django-comments-xtd Documentation Release 2.6.2

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A Django pluggable application that adds comments to your project. It extends the once official Django Comments Framework.

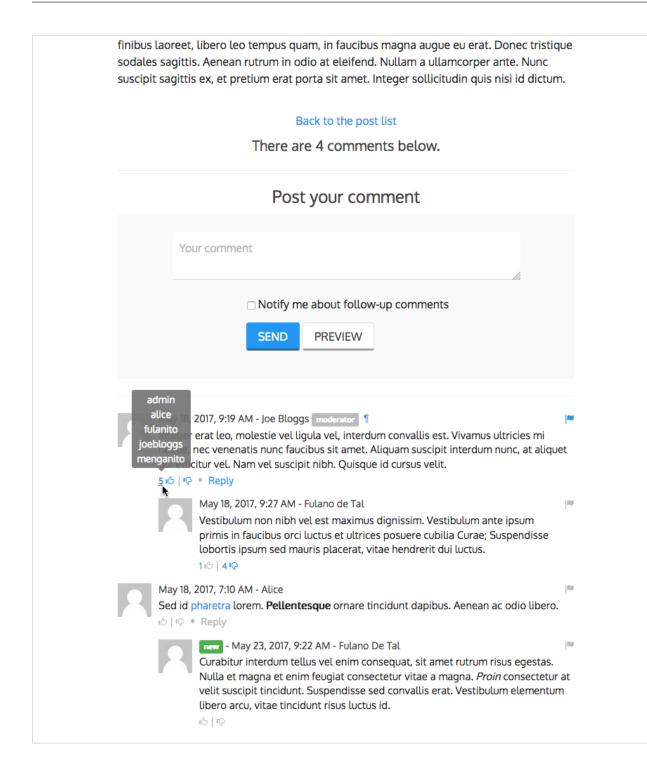
Note: This documentation represents the current version, v2.6.2, of django-comments-xtd. For old versions of the documentation:

- v2.5.1: https://django-comments-xtd.readthedocs.io/en/2.5.1/
- v2.4.3: https://django-comments-xtd.readthedocs.io/en/2.4.3/
- v2.3.1: https://django-comments-xtd.readthedocs.io/en/2.3.1/
- v2.2.1: https://django-comments-xtd.readthedocs.io/en/2.2.1/
- v2.1.0: https://django-comments-xtd.readthedocs.io/en/2.1.0/
- v2.0.10: https://django-comments-xtd.readthedocs.io/en/2.0.10/
- v1.7.1: https://django-comments-xtd.readthedocs.io/en/1.7.1/
- v1.6.7: https://django-comments-xtd.readthedocs.io/en/1.6.7/
- v1.5.1: https://django-comments-xtd.readthedocs.io/en/1.5.1/

CHAPTER 1

Features

- 1. Thread support, so comments can be nested.
- 2. Customizable maximum thread level, either for all models or on a per app.model basis.
- 3. Optional notifications on follow-up comments via email.
- 4. Mute links to allow cancellation of follow-up notifications.
- 5. Comment confirmation via email when users are not authenticated.
- 6. Comments hit the database only after they have been confirmed.
- 7. Registered users can like/dislike comments and can suggest comments removal.
- 8. Template tags to list/render the last N comments posted to any given list of app.model pairs.
- 9. Emails sent through threads (can be disable to allow other solutions, like a Celery app).
- 10. Fully functional JavaScript plugin using ReactJS, jQuery, Bootstrap, Remarkable and MD5.



CHAPTER 2

Getting started

Start with these documents to get you up and running:

2.1 Quick start guide

To get started using django-comments-xtd follow these steps:

- 1. pip install django-comments-xtd
- 2. Enable the "sites" framework by adding 'django.contrib.sites' to INSTALLED_APPS and defining SITE_ID. Visit the admin site and be sure that the domain field of the Site instance points to the correct domain (localhost:8000 when running the default development server), as it will be used to create comment verification URLs, follow-up cancellations, etc.
- 3. Add 'django_comments_xtd' and 'django_comments', in that order, to INSTALLED_APPS.
- 4. Set the COMMENTS_APP setting to 'django_comments_xtd'.
- 5. Set the *COMMENTS_XTD_MAX_THREAD_LEVEL* to N, being N the maximum level of threading up to which comments will be nested in your project.

```
# 0: No nested comments:
# Comment (level 0)
# 1: Nested up to level one:
# Comment (level 0)
# /-- Comment (level 1)
# 2: Nested up to level two:
# Comment (level 0)
# /-- Comment (level 1)
# /-- Comment (level 2)
COMMENTS_XTD_MAX_THREAD_LEVEL = 2
```

The thread level can also be established on a per <app>.<model> basis by using the COMMENTS_XTD_MAX_THREAD_LEVEL_BY_APP_MODEL setting. Use it to establish different maxi-

mum threading levels for each model. ie: no nested comments for quotes, up to thread level 2 for blog stories, etc.

- 6. Set the *COMMENTS_XTD_CONFIRM_EMAIL* to True to require comment confirmation by email for no logged-in users.
- 7. Run manage.py migrate to create the tables.
- 8. Add the URLs of the comments-xtd app to your project's urls.py:

```
urlpatterns = [
    ...
    url(r'^comments/', include('django_comments_xtd.urls')),
    ...
]
```

9. Customize your project's email settings:

```
EMAIL_HOST = "smtp.mail.com"
EMAIL_PORT = "587"
EMAIL_HOST_USER = "alias@mail.com"
EMAIL_HOST_PASSWORD = "yourpassword"
DEFAULT_FROM_EMAIL = "Helpdesk <helpdesk@yourdomain>"
```

- 10. To allow a quick start django-comments-xtd makes use of twitter-bootstrap. From django-comments-xtd v2.3 on it uses Twitter-Bootstrap v4. From django-comments-xtd v1.7.1 to v2.2 it uses Twitter-Bootstrap v3. If you want to build your own templates, use the comments templatetag module, provided by the django-comments app. Create a comments directory in your templates directory and copy the templates you want to customise from the Django Comments Framework. The following are the most important:
 - comments/list.html, used by the render_comments_list templatetag.
 - comments/form.html, used by the render_comment_form templatetag.
 - comments/preview.html, used to preview the comment or when there are errors submitting it.
 - comments/posted.html, which gets rendered after the comment is sent.
- 11. Add extra settings to control comments in your project. Check the available settings in the Django Comments Framework and in the *django-comments-xtd app*.

These are the steps to quickly start using django-comments-xtd. Follow to the next page, the *Tutorial*, to read a detailed guide that takes everything into account. In addition to the tutorial, the *Demo projects* implement several commenting applications.

2.2 Tutorial

This tutorial guides you through the steps to use every feature of django-comments-xtd together with the Django Comments Framework. The Django project used throughout the tutorial is available to download. Following the tutorial will take about an hour, and it is highly recommended to get a comprehensive understanding of django-comments-xtd.

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```

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2.2.1 Introduction

Through the following sections the tutorial will cover the creation of a simple blog with stories to which we will add comments, exercising each and every feature provided by both, django-comments and django-comments-xtd, from comment post verification by mail to comment moderation and nested comments.

2.2.2 Preparation

Before we install any package we will set up a virtualenv and install everything we need in it.

By installing django-comments-xtd we install all its dependencies, Django and django-contrib-comments among them. So we are ready to work on the project. Take a look at the content of the tutorial directory, it contains:

- A blog app with a Post model. It uses two generic class-based views to list the posts and show a post in detail.
- The **templates** directory, with a **base.html** and **home.html**, and the templates for the blog app: **blog/post_list.html** and **blog/post_detail.html**.
- The **static** directory with a **css/bootstrap.min.css** file (this file is a static asset available, when the app is installed, under the path **django_comments_xtd/css/bootstrap.min.css**).
- The tutorial directory containing the settings and urls modules.
- And a **fixtures** directory with data files to create the *admin* superuser (with *admin* password), the default site and some blog posts.

Let's finish the initial setup, load the fixtures and run the development server:

(venv)\$ python manage.py migrate (venv)\$ python manage.py loaddata fixtures/*.json (venv)\$ python manage.py runserver

Head to http://localhost:8000 and visit the tutorial site.

Note: Remember to implement the *get_absolute_url* in the model class whose objects you want to receive comments, like the class *Post* in this tutorial. It is so because the permanent URL of each comment uses the *shortcut* view of *django.contrib.contenttypes* which in turn uses the *get_absolute_url* method.

2.2.3 Configuration

Now that the project is running we are ready to add comments. Edit the settings module, tutorial/settings. py, and make the following changes:

```
INSTALLED_APPS = [
    . . .
    'django_comments_xtd',
    'django_comments',
    'blog',
]
. . .
COMMENTS_APP = 'django_comments_xtd'
# Either enable sending mail messages to the console:
EMAIL_BACKEND = 'django.core.mail.backends.console.EmailBackend'
# Or set up the EMAIL_* settings so that Django can send emails:
EMAIL_HOST = "smtp.mail.com"
EMAIL_PORT = "587"
EMAIL_HOST_USER = "alias@mail.com"
EMAIL_HOST_PASSWORD = "yourpassword"
EMAIL_USE_TLS = True
DEFAULT_FROM_EMAIL = "Helpdesk <helpdesk@yourdomain>"
```

Edit the urls module of the project, tutorial/tutorial/urls.py and mount the URL patterns of django_comments_xtd in the path /comments/. The urls installed with django_comments_xtd include django_comments' urls too:

```
from django.urls import include, path
urlpatterns = [
    ...
    path(r'comments/', include('django_comments_xtd.urls')),
    ...
]
```

Now let Django create the tables for the two new applications:

```
$ python manage.py migrate
```

Be sure that the domain field of the Site instance points to the correct domain, which for the development server is expected to be localhost:8000. The value is used to create comment verifications, follow-up cancellations, etc. Edit the site instance in the admin interface in case you were using a different value.

Comment confirmation

Before we go any further we need to set up the *COMMENTS_XTD_SALT* setting. This setting plays an important role during the comment confirmation by mail. It helps obfuscating the comment before the user approves its publication.

It is so because django-comments-xtd does not store comments in the server until they have been confirmed. This way there is little to none possible comment spam flooding in the database. Comments are encoded in URLs and sent for confirmation by mail. Only when the user clicks the confirmation URL the comment lands in the database.

This behaviour is disabled for authenticated users, and can be disabled for anonymous users too by simply setting COMMENTS_XTD_CONFIRM_EMAIL to False.

Now let's append the following entries to the tutorial settings module:

2.2.4 Comments tags

Next step consist of editing blog/post_detail.html and loading the comments templatetag module after the extends tag:

```
{% extends "base.html" %}
{% load comments %}
```

Now we will change the blog post detail template to:

- 1. Show the number of comments posted to the blog story,
- 2. List the comments already posted, and
- 3. Show the comment form, so that comments can be sent.

By using the get_comment_count tag we will show the number of comments posted. Change the code around the link element to make it look as follows:

```
{% get_comment_count for object as comment_count %}
<div class="py-4 text-center">
    <a href="{% url 'blog:post-list' %}">Back to the post list</a>
    &nbsp;&sdot;&nbsp;
    {{ comment_count }} comment{{ comment_count|pluralize }}
    ha{{ comment_count|pluralize:"s,ve" }} been posted.
</div>
```

Now let's add the code to list the comments posted to the story. We can make use of two template tags, render_comment_list and get_comment_list. The former renders a template with the comments while the latter put the comment list in a variable in the context of the template.

When using the first, render_comment_list, with a blog.post object, Django will look for the template list.html in the following directories:

```
comments/blog/post/list.html
comments/blog/list.html
comments/list.html
```

Both, django-contrib-comments and django-comments-xtd, provide the last template of the list, comments/list. html. The one provided within django-comments-xtd comes with styling based on twitter-bootstrap.

Django will use the first template found depending on the order in which applications are listed in INSTALLED_APPS. In this tutorial django-comments-xtd is listed first and therefore its comment/list.html template will be found first.

Let's modify the blog/post_detail.html template to make use of the render_comment_list. Add the following code at the end of the page, before the endblock tag:

```
{% if comment_count %}
<hr/>
<hr/>
<div class="comments">
    {% render_comment_list for object %}
</div>
{% endif %}
```

Below the list of comments we want to display the comment form. There are two template tags available for that purpose, the render_comment_form and the get_comment_form. The former renders a template with the comment form while the latter puts the form in the context of the template giving more control over the fields.

We will use the first tag, render_comment_form. Again, add the following code before the endblock tag:

```
{% if object.allow_comments %}
<div class="card card-block mb-5">
    <div class="card-block mb-5">
        <div class="card-block mb-5">
        <div class="card-block mb-5">
        <div class="card-block mb-5">
        <div class="card-block mb-5">
        </div>
        </hd>
    </div>
    </div>
    </div>
    </div>
    </div>
    {% endif %}
</div
```

Note: The {% if object.allow_comments %} and corresponding {% endif %} are not necessary in your code. I use it in this tutorial (and in the demo sites) as a way to disable comments whenever the author of a blog post decides so. It has been mentioned here too.

Finally, before completing this first set of changes, we could show the number of comments along with post titles in the blog's home page. For this we have to edit blog/post_list.html and make the following changes:

```
{* extends "base.html" %}
{* load comments %}
...
{* for object in object_list *}
...
{* get_comment_count for object as comment_count *}
Published {{ object.publish }}
    {* if comment_count *}
        ⋅   {{ comment_count }} comment {{ comment_count |pluralize }}
        {* endif *}

...
        {* endfor *}
```

Now we are ready to send comments. If you are logged in in the admin site, your comments won't need to be confirmed by mail. To test the confirmation URL do logout of the admin interface. Bear in mind that EMAIL_BACKEND is set up to send mail messages to the console, so look in the console after you post the comment and find the first long URL in the message. To confirm the comment copy the link and paste it in the location bar of the browser.

Maecenas vitae metus non ante bibendum tincidunt. Nam vulputate arcu nec varius elementum. Aliquam pellentesque tortor dolor, non varius quam blandit quis. Aenean id pellentesque dui. Donec a fringilla odio, quis sollicitudin enim. Maecenas mollis viverra ornare. Proin dictum purus nunc, a elementum nunc ultrices et. Fusce feugiat, velit mollis finibus laoreet, libero leo tempus quam, in faucibus magna augue eu erat. Donec tristique sodales sagittis. Aenean rutrum in odio at eleifend. Nullam a ullamcorper ante. Nunc suscipit sagittis ex, et pretium erat porta sit amet. Integer sollicitudin quis nisi id dictum.

	Post your comment	
Your comme	ent	
Name	name	
Mail	mail address	
Link	Required for comment verification	
Link	url your name links to (optional)	

The setting *COMMENTS_XTD_MAX_THREAD_LEVEL* is 0 by default, which means comments can not be nested. Later in the threads section we will enable nested comments. Now we will set up comment moderation.

2.2.5 Moderation

One of the differences between django-comments-xtd and other commenting applications is the fact that by default it requires comment confirmation by email when users are not logged in, a very effective feature to discard unwanted comments. However there might be cases in which you would prefer a different approach. Django Comments Framework comes with moderation capabilities included upon which you can build your own comment filtering.

Comment moderation is often established to fight spam, but may be used for other purposes, like triggering actions based on comment content, rejecting comments based on how old is the subject being commented and whatnot.

In this section we want to set up comment moderation for our blog application, so that comments sent to a blog post older than a year will be automatically flagged for moderation. Also we want Django to send an email to registered MANAGERS of the project when the comment is flagged.

Let's start adding our email address to the MANAGERS in the tutorial/settings.py module:

```
MANAGERS = (
   ('Joe Bloggs', 'joe.bloggs@example.com'),
)
```

Now we will create a new Moderator class that inherits from Django Comments Frammework's CommentModerator. This class enables moderation by defining a number of class attributes. Read more about it in moderation options, in the official documentation of the Django Comments Framework.

We will also register our Moderator class with the django-comments-xtd's moderator object. We use djangocomments-xtd's object instead of django-contrib-comments' because we still want to have confirmation by email for non-registered users, nested comments, follow-up notifications, etc.

Let's add those changes to the blog/model.py file:

```
# Append these imports below the current ones.
from django_comments.moderation import CommentModerator
from django_comments_xtd.moderation import moderator
...
# Add this code at the end of the file.
class PostCommentModerator(CommentModerator):
    email_notification = True
    auto_moderate_field = 'publish'
    moderate_after = 365
moderator.register(Post, PostCommentModerator)
```

That makes it, moderation is ready. Visit any of the blog posts with a publish datetime older than a year and try to send a comment. After confirming the comment you will see the django_comments_xtd/moderated.html template, and your comment will be put on hold for approval.

If on the other hand you send a comment to a blog post created within the last year your comment will not be put in moderation. Give it a try as a logged in user and as an anonymous user.

When sending a comment as a logged-in user the comment won't have to be confirmed and will be put in moderation immediately. However, when you send it as an anonymous user the comment will have to be confirmed by clicking on the confirmation link, immediately after that the comment will be put on hold pending for approval.

In both cases, due to the attribute email_notification = True above, all mail addresses listed in the MANAGERS setting will receive a notification about the reception of a new comment. If you did not received such message, you might need to review your email settings, or the console output. Read about the mail settings above in the *Configuration* section. The mail message received is based on the comments/ comment_notification_email.txt template provided with django-comments-xtd.

A last note on comment moderation: comments pending for moderation have to be reviewed and eventually approved. Don't forget to visit the comments-xtd app in the admin interface. Filter comments by *is public: No* and *is removed: No*. Tick the box of those you want to approve, choose **Approve selected comments** in the **action** dropdown, at the top left of the comment list, and click on the **Go** button.

Disallow black listed domains

In case you wanted to disable comment confirmation by mail you might want to set up some sort of control to reject spam.

This section goes through the steps to disable comment confirmation while enabling a comment filtering solution based on Joe Wein's blacklist of spamming domains. We will also add a moderation function that will put in moderation comments containing badwords.

Let us first disable comment confirmation. Edit the tutorial/settings.py file and add:

```
COMMENTS_XTD_CONFIRM_EMAIL = False
```

django-comments-xtd comes with a **Moderator** class that inherits from CommentModerator and implements a method allow that will do the filtering for us. We just have to change blog/models.py and replace CommentModerator with SpamModerator, as follows:

```
# Remove the CommentModerator imports and leave only this:
from django_comments_xtd.moderation import moderator, SpamModerator
# Our class Post PostCommentModerator now inherits from SpamModerator
class PostCommentModerator(SpamModerator):
...
moderator.register(Post, PostCommentModerator)
```

Now we can add a domain to the BlackListed model in the admin interface. Or we could download a blacklist from Joe Wein's website and load the table with actual spamming domains.

Once we have a BlackListed domain, try to send a new comment and use an email address with such a domain. Be sure to log out before trying, otherwise django-comments-xtd will use the logged in user credentials and ignore the email given in the comment form.

Sending a comment with an email address of the blacklisted domain triggers a **Comment post not allowed** response, which would have been a HTTP 400 Bad Request response with DEBUG = False in production.

Moderate on bad words

Let's now create our own Moderator class by subclassing SpamModerator. The goal is to provide a moderate method that looks in the content of the comment and returns False whenever it finds a bad word in the message. The effect of returning False is that comment's is_public attribute will be put to False and therefore the comment will be in moderation.

The blog application comes with a bad word list in the file blog/badwords.py.

We assume we already have a list of BlackListed domains and we don't need further spam control. So we will disable comment confirmation by email. Edit the settings.py file:

COMMENTS_XTD_CONFIRM_EMAIL = False

Now edit blog/models.py and add the code corresponding to our new PostCommentModerator:

```
# Below the other imports:
from django_comments_xtd.moderation import moderator, SpamModerator
from blog.badwords import badwords
...
```

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```
class PostCommentModerator(SpamModerator):
    email_notification = True
    def moderate(self, comment, content_object, request):
        # Make a dictionary where the keys are the words of the message
        # and the values are their relative position in the message.
        def clean(word):
            ret = word
            if word.startswith('.') or word.startswith(','):
                ret = word[1:]
            if word.endswith('.') or word.endswith(','):
                ret = word[:-1]
            return ret
        lowcase_comment = comment.comment.lower()
        msg = dict([(clean(w), i)
                    for i, w in enumerate(lowcase_comment.split())])
        for badword in badwords:
            if isinstance(badword, str):
                if lowcase_comment.find(badword) > -1:
                    return True
            else
                lastindex = -1
                for subword in badword:
                    if subword in msg:
                        if lastindex > -1:
                            if msg[subword] == (lastindex + 1):
                                lastindex = msg[subword]
                        else:
                            lastindex = msg[subword]
                    else:
                        break
                if msg.get(badword[-1]) and msg[badword[-1]] == lastindex:
                    return True
        return super(PostCommentModerator, self).moderate(comment,
                                                           content_object,
                                                           request)
moderator.register(Post, PostCommentModerator)
```

Now we can try to send a comment with any of the bad words listed in badwords. After sending the comment we will see the content of the django_comments_xtd/moderated.html template and the comment will be put in moderation.

If you enable comment confirmation by email, the comment will be put on hold after the user clicks on the confirmation link in the email.

2.2.6 Threads

Up until this point in the tutorial django-comments-xtd has been configured to disallow nested comments. Every comment is at thread level 0. It is so because by default the setting *COMMENTS_XTD_MAX_THREAD_LEVEL* is set to 0.

When the *COMMENTS_XTD_MAX_THREAD_LEVEL* is greater than 0, comments below the maximum thread level may receive replies that will nest inside each other up to the maximum thread level. A comment in a the thread

level below the *COMMENTS_XTD_MAX_THREAD_LEVEL* can show a **Reply** link that allows users to send nested comments.

In this section we will enable nested comments by modifying *COMMENTS_XTD_MAX_THREAD_LEVEL* and apply some changes to our blog_detail.html template.

We can make use of two template tags, render_xtdcomment_tree and get_xtdcomment_tree. The former renders a template with the comments while the latter put the comments in a nested data structure in the context of the template.

We will also introduce the setting *COMMENTS_XTD_LIST_ORDER*, that allows altering the default order in which the comments are sorted in the list. By default comments are sorted by thread and their position inside the thread, which turns out to be in ascending datetime of arrival. In this example we will list newer comments first.

Let's start by editing tutorial/settings.py to set up the maximum thread level to 1 and a comment ordering such that newer comments are retrieve first:

Now we have to modify the blog post detail template to load the comments_xtd templatetag and make use of *render_xtdcomment_tree*. We also want to move the comment form from the bottom of the page to a more visible position right below the blog post, followed by the list of comments.

Edit blog/post_detail.html to make it look like follows:

```
{% extends "base.html" %}
{% load comments %}
{% load comments_xtd %}
{% block title %}{{ object.title }}{% endblock %}
{% block content %}
<div class="pb-3">
 <h1 class="page-header text-center">{{ object.title }}</h1>
 {{ object.publish|date:"l, j F Y" }}
</div>
<div>
 {{ object.body|linebreaks }}
</div>
{% get_comment_count for object as comment_count %}
<div class="py-4 text-center>
 <a href="{% url 'blog:post-list' %}">Back to the post list</a>
  ⋅ 
 {{ comment_count }} comment{{ comment_count|pluralize }}
 ha{{ comment_count|pluralize:"s,ve"}} been posted.
</div>
{% if object.allow_comments %}
<div class="comment">
 <h4 class="text-center">Your comment</h4>
 <div class="well">
   {% render_comment_form for object %}
 </div>
</div>
{% endif %}
```

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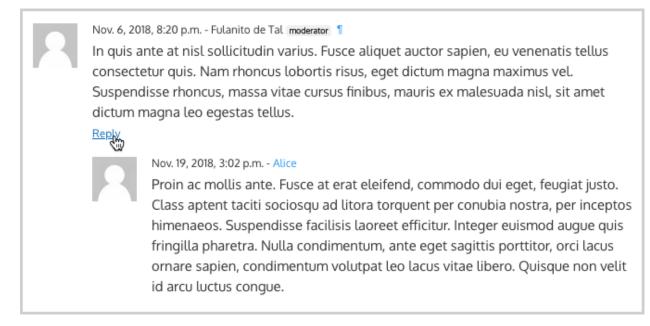
```
{% if comment_count %}

    {% render_xtdcomment_tree for object %}

{% endif %}
{% endblock %}
```

The tag render_xtdcomment_tree renders the template django_comments_xtd/comment_tree. html.

Now visit any of the blog posts to which you have already sent comments and see that a new *Reply* link shows up below each comment. Click on the link and post a new comment. It will appear nested inside the parent comment. The new comment will not show a *Reply* link because *COMMENTS_XTD_MAX_THREAD_LEVEL* has been set to 1. Raise it to 2 and reload the page to offer the chance to nest comments inside one level deeper.



Different max thread levels

There might be cases in which nested comments have a lot of sense and others in which we would prefer a plain comment sequence. We can handle both scenarios under the same Django project.

We just have to use both settings, *COMMENTS_XTD_MAX_THREAD_LEVEL* and *COMMENTS_XTD_MAX_THREAD_LEVEL_BY_APP_MODEL*. The former establishes the default maximum thread level site wide, while the latter sets the maximum thread level on *app.model* basis.

If we wanted to disable nested comments site wide, and enable nested comments up to level one for blog posts, we would set it up as follows in our settings.py module:

```
COMMENTS_XTD_MAX_THREAD_LEVEL = 0 # site wide default
COMMENTS_XTD_MAX_THREAD_LEVEL_BY_APP_MODEL = {
    # Objects of the app blog, model post, can be nested
    # up to thread level 1.
        'blog.post': 1,
}
```

2.2.7 Flags

The Django Comments Framework supports comment flagging, so comments can be flagged for:

- Removal suggestion, when a registered user suggests the removal of a comment.
- Moderator deletion, when a comment moderator marks the comment as deleted.
- Moderator approval, when a comment moderator sets the comment as approved.

django-comments-xtd expands flagging with two more flags:

- Liked it, when a registered user likes the comment.
- Disliked it, when a registered user dislikes the comment.

In this section we will see how to enable a user with the capacity to flag a comment for removal with the **Removal suggestion** flag, how to express likeability, conformity, acceptance or acknowledgement with the **Liked it** flag and the opposite with the **Disliked it** flag.

One important requirement to mark comments is that the user flagging must be authenticated. In other words, comments can not be flagged by anonymous users.

Commenting options

As of version 2.0 django-comments-xtd has a new setting *COMMENTS_XTD_APP_MODEL_OPTIONS* that must be used to allow comment flagging. The purpose of it is to give an additional level of control about what action users can do on comments: flag them as inappropriate, like/dislike them, and retrieve the list of users who liked/disliked them.

It defaults to:

```
COMMENTS_XTD_APP_MODEL_OPTIONS = {
    'default': {
        'allow_flagging': False,
        'allow_feedback': False,
        'show_feedback': False,
    }
}
```

We will enable each option in the next sections.

Removal suggestion

Enabling the comment removal flag is about including the **allow_flagging** argument in the render_xtdcomment_tree template tag. Edit the blog/post_detail.html template and append the argument:

```
...

    {% render_xtdcomment_tree for object allow_flagging %}
```

The allow_flagging argument makes the templatetag populate a variable allow_flagging = True in the context in which django_comments_xtd/comment_tree.html is rendered. Edit now the settings module and enable the allow_flagging option for the blog.post:

```
COMMENTS_XTD_APP_MODEL_OPTIONS = {
    'blog.post': {
        'allow_flagging': True,
        'allow_feedback': False,
        'show_feedback': False,
    }
}
```

Now let's suggest a removal. First we need to login in the admin interface so that we are not an anonymous user. Then we can visit any of the blog posts we sent comments to. There is a flag at the right side of every comment's header. Clicking on it takes the user to a page in which she is requested to confirm the removal suggestion. Finally, clicking on the red **Flag** button confirms the request.

Users with the django_comments.can_moderate permission will see a yellow labelled counter near the flag button in each flagged comment, representing how many times comments have been flagged. Also notice that when a user flags a comment for removal the icon turns red for that user.

Locomit	a ootiii	
Reply		
	Nov. 19, 2018, 3:02 p.m Alice Proin ac mollis ante. Fusce at erat eleifend, commodo dui eget, fe Class aptent taciti sociosqu ad litora torquent per conubia nostra himenaeos. Suspendisse facilisis laoreet efficitur. Integer euismoo fringilla pharetra. Nulla condimentum, ante eget sagittis porttitor ornare sapien, condimentum volutpat leo lacus vitae libero. Quise id arcu luctus congue. Reply	, per inceptos d augue quis ; orci lacus

Administrators/moderators can find flagged comment entries in the admin interface, under the **Comment flags** model, within the Django Comments application.

Getting notifications

A user might want to flag a comment on the basis of a violation of the site's terms of use, hate speech, racism or the like. To prevent a comment from staying published long after it has been flagged we might want to receive notifications on flagging events.

For such purpose django-comments-xtd provides the class **XtdCommentModerator**, which extends django-contribcomments' **CommentModerator**.

In addition to all the options of its parent class, **XtdCommentModerator** offers the removal_suggestion_notification attribute, that when set to True makes Django send a mail to all the MANAGERS on every **Removal suggestion** flag created.

To see an example let's edit blog/models.py. If you are already using the class **SpamModerator**, which inherits from **XtdCommentModerator**, just add removal_suggestion_notification = True to your PostCommentModeration class. Otherwise add the following code:

from django_comments_xtd.moderation import moderator, XtdCommentModerator
...
class PostCommentModerator(XtdCommentModerator):

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```
removal_suggestion_notification = True
moderator.register(Post, PostCommentModerator)
```

Be sure that PostCommentModerator is the only moderation class registered for the Post model, and be sure as well that the MANAGERS setting contains a valid email address. The message sent is based on the django_comments_xtd/removal_notification_email.txt template, already provided within django-comments-xtd. After these changes flagging a comment with a **Removal suggestion** will trigger a notification by mail.

Liked it, Disliked it

Django-comments-xtd adds two new flags: the Liked it and the Disliked it flags.

Unlike the **Removal suggestion** flag, the **Liked it** and **Disliked it** flags are mutually exclusive. A user can not like and dislike a comment at the same time. Users can like/dislike at any time but only the last action will prevail.

In this section we make changes to give our users the capacity to like or dislike comments. Following the same pattern as with the removal flag, enabling like/dislike buttons is about adding an argument to the render_xtdcomment_tree, the argument allow_feedback. Edit the blog/post_detail.html template and add the new argument:

```
class="media-list">{% render_xtdcomment_tree for object allow_flagging allow_feedback %}
```

The allow_feedback argument makes the templatetag populate a variable allow_feedback = True in the context in which django_comments_xtd/comment_tree.html is rendered. Edit the settings module and enable the allow_feedback option for the blog.post **app.label** pair:

```
COMMENTS_XTD_APP_MODEL_OPTIONS = {
    'blog.post': {
        'allow_flagging': True,
        'allow_feedback': True,
        'show_feedback': False,
    }
}
```

The blog post detail template is ready to show the like/dislike buttons, refresh your browser.

Nov. 6, 2018, 8:20 p.m. - Fulanito de Tal moderator
 In quis ante at nisl sollicitudin varius. Fusce aliquet auctor sapien, eu venenatis tellus consectetur quis. Nam rhoncus lobortis risus, eget dictum magna maximus vel.
 Suspendisse rhoncus, massa vitae cursus finibus, mauris ex malesuada nisl, sit amet dictum magna leo egestas tellus.

💼 | 📭 🔹 Reply

Having the new like/dislike links in place, if we click on any of them we will end up in either the django_comments_xtd/like.html or the django_comments_xtd/dislike.html templates, which are meant to request the user a confirmation for the operation.

100

Show the list of users

With the like/dislike buttons enabled we might as well consider to display the users who actually liked/disliked comments. Again addind an argument to the render_xtdcomment_tree will enable the feature. Change the blog/ post_detail.html and add the argument show_feedback to the template tag:

```
class="media-list">
  {% render_xtdcomment_tree for object allow_flagging allow_feedback show_
\leftrightarrow feedback \&
{% block extra-js %}
<script
 src="https://code.jquery.com/jquery-3.3.1.min.js"
 crossorigin="anonymous"></script>
<script
 src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.3/umd/popper.
→min.js"
 integrity="sha384-ZMP7rVo3mIykV+2+9J3UJ46jBk0WLaUAdn689aCwoqbBJiSnjAK/
→18WvCWPIPm49"
 crossorigin="anonymous"></script>
<script
 src="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/js/bootstrap.min.js
\hookrightarrow "
 integrity="sha384-ChfqqxuZUCnJSK3+MXmPNIyE6ZbWh2IMqE241rYiqJxyMiZ6OW/
→JmZQ5stwEULTy"
 crossorigin="anonymous"></script>
<script>
 $(function() {
   $('[data-toggle="tooltip"]').tooltip({html: true});
 });
</script>
{ % endblock % }
```

Also change the settings and enable the show_feedback option for blog.post:

```
COMMENTS_XTD_APP_MODEL_OPTIONS = {
    'blog.post': {
        'allow_flagging': True,
        'allow_feedback': True,
        'show_feedback': True,
    }
}
```

We loaded jQuery and twitter-bootstrap libraries from their respective default CDNs as the code above uses bootstrap's tooltip functionality to show the list of users when the mouse hovers the numbers near the buttons, as the following image shows:



Put the mouse over the counters near the like/dislike buttons to display the list of users.

2.2.8 Markdown

In versions prior to 2.0 django-comments-xtd required the installation of django-markup as a dependency. There was also a specific template filter called render_markup_comment to help rendering comment's content in the markup language of choice.

As of version 2.0 the backend side of the application does not require the installation of any additional package to parser comments' content, and therefore does not provide the render_markup_comment filter anymore. However, in the client side the JavaScript plugin uses Markdown by default to render comments' content.

As for the backend side, comment's content is presented by default in plain text, but it is easily customizable by overriding the template includes/django_comments_xtd/render_comment.html.

In this section we will send a Markdown formatted comment, and once published we will install support for Markdown, with django-markdown2. We'll then override the template mentioned above so that comments are interpreted as Markdown.

Send a comment formatted in Markdown, as the one in the following image.

May 18, 2017, 7:10 a.m. - Alice Sed id [pharetra](https://www.example.com) lorem. **Pellentesque** ornare tincidunt dapibus. Aenean ac odio libero.

心口 · Reply

Now we will install django-markdown2, and create the template directory and the template file:

```
(venv)$ pip install django-markdown2
(venv)$ mkdir -p templates/includes/django_comments_xtd/
(venv)$ touch templates/includes/django_comments_xtd/comment_content.html
```

We have to add django_markdown2 to our INSTALLED_APPS, and add the following template code to the file comment_content.html we just created:

100

```
{% load md2 %}
{{ content|markdown:"safe, code-friendly, code-color" }}
```

Now our project is ready to show comments posted in Markdown. After reloading, the comment's page will look like this:

```
      May 18, 2017, 7:10 a.m. - Alice
      Image: Sed id pharetra lorem. Pellentesque ornare tincidunt dapibus. Aenean ac odio libero.

      Image: I
```

2.2.9 JavaScript plugin

Up until now we have used django-comments-xtd as a backend application. As of version 2.0 it includes a JavaScript plugin that helps moving part of the logic to the browser improving the overall usability. By making use of the JavaScript plugin users don't have to leave the blog post page to preview, submit or reply comments, or to like/dislike them. But it comes at the cost of using:

- ReactJS
- jQuery (to handle Ajax calls).
- Twitter-Bootstrap (for the UI).
- Remarkable (for Markdown support).

To know more about the client side of the application and the build process read the specific page on the *JavaScript* plugin.

In this section of the tutorial we go through the steps to make use of the JavaScript plugin.

Enable Web API

The JavaScript plugin uses the Web API provided within the app. In order to enable it install the django-rest-framework:

```
(venv)$ pip install djangorestframework
```

Once installed, add it to our tutorial INSTALLED_APPS setting:

To know more about the Web API provided by django-comments-xtd read on the Web API page.

Enable app.model options

Be sure *COMMENTS_XTD_APP_MODEL_OPTIONS* includes the options we want to enable for comments sent to Blog posts. In this case we will allow users to flag comments for removal (allow_flagging option), to like/dislike comments (allow_feedback), and we want users to see the list of people who liked/disliked comments:

```
COMMENTS_XTD_APP_MODEL_OPTIONS = {
    'blog.post': {
        'allow_flagging': True,
        'allow_feedback': True,
        'show_feedback': True,
    }
}
```

The i18n JavaScript Catalog

Internationalization support (see Internationalization) has been included within the plugin by making use of the Django's JavaScript i18n catalog. If your project doesn't need i18n you can easily remove every mention to these functions (namespaced under the *django* object) from the source and change the webpack.config.js file to build the plugin without it.

Our tutorial doesn't have i18n enabled (the comp example project has it), but we will not remove its support from the plugin, we will simply enable the JavaScript Catalog URL, so that the plugin can access its functions. Edit tutorial/urls.py and add the following url:

```
from django.views.i18n import JavaScriptCatalog
urlpatterns = [
...
path(r'jsi18n/', JavaScriptCatalog.as_view(), name='javascript-catalog'),
]
```

In the next section we will use the new URL to load the i18n JavaScript catalog.

Load the plugin

Now let's edit blog/post_detail.html and make it look as follows:

```
{% extends "base.html" %}
{% load static %}
{% load comments %}
{% load comments_xtd %}
{% block title %}{{ object.title }}{% endblock %}
{% block content %}
<div class="pb-3">
 <h1 class="text-center">{{ object.title }}</h1>
 {{ object.publish|date:"l, j F Y" }}
</div>
<div>
  {{ object.body|linebreaks }}
</div>
<div class="py-4 text-center">
 <a href="{% url 'blog:post-list' %}">Back to the post list</a>
</div>
<div id="comments"></div>
{% endblock %}
```

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```
{% block extra-js %}
<script crossorigin src="https://unpkg.com/react@16/umd/react.production.min.
⇔js"></script>
<script crossorigin src="https://unpkg.com/react-dom@16/umd/react-dom.
→production.min.js"></script>
<script>
window.comments_props = { % get_commentbox_props for object % };
window.comments_props_override = {
    allow_comments: {%if object.allow_comments%}true{%else%}false{%endif%},
    allow_feedback: true,
    show_feedback: true,
    allow_flagging: true,
    polling_interval: 5000 // In milliseconds.
};
</script>
<script
 src="https://code.jquery.com/jquery-3.3.1.min.js"
 crossorigin="anonymous"></script>
<script
 src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.3/umd/popper.
⇔min.js"
 integrity="sha384-ZMP7rVo3mIykV+2+9J3UJ46jBk0WLaUAdn689aCwoqbBJiSnjAK/
→18WvCWPIPm49"
 crossorigin="anonymous"></script>
<script
 src="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/js/bootstrap.min.js
\hookrightarrow "
 integrity="sha384-ChfqqxuZUCnJSK3+MXmPNIyE6ZbWh2IMqE241rYiqJxyMiZ60W/
→JmZQ5stwEULTy"
 crossorigin="anonymous"></script>
<script
 type="text/javascript"
  src="{% url 'javascript-catalog' %}"></script>
<script src="{% static 'django_comments_xtd/js/vendor~plugin-2.6.2.js' %}"></
\leftrightarrow script>
<script src="{% static 'django_comments_xtd/js/plugin-2.6.2.js' %}"></script>
<script>
$(function() {
 $('[data-toggle="tooltip"]').tooltip({html: true});
});
</script>
{% endblock %}
```

The blog post page is now ready to handle comments through the JavaScript plugin, including the following features:

- 1. Post comments.
- 2. Preview comments, with instant preview update while typing.
- 3. Reply comment in the same page, with instant preview while typing.
- 4. Notifications of new incoming comments using active polling (override *polling_interval* parameter, see the content of first *<script>* tag in the code above).
- 5. Button to reload the tree of comments, highlighting new comments (see image below).
- 6. Immediate like/dislike actions.

3 comments.

Pos	st your comment
Your comment	
Notify r	me about follow-up comments
SEND	PREVIEW

Ther	e is 1 new comment.	UPDATE
2	Nov. 29, 2018, 5:08 a.m Alice Aenean hendrerit elit eu lorem cursus molestie. Donec et sapien non massa l sit amet tortor. Integer vulputate, est id mollis malesuada, nisl enim volutpat enim purus eget ante. Suspendisse ut ornare risus. Proin dignissim urna quis luctus.	lacus, id rhoncus
	 Nov. 29, 2018, 5:09 a.m Joe Bloggs moderator Cras ante lorem, fringilla sed elit volutpat, sodales rutrum nulla. Cullamcorper blandit. Maecenas id dapibus risus, at eleifend purus. Image: Image: Ima	
2	Nov. 29, 2018, 5:07 a.m Luis López Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris tincidunt ipsu fermentum mi porttitor ac. Integer nec metus ac velit posuere posuere eu qu auctor dolor vitae ex dapibus fermentum. Curabitur congue mi in neque dictu augue pellentesque.	is mauris. Integer

2.2.10 Final notes

We have reached the end of the tutorial. I hope you got enough to start using django-comments-xtd in your own project.

The following page introduces the **Demo projects**. The **simple** demo is a straightforward backend handled project that uses comment confirmation by mail, with follow-up notifications and mute links. The **custom** demo is an example about how to extend django-comments-xtd **Comment** model with new attributes. The **comp** demo shows a project using the complete set of features provided by both django-contrib-comments and django-comments-xtd.

Checkout the **Control Logic** page to understand how django-comments-xtd works along with django-contribcomments. The **Web API** page details the API provided. The **JavaScript Plugin** covers every aspect regarding the frontend code. Read on **Filters and Template Tags** to see in detail the list of template tags and filters offered. The page on **Customizing django-comments-xtd** goes through the steps to extend the app with a quick example and little prose. Read the **Settings** page and the **Templates** page to get to know how you can customize the default behaviour and default look and feel.

If you want to help, please, report any bug or enhancement directly to the github page of the project. Your contributions are welcome.

2.3 Demo projects

There are three example projects available within django-comments-xtd's GitHub repository.

The **simple project** provides non-threaded comment support to articles. It's an only-backend project, meant as a test case of the basic features (confirmation by mail, follow-up notifications, mute link).

The **custom project** provides threaded comment support to articles using a new comment class that inherits from django-comments-xtd's. The new comment model adds a **title** field to the **XtdComment** class. Find more details in *Customizing django-comments-xtd*.

The **comp project** provides comments to an Article model and a Quote model. Comments for Quotes show how to use django-comments-xtd as a pure Django backend application. However comments for Articles illustrate how to use the app in combination with the provided JavaScript plugin. The project allows nested comments and defines the maximum thread level on per app.model basis. It uses moderation, removal suggestion flag, like/dislike flags, and list of users who liked/disliked comments.

Visit the example directory within the repository in GitHub for a quick look.

Table of Contents

- Setup
- Simple project
- Custom project
- Comp project

2.3.1 Setup

The recommended way to run a demo site is within its own virtualenv. Once in a new virtualenv, clone the code and cd into any of the 3 demo sites. Then run the migrate command and load the data in the fixtures directory:

```
$ virtualenv venv
$ source venv/bin/activate
(venv)$ git clone git://github.com/danirus/django-comments-xtd.git
(venv)$ cd django-comments-xtd/
(venv)$ python setup.py install
```

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```
(venv)$ npm install
(venv)$ node_modules/webpack/bin/webpack.js -p
(venv)$ cd django_comments_xtd
(venv)$ django-admin compilemessages -1 fi
(venv)$ django-admin compilemessages -1 fr
(venv)$ django-admin compilemessages -1 es
(venv)$ cd ../example/[simple|custom|comp]
(venv)$ cd ../example/[simple|custom|comp]
(venv)$ pip install -r requirements.txt
(venv)$ python manage.py migrate
(venv)$ python manage.py loaddata ../fixtures/auth.json
(venv)$ python manage.py loaddata ../fixtures/sites.json
(venv)$ python manage.py loaddata ../fixtures/articles.json
(venv)$ # The **comp** example project needs quotes.json too:
(venv)$ python manage.py loaddata ../fixtures/json.quotes
(venv)$ python manage.py runserver
```

Example projects make use of the package django-markdown2, which in turn depends on Markdown2, to render comments using Markdown syntax.

Fixtures provide:

- A User admin, with password admin.
- A default Site with domain localhost:8000 so that comment confirmation URLs are ready to hit the Django development web server.
- A couple of article objects to which the user can post comments.

By default mails are sent directly to the console using the console. EmailBackend. Comment out EMAIL_BACKEND in the settings module to send actual mails. You will need to provide working values for all EMAIL_* settings.

2.3.2 Simple project

The simple example project features:

- 1. An Articles App, with a model Article whose instances accept comments.
- Confirmation by mail is required before the comment hit the database, unless COMMENTS_XTD_CONFIRM_EMAIL is set to False. Authenticated users don't have to confirm comments.
- 3. Follow up notifications via mail.
- 4. Mute links to allow cancellation of follow-up notifications.
- 5. No nested comments.

This example project tests the initial features provided by django-comments-xtd. Setup the project as explained above.

Some hints:

- Log out from the admin site to post comments, otherwise they will be automatically confirmed and no email will be sent.
- When adding new articles in the admin interface be sure to tick the box *allow comments*, otherwise comments won't be allowed.
- Send new comments with the Follow-up box ticked and a different email address. You won't receive follow-up notifications for comments posted from the same email address the new comment is being confirmed from.

• Click on the Mute link on the Follow-up notification email and send another comment. You will not receive further notifications.

2.3.3 Custom project

The **custom** example project extends the **simple** project functionality featuring:

- Thread support up to level 2
- A new comment class that inherits from XtdComment with a new Title field and a new form class.

Ther	back to the articles list re are 2 comments below.
Ρ	ost your comment
Title title	
Your comment	
Name name	
Mail mail ad	Idress I for comment verification
Link url you	r name links to (optional)
	ify me about follow-up comments PREVIEW

2.3.4 Comp project

The Comp Demo implements two apps, each of which contains a model whose instances can received comments:

• App **articles** with the model **Article**

• App quotes with the model Quote

Features:

- 1. Comments can be nested, and the maximum thread level is established to 2.
- 2. Comment confirmation via mail when the users are not authenticated.
- 3. Comments hit the database only after they have been confirmed.
- 4. Follow up notifications via mail.
- 5. Mute links to allow cancellation of follow-up notifications.
- 6. Registered users can like/dislike comments and can suggest comments removal.
- 7. Registered users can see the list of users that liked/disliked comments.
- 8. The homepage presents the last 5 comments posted either to the articles. Article or the quotes. Quote model.

Threaded comments

The setting *COMMENTS_XTD_MAX_THREAD_LEVEL* is set to 2, meaning that comments may be threaded up to 2 levels below the first level (internally known as level 0):

render_xtdcomment_tree

By using the *render_xtdcomment_tree* templatetag, *quote_detail.html*, show the tree of comments posted. Addind the argument *allow_feedback* users can send like/dislike feedback. Adding the argument *show_feedback* allow visitors see other users like/dislike feedback. And adding *allow_flagging* allow users flag comments for removal.

render_last_xtdcomments

The Last 5 Comments shown in the block at the rigght uses the templatetag *render_last_xtdcomments* to show the last 5 comments posted to either *articles.Article* or *quotes.Quote* instances. The templatetag receives the list of pairs *app.model* from which we want to gather comments and shows the given N last instances posted. The templatetag renders the template *django_comments_xtd/comment.html* for each comment retrieve.

JavaScript plugin

As opposed to the Quote model, the Article model receives comments via the provided JavaScript plugin. Check the *JavaScript plugin* page to know more.

CHAPTER 3

Advanced Use

Once you've got django-comments-xtd working, you may want to know more about specific features, or check out the use cases to see how others customize it.

3.1 Control logic

Following is the application control logic described in 4 actions:

- 1. The user visits a page that accepts comments. Your app or a 3rd. party app handles the request:
- a. Your template shows content that accepts comments. It loads the comments templatetag and using tags as render_comment_list and render_comment_form the template shows the current list of comments and the *post your comment* form.
- 2. The user clicks on preview. Django Comments Framework post_comment view handles the request:
- a. Renders comments/preview.html either with the comment preview or with form errors if any.
- 3. The user clicks on post. Django Comments Framework post_comment view handles the request:
 - a. If there were form errors it does the same as in point 2.
 - b. Otherwise creates an instance of TmpXtdComment model: an in-memory representation of the comment.
 - c. Send signal comment_will_be_posted and comment_was_posted. The *django-comments-xtd* receiver on_comment_was_posted receives the second signal with the TmpXtdComment instance and does as follows:
 - If the user is authenticated or confirmation by email is not required (see *Settings*):
 - An instance of XtdComment hits the database.
 - An email notification is sent to previous comments followers telling them about the new comment following up theirs. Comment followers are those who ticked the box *Notify me about follow up comments via email.*

- Otherwise a confirmation email is sent to the user with a link to confirm the comment. The link contains a secured token with the TmpXtdComment. See below *Creating the secure token for the confirmation URL*.
- d. Pass control to the next parameter handler if any, or render the comments/posted.html template:
- If the instance of XtdComment has already been created, redirect to the the comments's absolute URL.
- Otherwise the template content should inform the user about the confirmation request sent by email.
- 4. The user clicks on the confirmation link, in the email message. *Django-comments-xtd* confirm view handles the request:
- a. Checks the secured token in the URL. If it's wrong returns a 404 code.
- b. Otherwise checks whether the comment was already confirmed, in such a case returns a 404 code.
- c. Otherwise sends a confirmation_received signal. You can register a receiver to this signal to do some extra process before approving the comment. See *Signal and receiver*. If any receiver returns False the comment will be rejected and the template django_comments_xtd/discarded.html will be rendered.
- d. Otherwise an instance of XtdComment finally hits the database, and
- e. An email notification is sent to previous comments followers telling them about the new comment following up theirs.

3.1.1 Creating the secure token for the confirmation URL

The Confirmation URL sent by email to the user has a secured token with the comment. To create the token Djangocomments-xtd uses the module signed.py authored by Simon Willison and provided in Django-OpenID.

django_openid.signed offers two high level functions:

- dumps: Returns URL-safe, sha1 signed base64 compressed pickle of a given object.
- loads: Reverse of dumps(), raises ValueError if signature fails.

A brief example:

```
>>> signed.dumps("hello")
'UydoZWxsbycKcDAKLg.QLtjWHYe7udYuZeQyLlafPqAx1E'
>>> signed.loads('UydoZWxsbycKcDAKLg.QLtjWHYe7udYuZeQyLlafPqAx1E')
'hello'
>>> signed.loads('UydoZWxsbycKcDAKLg.QLtjWHYe7udYuZeQyLlafPqAx1E-modified')
BadSignature: Signature failed: QLtjWHYe7udYuZeQyLlafPqAx1E-modified
```

There are two components in dump's output UydoZWxsbycKcDAKLg.QLtjWHYe7udYuZeQyLlafPqAx1E, separatad by a '.'. The first component is a URLsafe base64 encoded pickle of the object passed to dumps(). The second component is a base64 encoded hmac/SHA1 hash of "\$first_component.\$secret".

Calling signed.loads(s) checks the signature BEFORE unpickling the object -this protects against malformed pickle attacks. If the signature fails, a ValueError subclass is raised (actually a BadSignature).

Signal and receiver

In addition to the signals sent by the Django Comments Framework, django-comments-xtd sends the following signal:

- confirmation_received: Sent when the user clicks on the confirmation link and before the XtdComment instance is created in the database.
- comment_thread_muted: Sent when the user clicks on the mute link, in a follow-up notification.

3.1.2 Sample use of the confirmation_received signal

You might want to register a receiver for confirmation_received. An example function receiver could check the time stamp in which a user submitted a comment and the time stamp in which the confirmation URL has been clicked. If the difference between them is over 7 days we will discard the message with a graceful "sorry, it's a too old comment" template.

Extending the demo site with the following code will do the job:

```
# append the below code to demos/simple/views.py:
from datetime import datetime, timedelta
from django_comments_xtd import signals
def check_submit_date_is_within_last_7days(sender, data, request, **kwargs):
    plus7days = timedelta(days=7)
        if data["submit_date"] + plus7days < datetime.now():</pre>
            return False
    signals.confirmation_received.connect(check_submit_date_is_within_last_
\rightarrow 7days)
# change get_comment_create_data in django_comments_xtd/forms.py to cheat a
# bit and make Django believe that the comment was submitted 7 days ago:
def get_comment_create_data(self):
                                                                               #_
        from datetime import timedelta
\hookrightarrow ADD THIS
    data = super(CommentForm, self).get_comment_create_data()
    data['followup'] = self.cleaned_data['followup']
    if settings.COMMENTS_XTD_CONFIRM_EMAIL:
        # comment must be verified before getting approved
        data['is_public'] = False
        data['submit_date'] = datetime.datetime.now() - timedelta(days=8) #_
\hookrightarrow ADD THIS
    return data
```

Try the simple demo site again and see that the *django_comments_xtd/discarded.html* template is rendered after clicking on the confirmation URL.

Maximum Thread Level

Nested comments are disabled by default, to enable them use the following settings:

- COMMENTS_XTD_MAX_THREAD_LEVEL: an integer value
- COMMENTS_XTD_MAX_THREAD_LEVEL_BY_APP_MODEL: a dictionary

Django-comments-xtd inherits the flexibility of django-contrib-comments framework, so that developers can plug it to support comments on as many models as they want in their projects. It is as suitable for one model based project, like comments posted to stories in a simple blog, as for a project with multiple applications and models.

The configuration of the maximum thread level on a simple project is done by declaring the COMMENTS_XTD_MAX_THREAD_LEVEL in the settings.py file:

```
COMMENTS_XTD_MAX_THREAD_LEVEL = 2
```

Comments then could be nested up to level 2:

```
<In an instance detail page that allows comments>

First comment (level 0)

|-- Comment to First comment (level 1)

|-- Comment to Comment to First comment (level 2)
```

Comments posted to instances of every model in the project will allow up to level 2 of threading.

On a project that allows users posting comments to instances of different models, the developer may want to declare a maximum thread level on a per app.model basis. For example, on an imaginary blog project with stories, quotes, diary entries and book/movie reviews, the developer might want to define a default, project wide, maximum thread level of 1 for any model and an specific maximum level of 5 for stories and quotes:

```
COMMENTS_XTD_MAX_THREAD_LEVEL = 1
COMMENTS_XTD_MAX_THREAD_LEVEL_BY_APP_MODEL = {
    'blog.story': 5,
    'blog.quote': 5,
}
```

So that blog.review and blog.diaryentry instances would support comments nested up to level 1, while blog.story and blog.quote instances would allow comments nested up to level 5.

3.2 Web API

django-comments-xtd uses django-rest-framework to expose a Web API that provides developers with access to the same functionalities offered through the web user interface. The Web API has been designed to cover the needs required by the *JavaScript plugin*, and it's open to grow in the future to cover additional functionalities.

There are 5 methods available to perform the following actions:

- 1. Post a new comment.
- 2. Retrieve the list of comments posted to a given content type and object ID.
- 3. Retrieve the number of comments posted to a given content type and object ID.
- 4. Post user's like/dislike feedback.
- 5. Post user's removal suggestions.

Finally there is the ability to generate a view action in django_comments_xtd.api.frontend to return the commentbox props as used by the *JavaScript plugin* plugin for use with an existing django-rest-framework project.

Table of Contents

Post a new comment

- Retrieve comment list
- Retrieve comments count
- Post like/dislike feedback
- Post removal suggestions

3.2.1 Post a new comment

URL name: comments-xtd-api-create
Mount point: <comments-mount-point>/api/comment/
HTTP Methods: POST
HTTP Responses: 201, 202, 204, 403
Serializer: django_comments_xtd.api.serializers.WriteCommentSerializer

This method expects the same fields submitted in a regular django-comments-xtd form. The serializer uses the function django_comments.get_form to verify data validity.

Meaning of the HTTP Response codes:

- 201: Comment created.
- 202: Comment in moderation.
- 204: Comment confirmation has been sent by mail.
- 403: Comment rejected, as in Disallow black listed domains.

3.2.2 Retrieve comment list

URL name: comments-xtd-api-list

Mount point: <comments-mount-point>/api/<content-type>/<object-pk>/

<content-type> is a hyphen separated lowecase pair app_label-model <object-pk> is an integer representing the object ID.

HTTP Methods: GET

HTTP Responses: 200

Serializer: django_comments_xtd.api.serializers.ReadCommentSerializer

This method retrieves the list of comments posted to a given content type and object ID:

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```
"comment": "Integer erat leo, ...",
    "flags": {
        "dislike": {
            "active": false,
            "users": []
        },
        "like": {
            "active": false,
            "users": [
                "1:admin",
                "5:alice",
                "2:fulanito",
                "4:joebloggs",
                "3:menganito"
            ]
        },
        "removal": {
            "active": false,
            "count": null
        }
    },
    "id": 10,
    "is_removed": false,
    "level": 0,
    "parent_id": 10,
    "permalink": "/comments/cr/8/4/#c10",
    "submit_date": "May 18, 2017, 9:19 AM",
    "user_avatar": "http://www.gravatar.com/avatar/7dad9576 ...",
    "user_moderator": true,
    "user_name": "Joe Bloggs",
    "user_url": ""
},
{
    . . .
}
```

3.2.3 Retrieve comments count

```
$ http http://localhost:8000/comments/api/blog-post/4/count/
HTTP/1.0 200 OK
Allow: GET, HEAD, OPTIONS
Content-Length: 11
```

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3.2.4 Post like/dislike feedback

URL name: comments-xtd-api-feedback Mount point: <comments-mount-point>/api/feedback/ HTTP Methods: POST HTTP Responses: 201, 204, 403 Serializer: django_comments_xtd.api.serializers.FlagSerializer

This method toggles flags like/dislike for a comment. Successive calls set/unset the like/dislike flag:

Calling it again unsets the "I liked it" flag:

```
$ http -a admin:admin POST http://localhost:8000/comments/api/feedback/_

comment=10 flag="like"

HTTP/1.0 204 No Content

Allow: POST, OPTIONS

Content-Length: 0

Date: Tue, 23 May 2017 12:26:56 GMT

Server: WSGIServer/0.2 CPython/3.6.0

Vary: Accept, Cookie

X-Frame-Options: SAMEORIGIN
```

It requires the user to be logged in:

```
$ http POST http://localhost:8000/comments/api/feedback/ comment=10 flag=

    "like"

HTTP/1.0 403 Forbidden
Allow: POST, OPTIONS
Content-Length: 58
Content-Type: application/json
Date: Tue, 23 May 2017 12:27:31 GMT
Server: WSGIServer/0.2 CPython/3.6.0
Vary: Accept, Cookie
X-Frame-Options: SAMEORIGIN
{
    "detail": "Authentication credentials were not provided."
}
```

3.2.5 Post removal suggestions

URL name: comments-xtd-api-flag Mount point: <comments-mount-point>/api/flag/ HTTP Methods: POST HTTP Responses: 201, 403 Serializer: django_comments_xtd.api.serializers.FlagSerializer

This method sets the *removal suggestion* flag on a comment. Once created for a given user successive calls return 201 but the flag object is not created again.

```
$ http POST http://localhost:8000/comments/api/flag/ comment=10 flag="report"
HTTP/1.0 201 Created
Allow: POST, OPTIONS
Content-Length: 42
Content-Type: application/json
Date: Tue, 23 May 2017 12:35:02 GMT
Server: WSGIServer/0.2 CPython/3.6.0
Vary: Accept, Cookie
X-Frame-Options: SAMEORIGIN
{
    "comment": 10,
    "flag": "removal suggestion"
}
```

As the previous method, it requires the user to be logged in.

3.3 JavaScript plugin

As of version 2.0 django-comments-xtd comes with a JavaScript plugin that enables comment support as in a Single Page Application fashion. Comments are loaded and sent in the background, as long as like/dislike opinions. There is an active verification, based on polling, that checks whether there are new incoming comments to show to the user, and an update button that allows the user to refresh the tree, highlighting new comments with a green label to indicate recently received comment entries.

Note: Future v3 of django-comments-xtd will offer a vanilla JavaScript plugin free of frontend choices, to replace the current plugin based on ReactJS, jQuery and Twitter-bootstrap.

3 comments.

Post	t your comment
Your comment	
Notify m	ne about follow-up comments
SEND	PREVIEW

Ther	e is 1 new comment.	UPDATE
2	Nov. 29, 2018, 5:08 a.m Alice Aenean hendrerit elit eu lorem cursus molestie. Donec et sapien non massa l sit amet tortor. Integer vulputate, est id mollis malesuada, nisl enim volutpat enim purus eget ante. Suspendisse ut ornare risus. Proin dignissim urna quis luctus.	lacus, id rhoncus
	 Nov. 29, 2018, 5:09 a.m Joe Bloggs moderator Cras ante lorem, fringilla sed elit volutpat, sodales rutrum nulla. Cu ullamcorper blandit. Maecenas id dapibus risus, at eleifend purus. Image: Image: I	
2	Nov. 29, 2018, 5:07 a.m Luis López Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris tincidunt ipsu fermentum mi porttitor ac. Integer nec metus ac velit posuere posuere eu qui auctor dolor vitae ex dapibus fermentum. Curabitur congue mi in neque dictu augue pellentesque.	s mauris. Integer

This plugin is done by making choices that might not be the same you made in your own projects.

3.3.1 Frontend opinions

Django is a backend framework imposing little opinions regarding the frontend. It merely uses jQuery in the admin site. Nothing more. That leaves developers the choice to pick anything they want for the frontend to go along with the backend.

For backend developers the level of stability found in Python and Django contrasts with the active diversity of JavaScript libraries available for the frontend.

The JavaScript plugin included in the app is a mix of frontend decisions with the goal to provide a quick and full frontend solution. Doing so the app is ready to be plugged in a large number of backend projects, and in a reduced set of frontend stacks.

The JavaScript Plugin is based on:

- ReactJS
- jQuery (merely for Ajax)
- Remarkable (for Markdown markup support)
- Twitter-bootstrap (for the UI and the tooltip utility)

The build process is based on Webpack2 instead of any other as good a tool available in the JavaScript building tools landscape.

The decision of building a plugin based on these choices doesn't mean there can't be other ones. The project is open to improve its own range of JavaScript plugins through contributions. If you feel like improving the current plugin or providing additional ones, please, consider to integrate it using Webpack2 and try to keep the source code tree as clean and structured as possible.

3.3.2 Build process

In order to further develop the current plugin, fix potential bugs or install the the plugin from the sources, you have to use NodeJS and NPM.

Set up the backend

Before installing the frontend dependencies we will prepare a Python virtualenv in which we will have all the backend dependencies installed. Let's start by creating the virtualenv and fetching the sources:

```
$ virtualenv ~/venv/django-comments-xtd
$ source ~/venv/django-comments-xtd/bin/activate
(django-comments-xtd)$ cd ~/src/ # or cd into your sources dir of choice.
(django-comments-xtd)$ git clone https://github.com/danirus/django-comments-
→xtd.git
(django-comments-xtd)$ cd django-comments-xtd
(django-comments-xtd)$ python setup.py develop
```

Check whether the app passes the battery of tests:

```
(django-comments-xtd) $ python setup.py test
```

As the sample Django project you can use the **comp** example site. Install first the django-markdown2 package (required by the comp example project) and setup the project:

```
(django-comments-xtd)$ cd example/comp
(django-comments-xtd)$ pip install django-markdown2
(django-comments-xtd)$ pip install django-rosetta
(django-comments-xtd)$ python manage.py migrate
(django-comments-xtd)$ python manage.py loaddata ../fixtures/auth.json
(django-comments-xtd)$ python manage.py loaddata ../fixtures/sites.json
(django-comments-xtd)$ python manage.py loaddata ../fixtures/articles.json
(django-comments-xtd)$ python manage.py runserver
```

Now the project is ready and the plugin will load from the existing bundle files. Check it out by visiting an article's page and sending some comments. No frontend source package has been installed so far.

Install frontend packages

At this point open another terminal and cd into django-comments-xtd source directory again, then install all the frontend dependencies:

```
$ cd ~/src/django-comments-xtd
$ npm install
```

It will install all the dependencies listed in the **package.json** file in the local *node_modules* directory. Once it's finished run webpack to build the bundles and watch for changes in the source tree:

```
$ webpack --watch
```

Webpack will put the bundles in the static directory of django-comments-xtd and Django will fetch them from there when rendering the article's detail page:

3.3.3 Code structure

Plugin sources live inside the static directory of django-comments-xtd:

The initial development was inspired by the ReactJS Comment Box tutorial. Component names reflect those of the ReactJS tutorial.

The application entry point is located inside the index.js file. The props passed to the **CommentBox** object are those declared in the var window.comments_props defined in the django template:

```
<script>
window.comments_props = {% get_commentbox_props for object %};
window.comments_props_override = {
    allow_comments: {%if object.allow_comments%}true{%else%}false{%endif%},
    allow_feedback: true,
    show_feedback: true,
    allow_flagging: true,
    polling_interval: 2000,
    };
</script>
```

And are overriden by those declared in the var window.comments_props_override.

To use without the template, you can set up an endpoint to get the props by generating a view action within the *Web API*.

3.3.4 Improvements and contributions

The current ReactJS plugin could be ported to an Inferno plugin within a reasonable timeframe. Inferno offers a lighter footprint compared to ReactJS plus it is among the faster JavaScript frontend frameworks.

Another improvement pending for implementation would be a websocket based update. At the moment comment updates are received by active polling. See commentbox.jsx, method load_count of the CommentBox component.

Contributions are welcome, write me an email at mbox@danir.us or open an issue in the GitHub repository.

3.4 Filters and template tags

Django-comments-xtd provides 5 template tags and 3 filters. Load the module to make use of them in your templates:

```
{% load comments_xtd %}
```

Table of Contents

- Tag render_xtdcomment_tree
- Tag get_xtdcomment_tree
- Tag render_last_xtdcomments
- Tag get_last_xtdcomments
- Tag get_xtdcomment_count
- *Filter* xtd_comment_gravatar
- Filter xtd_comment_gravatar_url
- Filter render_markup_comment
- Filter can_receive_comments_from

3.4.1 Tag render_xtdcomment_tree

Tag syntax:

Renders the threaded structure of comments posted to the given object using the first template found from the list:

- django_comments_xtd/<app>/<model>/comment_tree.html
- django_comments_xtd/<app>/comment_tree.html
- django_comments_xtd/comment_tree.html (provided with the app)

It expects either an object specified with the for <object> argument, or a variable named comments, which might be present in the context or received as comments=<comments-object>. When the for <object> argument is specified, it retrieves all the comments posted to the given object, ordered by the thread_id and order within the thread, as stated by the setting COMMENTS_XTD_LIST_ORDER.

It supports 4 optional arguments:

- allow_flagging, enables the comment removal suggestion flag. Clicking on the removal suggestion flag redirects to the login view whenever the user is not authenticated.
- allow_feedback, enables the like and dislike flags. Clicking on any of them redirects to the login view whenever the user is not authenticated.
- show_feedback, shows two list of users, of those who like the comment and of those who don't like it. By overriding includes/django_comments_xtd/user_feedback.html you could show the lists only to authenticated users.
- using <template_path>, makes the templatetag use a different template, instead of the default one, django_comments_xtd/comment_tree.html

Example usage

In the usual scenario the tag is used in the object detail template, i.e.: blog/article_detail.html, to include all comments posted to the article, in a tree structure:

3.4.2 Tag get_xtdcomment_tree

Tag syntax:

{

}

{% get_xtdcomment_tree for [object] as [varname] [with_feedback] %}

Returns a dictionary to the template context under the name given in [varname] with the comments posted to the given [object]. The dictionary has the form:

```
'comment': xtdcomment_object,
'children': [ list_of_child_xtdcomment_dicts ]
```

The comments will be ordered by the thread_id and order within the thread, as stated by the setting COMMENTS_XTD_LIST_ORDER.

When the optional argument with_feedback is specified the returned dictionary will contain two additional attributes with the list of users who liked the comment and the list of users who disliked it:

```
'xtdcomment': xtdcomment_object,
'children': [ list_of_child_xtdcomment_dicts ],
'likedit': [user_a, user_b, ...],
'dislikedit': [user_n, user_m, ...]
```

Example usage

Get an ordered dictionary with the comments posted to a given blog story and store the dictionary in a template context variabled called comment_tree:

{% get_xtdcomment_tree for story as comments_tree with_feedback %}

3.4.3 Tag render_last_xtdcomments

Tag syntax:

```
{% render_last_xtdcomments [N] for [app].[model] [[app].[model] ...] %}
```

Renders the list of the last N comments for the given pairs <app>.<model> using the following search list for templates:

- django_comments_xtd/<app>/<model>/comment.html
- django_comments_xtd/<app>/comment.html
- django_comments_xtd/comment.html

Example usage

Render the list of the last 5 comments posted, either to the blog.story model or to the blog.quote model. See it in action in the *Multiple Demo Site*, in the *blog homepage*, template blog/homepage.html:

{% render_last_xtdcomments 5 for blog.story blog.quote %}

3.4.4 Tag get_last_xtdcomments

Tag syntax:

```
{% get_last_xtdcomments [N] as [varname] for [app].[model] [[app].[model] ...] %}
```

Gets the list of the last N comments for the given pairs <app>.<model> and stores it in the template context whose name is defined by the as clause.

Example usage

Get the list of the last 10 comments two models, Story and Quote, have received and store them in the context variable last_10_comment. You can then loop over the list with a for tag:

```
{% get_last_xtdcomments 10 as last_10_comments for blog.story blog.quote %}
{% if last_10_comments %}
    {% for comment in last_10_comments %}
        {{ comment.comment|linebreaks }} ...
    {% endfor %}
    {% else %}
        No comments
    {% endif %}
```

3.4.5 Tag get_xtdcomment_count

Tag syntax:

{% get_xtdcomment_count as [varname] for [app].[model] [[app].[model] ...] %}

Gets the comment count for the given pairs <app>.<model> and populates the template context with a variable containing that value, whose name is defined by the as clause.

Example usage

Get the count of comments the model Story of the app blog have received, and store it in the context variable comment_count:

{% get_xtdcomment_count **as** comment_count **for** blog.story %}

Get the count of comments two models, Story and Quote, have received and store it in the context variable comment_count:

```
{% get_xtdcomment_count as comment_count for blog.story blog.quote %}
```

3.4.6 Filter xtd_comment_gravatar

Filter syntax:

```
{{ comment.email|xtd_comment_gravatar }}
```

A simple gravatar filter that inserts the gravatar image associated to an email address.

This filter has been named xtd_comment_gravatar as oposed to simply gravatar to avoid potential name collisions with other gravatar filters the user might have opted to include in the template.

You can custom the way of generating the avatar, like this:

{{ comment.emaillxtd_comment_gravatar: '48,mm' }}

3.4.7 Filter xtd_comment_gravatar_url

Filter syntax:

```
{{ comment.email|xtd_comment_gravatar_url }}
```

A simple gravatar filter that inserts the gravatar URL associated to an email address.

This filter has been named xtd_comment_gravatar_url as oposed to simply gravatar_url to avoid potential name collisions with other gravatar filters the user might have opted to include in the template.

3.4.8 Filter render_markup_comment

Filter syntax:

```
{{ comment.comment | render_markup_comment }}
```

Renders a comment using a markup language specified in the first line of the comment. It uses django-markup to parse the comments with a markup language parser and produce the corresponding output.

Example usage

A comment posted with a content like:

```
#!markdown
An [example](http://url.com/ "Title")
```

Would be rendered as a markdown text, producing the output:

example

Available markup languages are:

- Markdown, when starting the comment with #!markdown.
- reStructuredText, when starting the comment with #!restructuredtext.
- Linebreaks, when starting the comment with #!linebreaks.

3.4.9 Filter can_receive_comments_from

Filter syntax:

```
{{ object|can_receive_comments_from:user }}
```

Returns True depending on the value of the 'who_can_post' entry in the COMMENTS_XTD_APP_MODEL_OPTIONS.

3.5 Migrating to django-comments-xtd

If your project uses django-contrib-comments you can easily plug django-comments-xtd to add extra functionalities like comment confirmation by mail, comment threading and follow-up notifications.

This section describes how to make django-comments-xtd take over comments support in a project in which djangocontrib-comments tables have received data already.

3.5.1 Preparation

First of all, install django-comments-xtd:

```
(venv)$ cd mysite
(venv)$ pip install django-comments-xtd
```

Then edit the settings module and change your INSTALLED_APPS so that django_comments_xtd and django_comments are listed in this order. Also change the COMMENTS_APP and add the EMAIL_* settings to be able to send mail messages:

```
INSTALLED_APPS = [
    . . .
    'django_comments_xtd',
    'django_comments',
    . . .
]
. . .
COMMENTS_APP = 'django_comments_xtd'
# Either enable sending mail messages to the console:
EMAIL_BACKEND = 'django.core.mail.backends.console.EmailBackend'
# Or set up the EMAIL_* settings so that Django can send emails:
EMAIL_HOST = "smtp.mail.com"
EMAIL_PORT = "587"
EMAIL_HOST_USER = "alias@mail.com"
EMAIL_HOST_PASSWORD = "yourpassword"
EMAIL_USE_TLS = True
DEFAULT_FROM_EMAIL = "Helpdesk <helpdesk@yourdomain>"
```

Edit the urls module of the project and mount django_comments_xtd's URLs in the path in which you had django_comments' URLs, django_comments_xtd's URLs includes django_comments':

```
from django.conf.urls import include, url
urlpatterns = [
    ...
    url(r'^comments/', include('django_comments_xtd.urls')),
    ...
]
```

Now create the tables for django-comments-xtd:

```
(venv)$ python manage.py migrate
```

3.5.2 Populate comment data

The following step will populate **XtdComment**'s table with data from the **Comment** model. For that purpose you can use the populate_xtdcomments management command:

```
(venv)$ python manage.py populate_xtdcomments
Added 3468 XtdComment object(s).
```

You can pass as many DB connections as you have defined in DATABASES and the command will run in each of the databases, populating the **XtdComment**'s table with data from the comments table existing in each database.

Now the project is ready to handle comments with django-comments-xtd.

3.6 Customizing django-comments-xtd

django-comments-xtd can be extended in the same way as django-contrib-comments. There are three points to observe:

- 1. The setting COMMENTS_APP must be 'django_comments_xtd'.
- The setting COMMENTS_XTD_MODEL must be your model class name, i.e.: 'mycomments.models. MyComment'.
- 3. The setting COMMENTS_XTD_FORM_CLASS must be your form class name, i.e.: 'mycomments.forms. MyCommentForm'.

In addition to that, write an admin.py module to see the new comment class in the admin interface. Inherit from django_commensts_xtd.admin.XtdCommentsAdmin. You might want to add your new comment fields to the comment list view, by rewriting the list_display attribute of your admin class. Or change the details view customizing the fieldsets attribute.

3.6.1 Custom Comments Demo

The demo site custom_comments available with the source code in GitHub (directory django_comments_xtd\demos\custom_comments) implements a sample Django project with comments that extend django_comments_xtd with an additional field, a title.

settings Module

The settings.py module contains the following customizations:

```
INSTALLED_APPS = (
    # ...
    'django_comments_xtd',
    'django_comments',
    'articles',
    'mycomments',
    # ...
)
COMMENTS_APP = "django_comments_xtd"
COMMENTS_XTD_MODEL = 'mycomments.models.MyComment'
COMMENTS_XTD_FORM_CLASS = 'mycomments.forms.MyCommentForm'
```

models Module

The new class MyComment extends django_comments_xtd's XtdComment with a title field:

```
from django.db import models
from django_comments_xtd.models import XtdComment
class MyComment(XtdComment):
    title = models.CharField(max_length=256)
```

forms Module

The forms module extends XtdCommentForm and rewrites the method get_comment_create_data:

```
from django import forms
from django.utils.translation import ugettext_lazy as _
from django_comments_xtd.forms import XtdCommentForm
from django_comments_xtd.models import TmpXtdComment

class MyCommentForm(XtdCommentForm):
   title = forms.CharField(
        max_length=256,
        widget=forms.TextInput(attrs={'placeholder': _('title')})
   )

   def get_comment_create_data(self):
      data = super(MyCommentForm, self).get_comment_create_data()
      data.update({'title': self.cleaned_data['title']})
      return data
```

admin Module

The admin module provides a new class MyCommentAdmin that inherits from XtdCommentsAdmin and customize some of its attributes to include the new field title:

```
from django.contrib import admin
from django.utils.translation import ugettext_lazy as _
from django_comments_xtd.admin import XtdCommentsAdmin
from custom_comments.mycomments.models import MyComment
class MyCommentAdmin(XtdCommentsAdmin):
    list_display = ('thread_level', 'title', 'cid', 'name', 'content_type',
                    'object_pk', 'submit_date', 'followup', 'is_public',
                    'is_removed')
    list_display_links = ('cid', 'title')
    fieldsets = (
                        {'fields': ('content_type', 'object_pk', 'site')}),
        (None,
        (_('Content'), {'fields': ('title', 'user', 'user_name', 'user_email',
                                  'user_url', 'comment', 'followup')}),
        (_('Metadata'), {'fields': ('submit_date', 'ip_address',
                                    'is_public', 'is_removed')}),
   )
admin.site.register(MyComment, MyCommentAdmin)
```

Templates

You will need to customize the following templates:

- comments/form.html to include new fields.
- comments/preview.html to preview new fields.
- django_comments_xtd/email_confirmation_request.{txt|html} to add the new fields to the confirmation request, if it was necessary. This demo overrides them to include the title field in the mail.
- django_comments_xtd/comments_tree.html to show the new field when displaying the comments. If your project doesn't allow nested comments you can use either this template or *comments/list.html*'.
- django_comments_xtd/reply.html to show the new field when displaying the comment the user is replying to.

3.6.2 Modifying comments with code

Here's an example of how to access the underlying model storing your comments:

```
from django_comments_xtd.models import XtdComment
from django.contrib.contenttypes.models import ContentType
def unbsubscribe_everyone(model_instance):
    content_type = ContentType.objects.get_for_model(model_instance)
    XtdComment.objects\
    .filter(content_type=content_type, object_pk=model_instance.pk)\
    .update(followup=False)
```

3.7 Internationalization

django-comments-xtd is i18n ready. Please, consider extending support for your language if it's not listed below. At the moment it's available only in:

- English, en (default language)
- Finnish, fi
- French, fr
- Norwegian, no
- Spanish, es

3.7.1 Contributions

This is a step by step guide to help extending the internationalization of django-comments-xtd. Install the **comp** example site. It will be used along with django-rosetta to help with translations.

```
$ virtualenv venv
$ source venv/bin/activate
(venv)$ git clone git://github.com/danirus/django-comments-xtd.git
(venv)$ cd django-comments-xtd/example/comp
(venv)$ pip install django-rosetta django-markdown2
```

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```
(venv)$ python manage.py migrate
(venv)$ python manage.py loaddata ../fixtures/auth.json
(venv)$ python manage.py loaddata ../fixtures/sites.json
(venv)$ python manage.py loaddata ../fixtures/articles.json
(venv)$ python manage.py loaddata ../fixtures/quotes.json
(venv)$ python manage.py runserver
```

Edit the **comp/settings.py** module. Add the ISO-639-1 code of the language you want to support to LANGUAGES and add 'rosetta' to your INSTALLED_APPS.

```
LANGUAGES = (
    ('nl', 'Dutch'),
    ('en', 'English'),
    ('fi', 'Finnish'),
    ('fr', 'French'),
    ('de', 'German'),
    ('no', 'Norwegian'),
    ('ru', 'Russian'),
    ('ru', 'Russian'),
    ...
)
INSTALLED_APPS = [
    ...
    'rosetta',
    ...
]
```

Note: When django-rosetta is enabled in the **comp** project, the homepage shows a selector to help switch languages. It uses the language_tuple filter, located in the **comp_filters.py** module, to show the language name in both, the translated form and the original language.

We have to create the translation catalog for the new language. Use the ISO-639-1 code to indicate the language. There are two catalogs to translate, one for the backend and one for the frontend.

The frontend catalog is produced out of the **plugin-X.Y.Z.js** file. It's a good idea to run the webpack --watch command if you change the messages in the sources of the plugin (placed in the **js/src/** directory). This way the plugin is built automatically and the Django makemessages command will fetch the new messages accordingly.

Keep the runserver command launched above running in one terminal and open another terminal to run the **makemes**sages and **compilemessages** commands:

```
$ source venv/bin/activate
(venv)$ cd django-comments-xtd/django_comments_xtd
(venv)$ django-admin makemessages -1 de
(venv)$ django-admin makemessages -d djangojs -1 de
```

Now head to the rosetta page, under http://localhost:8000/rosetta/, do login with user admin and password admin, and proceed to translate the messages. Find the two catalogs for django-comments-xtd under the **Third Party** filter, at the top-right side of the page.

Django must have the catalogs compiled before the messages show up in the comp site. Run the compile message for that purpose:

```
(venv)$ django-admin compilemessages
```

The **comp** example site is now ready to show the messages in the new language. It's time to verify that the translation fits the UI. If everything looks good, please, make a Pull Request to add the new .po files to the upstream repository.

3.8 Settings

To use django-comments-xtd it is necessary to declare the COMMENTS_APP setting in your project's settings module as:

COMMENTS_APP = "django_comments_xtd"

A number of additional settings are available to customize django-comments-xtd behaviour.

```
      Table of Contents

      • COMMENTS_XTD_MAX_THREAD_LEVEL

      • COMMENTS_XTD_MAX_THREAD_LEVEL_BY_APP_MODEL

      • COMMENTS_XTD_CONFIRM_EMAIL

      • COMMENTS_XTD_FROM_EMAIL

      • COMMENTS_XTD_CONTACT_EMAIL

      • COMMENTS_XTD_FORM_CLASS

      • COMMENTS_XTD_MODEL

      • COMMENTS_XTD_LIST_ORDER

      • COMMENTS_XTD_MARKUP_FALLBACK_FILTER

      • COMMENTS_XTD_SALT

      • COMMENTS_XTD_SEND_HTML_EMAIL

      • COMMENTS_XTD_THREADED_EMAILS

      • COMMENTS_XTD_APP_MODEL_OPTIONS

      • COMMENTS_XTD_API_USER_REPR
```

3.8.1 COMMENTS_XTD_MAX_THREAD_LEVEL

Optional. Indicates the **Maximum thread level** for comments. In other words, whether comments can be nested. This setting established the default value for comments posted to instances of every model instance in Django. It can be overriden on per app.model basis using the *COMMENTS_XTD_MAX_THREAD_LEVEL_BY_APP_MODEL*, introduced

An example:

right after this section.

COMMENTS_XTD_MAX_THREAD_LEVEL = 8

It defaults to 0. What means nested comments are not permitted.

3.8.2 COMMENTS_XTD_MAX_THREAD_LEVEL_BY_APP_MODEL

Optional. The **Maximum thread level on per app.model basis** is a dictionary with pairs *app_label.model* as keys and the maximum thread level for comments posted to instances of those models as values. It allows definition of max comment thread level on a per *app_label.model* basis.

An example:

```
COMMENTS_XTD_MAX_THREAD_LEVEL = 0
COMMENTS_XTD_MAX_THREAD_LEVEL_BY_APP_MODEL = {
    'projects.release': 2,
        'blog.stories': 8,
        'blog.quotes': 8,
        'blog.diarydetail': 0 # Omit, defaults to COMMENTS_XTD_MAX_THREAD_LEVEL
}
```

In the example, comments posted to projects.release instances can go up to level 2:

It defaults to {}. What means the maximum thread level is setup with COMMENTS_XTD_MAX_THREAD_LEVEL.

3.8.3 COMMENTS_XTD_CONFIRM_EMAIL

Optional. It specifies the **confirm comment post by mail** setting, establishing whether a comment confirmation should be sent by mail. If set to True a confirmation message is sent to the user with a link on which she has to click to confirm the comment. If the user is already authenticated the confirmation is not sent and the comment is accepted, if no moderation has been setup up, with no further confirmation needed.

If is set to False, and no moderation has been set up to potentially discard it, the comment will be accepted.

Read about the *Moderation* topic in the tutorial.

An example:

```
COMMENTS_XTD_CONFIRM_EMAIL = True
```

It defaults to True.

3.8.4 COMMENTS_XTD_FROM_EMAIL

Optional. It specifies the **from mail address** setting used in the *from* field when sending emails.

An example:

COMMENTS_XTD_FROM_EMAIL = "noreply@yoursite.com"

```
It defaults to settings.DEFAULT_FROM_EMAIL.
```

3.8.5 COMMENTS_XTD_CONTACT_EMAIL

Optional. It specifies a **contact mail address the user could use to get in touch with a helpdesk or support personnel. It's used in both templates, **email_confirmation_request.txt** and **email_confirmation_request.html**, from the **templates/django_comments_xtd** directory.

An example:

COMMENTS_XTD_FROM_EMAIL = "helpdesk@yoursite.com"

It defaults to settings.DEFAULT_FROM_EMAIL.

3.8.6 COMMENTS_XTD_FORM_CLASS

Optional, form class to use when rendering comment forms. It's a string with the class path to the form class that will be used for comments.

An example:

COMMENTS_XTD_FORM_CLASS = "mycomments.forms.MyCommentForm"

It defaults to "django_comments_xtd.forms.XtdCommentForm".

3.8.7 COMMENTS_XTD_MODEL

Optional, represents the model class to use for comments. It's a string with the class path to the model that will be used for comments.

An example:

COMMENTS_XTD_MODEL = "mycomments.models.MyCommentModel"

Defaults to "django_comments_xtd.models.XtdComment".

3.8.8 COMMENTS_XTD_LIST_ORDER

Optional, represents the field ordering in which comments are retrieve, a tuple with field names, used by the get_queryset method of XtdComment model's manager.

It defaults to ('thread_id', 'order')

3.8.9 COMMENTS_XTD_MARKUP_FALLBACK_FILTER

Optional, default filter to use when rendering comments. Indicates the default markup filter for comments. This value must be a key in the MARKUP_FILTER setting. If not specified or None, comments that do not indicate an intended markup filter are simply returned as plain text.

An example:

COMMENTS_XTD_MARKUP_FALLBACK_FILTER = 'markdown'

It defaults to None.

3.8.10 COMMENTS_XTD_SALT

Optional, it is the **extra key to salt the comment form**. It establishes the bytes string extra_key used by signed. dumps to salt the comment form hash, so that there an additional secret is in use to encode the comment before sending it for confirmation within a URL.

An example:

COMMENTS_XTD_SALT = 'G0h5gt073h6gH4p25Gs2g5AQ2Tm256yGt134tMP5TgCX\$&HKOYRV'

It defaults to an empty string.

3.8.11 COMMENTS_XTD_SEND_HTML_EMAIL

Optional, enable/disable HTML mail messages. This boolean setting establishes whether email messages have to be sent in HTML format. By the default messages are sent in both Text and HTML format. By disabling the setting, mail messages will be sent only in text format.

An example:

COMMENTS_XTD_SEND_HTML_EMAIL = False

It defaults to True.

3.8.12 COMMENTS_XTD_THREADED_EMAILS

Optional, enable/disable sending mails in separated threads. For low traffic websites sending mails in separate threads is a fine solution. However, for medium to high traffic websites such overhead could be reduced by using other solutions, like a Celery application or any other detached from the request-response HTTP loop.

An example:

```
COMMENTS_XTD_THREADED_EMAILS = False
```

Defaults to True.

3.8.13 COMMENTS_XTD_APP_MODEL_OPTIONS

Optional. Allow enabling/disabling commenting options on per **app_label.model** basis. The options available are the following:

- allow_flagging: Allow registered users to flag comments as inappropriate.
- allow_feedback: Allow registered users to like/dislike comments.
- show_feedback: Allow django-comments-xtd to report the list of users who liked/disliked the comment. The representation of each user in the list depends on the next setting :set-ting::COMMENTS_XTD_API_USER_REPR.
- who_can_post: Can be either 'all' or 'users'. When it is 'all', all users can post, whether registered users or mere visitors. When it is 'users', only registered users can post. Read the use case *Only signed in users can comment*, for details on how to set it up.

An example use:

```
COMMENTS_XTD_APP_MODEL_OPTIONS = {
    'blog.post': {
        'allow_flagging': True,
        'allow_feedback': True,
        'show_feedback': True,
        'who_can_post': 'users'
    }
}
```

Defaults to:

```
COMMENTS_XTD_APP_MODEL_OPTIONS = {
    'default': {
        'allow_flagging': False,
        'allow_feedback': False,
        'show_feedback': False,
        'who_can_post': 'all'
    }
}
```

3.8.14 COMMENTS_XTD_API_USER_REPR

Optional. Function that receives a user object and returns its string representation. It's used to produced the list of users who liked/disliked comments. By default it outputs the username, but it could perfectly return the full name:

COMMENTS_XTD_API_USER_REPR = **lambda** u: u.get_full_name()

Defaults to:

COMMENTS_XTD_API_USER_REPR = **lambda** u: u.username

3.9 Templates

This page details the list of templates provided by django-comments-xtd. They are located under the django_comments_xtd/ templates directory.

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- email_confirmation_request
- comment_tree.html
- user_feedback.html
- like.html
- liked.html
- dislike.html
- disliked.html
- discarded.html
- email_followup_comment
- comment.html
- posted.html
- reply.html
- muted.html
- only_users_can_post.html

3.9.1 email_confirmation_request

As .html and .txt, this template represents the confirmation message sent to the user when the **Send** button is clicked to post a comment. Both templates are sent in a multipart message, or only in text format if the *COMMENTS_XTD_SEND_HTML_EMAIL* setting is set to False.

In the context of the template the following objects are expected:

- The site object (django-contrib-comments, and in turn django-comments-xtd, use the Django Sites Framework).
- The comment object.

{

• The confirmation_url the user has to click on to confirm the comment.

3.9.2 comment_tree.html

This template is rendered by the Tag render_xtdcomment_tree to represent the comments posted to an object.

In the context of the template the following objects are expected:

• A list of dictionaries called comments in which each element is a dictionary like:

```
'comment': xtdcomment_object,
   'children': [ list_of_child_xtdcomment_dicts ]
}
```

Optionally the following objects can be present in the template:

- A boolean allow_flagging to indicate whether the user will have the capacity to suggest comment removal.
- A boolean allow_feedback to indicate whether the user will have the capacity to like/dislike comments. When True the special template user_feedback.html will be rendered.

3.9.3 user_feedback.html

This template is expected to be in the directory includes/django_comments_xtd/, and it provides a way to customized the look of the like and dislike buttons as long as the list of users who clicked on them. It is included from comment_tree.html. The template is rendered only when the *Tag render_xtdcomment_tree* is used with the argument allow_feedback.

In the context of the template is expected:

- The boolean variable show_feedback, which will be set to True when passing the argument show_feedback to the *Tag render_xtdcomment_tree*. If True the template will show the list of users who liked the comment and the list of those who disliked it.
- A comment item.

Look at the section *Show the list of users* to read on this particular topic.

3.9.4 like.html

This template is rendered when the user clicks on the like button of a comment.

The context of the template expects:

- A boolean already_liked_it that indicates whether the user already clicked on the like button of this comment. In such a case, if the user submits the form a second time the liked-it flag is withdrawn.
- The comment subject to be liked.

3.9.5 liked.html

This template is rendered when the user click on the submit button of the form presented in the like.html template. The template is meant to thank the user for the feedback. The context for the template doesn't expect any specific object.

3.9.6 dislike.html

This template is rendered when the user clicks on the **dislike** button of a comment.

The context of the template expects:

- A boolean already_disliked_it that indicates whether the user already clicked on the dislike button for this comment. In such a case, if the user submits the form a second time the disliked-it flag is withdrawn.
- The comment subject to be liked.

3.9.7 disliked.html

This template is rendered when the user click on the submit button of the form presented in the dislike.html template. The template is meant to thank the user for the feedback. The context for the template doesn't expect any specific object.

3.9.8 discarded.html

This template gets rendered if any receiver of the signal confirmation_received returns False. Informs the user that the comment has been discarded. Read the subsection *Signal and receiver* in the **Control Logic** to know about the confirmation_received signal.

3.9.9 email_followup_comment

As .html and .txt, this template represents the mail message sent when there is a new comment following up the user's. It's sent to the user who posted the comment that is being commented in a thread, or that arrived before the one being sent. To receive this email the user must tick the box *Notify me of follow up comments via email*.

The template expects the following objects in the context:

- The site object.
- The comment object about which users are being informed.
- The mute_url to offer the notified user the chance to stop receiving notifications on new comments.

3.9.10 comment.html

This template is rendered under any of the following circumstances:

- When using the Tag render_last_xtdcomments.
- When a logged in user sends a comment via Ajax. The comment gets rendered immediately. JavaScript client side code still has toe handle the response.

3.9.11 posted.html

Rendered when a not authenticated user sends a comment. It informs the user that a confirmation message has been sent and that the link contained in the mail must be clicked to confirm the publication of the comment.

3.9.12 reply.html

Rendered when a user clicks on the **reply** link of a comment. Reply links are created with XtdComment. get_reply_url method. They show up below the text of each comment when they allow nested comments.

3.9.13 muted.html

Rendered when a user clicks on the **mute link** received in a follow-up notification message. It informs the user that the site will not send more notifications on new comments sent to the object.

3.9.14 only_users_can_post.html

django-comments-xtd can be customize so that only registered users can post comments. Read the use case *Only registered users can post*, for details. The purpose of this template is to allow customizing the HTML message displayed when a non-registered visitor gets to the comments page. The message is displayed instead of the comment form.

This template expects a context variable html_id_suffix.

3.10 Use cases

In addition to the standard usage introduced over the previous chapters, this page will list more specific use examples.

3.10.1 Only signed in users can comment

This page describes how to setup django-comments-xtd so that only registered users can write comments or flag them. That means mere visitors will be able to see the comments but won't be able to send them. In order to do so a visitor must login first. The following instructions use the Django admin interface to login and logout users.

Table of Contents

- Simple example using only the backend
- Full featured example using backend and frontend code

Simple example using only the backend

A simple site using django-comments-xtd can be represented by the Simple project.

Customize the simple project

The Simple project is a basic example site that allows both, visitors and registered users, post comments to articles. It has been introduced in the Demo projects page: *Simple project*. The example loads a couple of articles to illustrate the functionality.

If you have already setup the *Simple project*, and have sent a few testing comments to see that visitors and registered users can comment, add the *COMMENTS_XTD_APP_MODEL_OPTIONS* entry at the bottom of the settings.py module to allow only registered users to post comments:

```
COMMENTS_XTD_APP_MODEL_OPTIONS = {
    'default': {
        'allow_flagging': False,
        'allow_feedback': False,
        'show_feedback': False,
        'who_can_post': 'users'
    }
}
```

Once the change is saved and Django has reloaded check that, as before, registered users can comment without issues, however visitors get the HTTP-400 page (Bad Request).

As a final step to customize the simple example site either edit templates/comments/form.html or templates/articles/article_detail.html to display a message inviting visitors to login or register instead of showing the post comment form.

As an example, here is a modified version of the article_detail.html template of the Simple project that displays a message with a link to the login page when the user is not authenticated:

```
[...]
  {% if object.allow_comments %}
   {% if user.is_authenticated %}
     <div class="comment">
       <h5 class="text-center">Post your comment</h5>
       <div class="well my-4">
         {% render comment form for object %}
       </div>
     </div>
    { % else % }
      Only registered users can post comments. Please,
       <a href="{% url 'admin:login' %}?next={{ object.get_absolute_url }}">
→login</a>.
     </p>
    { % endif % }
  { 8 else 8 }
   <h5 class="text-center">comments are disabled for this article</h5>
 { 8 endif 8 }
[...]
```

Full featured example using backend and frontend code

This section goes through the steps to customize a project that uses both, the backend and the frontend side of djangocomments-xtd, to prevent that unregistered users can post comments.

We will use the Comp project.

The *Comp project* contains two very similar apps: articles and quotes. Both apps allow visitors and registered users to post nested comments. The main difference between articles and quotes in the Comp project is that the articles app uses the JavaScript plugin, while the quotes app uses merely the backend.

Customize the quotes app

If you have already setup the *Comp project*, and have sent a few testing comments to see that visitors and registered users can comment, edit the *COMMENTS_XTD_APP_MODEL_OPTIONS* at the bottom of the settings.py and append the pair 'who_can_post': 'users' to the quotes app dictionary:

```
COMMENTS_XTD_APP_MODEL_OPTIONS = {
    'quotes.quote': {
        'allow_flagging': True,
        'allow_feedback': True,
        'show_feedback': True,
        'who_can_post': 'users'
    }
}
```

Once changes are saved and Django has restarted see that registered users can comment without issues. However visitors get the HTTP-400 page (Bad Request).

One last customization is required to prevent the HTTP-400 Bad Request. We have to edit the templates/ quotes/quote_detail.html file and be sure that the block that renders the comment form is not displayed when the user browsing the site is a mere visitor. The following changes will make it:

```
[...] around line 41...
   {% if object.allow_comments %}
     {% if object|can_receive_comments_from:user %}
       <div class="card card-block mt-4 mb-5">
         <div class="card-body">
           <h4 class="card-title text-center pb-3">Post your comment</h4>
           {% render comment form for object %}
         </div>
       </div>
      { 8 else 8 }
       Only registered users can post comments. Please,
         <a href="{% url 'admin:login' %}?next={{ object.get_absolute_url }}
\rightarrow">login</a>.
       </p>
      { 8 endif 8 }
   {% else %}
     <h4 class="mt-4 mb-5 text-center text-secondary">
       Comments are disabled for this quote.
     </h4>
    { 8 endif 8 }
[...]
```

Note: See that in the previous snippet we use the template filter *can_receive_comments_from*. Using this filter you could change the setting 'who_can_post' to 'all' in your *COMMENTS_XTD_APP_MODEL_OPTIONS* to allow mere visitors to post comments, and your template would do as expected without further changes.

If we rather had used {% if user.is_authenticated %} the template would have still to be changed to display the comment form to all, visitors and registered users.

After the template changes are saved, mere users will see a message inviting them to login. Also, the **Reply** link to send nested comments is already aware of the value of the 'who_can_post' setting and will redirect you to login if you have not done so yet.

Customize the articles app of the comp project

The articles app uses the JavaScript plugin. The only change required consist of adding the pair 'who_can_post': 'users' to the 'articles.article' dictionary entry of the *COMMENTS_XTD_APP_MODEL_OPTIONS*, as we did with the quotes app. That will make it work.

Run the site and check that as a mere visitor (logout first) you can not send comments to articles. Instead of the comment form there must be a message in blue saying that **Only registered users can post comments.** If you login and visit an article's page the comment form will be visible again.

The message in blue is the default response hardcoded in the commentbox.jsx module of the JavaScript plugin. The commentbox module controls whether the user in the session can post comments or not. If the user can not post comments it defaults to display that message in blue.

Most of the times we will want to customize that message. We will achieve it by modifying both, the base. html and the articles/article_detail.html, and by creating a new template in the comp/templates/ django_comments_xtd directory called only_users_can_post.html.

The changes in templates/base.html consist of adding a hidden block. We will put content in this hidden block in the articles_detail.html. Add the following HTML code before the script tags in the base.html in the example/comp/templates directory:

Add the following code to templates/articles/article_detail.html:

```
[...] around line 46, right before the {% block extra_js %}...
{% block hidden %}
    {% render_only_users_can_post_template object %}
{% endblock %}
```

And finally create the file only_users_can_post.html within the comp/templates/ django_comments_xtd directory, with the following content in it:

```
<div id="only-users-can-post-{{ html_id_suffix }}">
    Only registered users can post comments. Please,
```

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With all the changes already done, logout of the comp site and reload the article's page. You should see the message with the login link.



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