ToDo webapp using Django

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Django is a high-level Python Web framework-based web framework that allows rapid development and clean, pragmatic design. today we will create a todo app to understand the basics of Django. In this web app, one can create notes like Google Keep or Evernote.

Basic setup

Create a virtual environment, and install the packages:

```
pip install django-crispy-forms
pip install Django
```

Step 1: Start a project with the following command

```
django-admin startproject todo_site
```

Step 2: Change the directory to todo_site.

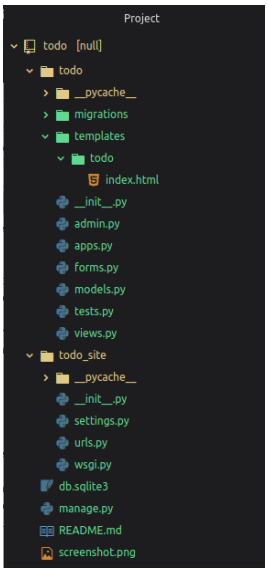
```
cd todo_site
```

Let's create an app now

Step 3: Create an app with the following command.

```
python manage.py startapp todo
```

The directory structure should look like this:



Step 4: Now add the todo app in your todo_site in **settings.py**

```
# Application definition

INSTALLED_APPS = [
    'todo',
    'crispy_forms',
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
]

MIDDLEWARE = [
    'django.middleware.security.SecurityMiddleware',
    'django.contrib.sessions.middleware.SessionMiddleware',
    'django.middleware.common.CommonMiddleware',
    'django.middleware.csrf.CsrfViewMiddleware',
    'django.contrib.auth.middleware.AuthenticationMiddleware',
    'django.contrib.messages.middleware.MessageMiddleware',
    'django.middleware.clickjacking.XFrameOptionsMiddleware',
]
```

Step 5: Edit urls.py file in todo_site

Python3

```
from django.contrib import admin
from django.urls import path
from todo import views

urlpatterns = [

######################home_page#################################
#############
```

```
    path('', views.index, name="todo"),
    ####################give id no. item_id name or
item_id=i.id ############
    # pass item_id as primary key to remove that the todo
with given id
    path('del/<str:item_id>', views.remove, name="del"),

############################################################
############
    path('admin/', admin.site.urls),
]
```

Step 6: Edit models.py in todo

Python3

```
from django.db import models
from django.utils import timezone


class Todo(models.Model):
    title = models.CharField(max_length=100)
    details = models.TextField()
    date = models.DateTimeField(default=timezone.now)

    def __str__(self):
        return self.title
```

Step 7: Edit views.py in todo

Python3

```
from django.shortcuts import render, redirect
from django.contrib import messages

# import todo form and models

from .forms import TodoForm
from .models import Todo

#############################################
```

```
11
12  def index(request):
13
14      item_list = Todo.objects.order_by("-date")
15      if request.method == "POST":
16          form = TodoForm(request.POST)
17          if form.is_valid():
18              form.save()
19              return redirect('todo')
20      form = TodoForm()
21
22      page = {
23          "forms": form,
24          "list": item_list,
25          "title": "TODO LIST",
26      }
27      return render(request, 'todo/index.html', page)
28
29
30  ### function to remove item, it receive todo item_id as
    primary key from url ##
31  def remove(request, item_id):
32      item = Todo.objects.get(id=item_id)
33      item.delete()
34      messages.info(request, "item removed !!!")
35      return redirect('todo')
```

Step 8: Now create a forms.py in todo

Python3

```
1  from django import forms
2  from .models import Todo
3
4
5  class TodoForm(forms.ModelForm):
6      class Meta:
7          model = Todo
8          fields = "__all__"
```

Step 9: Register models to admin

admin.py

```
from django.contrib import admin
from .models import Todo
# Register your models here.
admin.site.register(Todo)

```

Step 10: Create templates/todo/index.html

HTML

```
<!DOCTYPE html>
<html lang="en" dir="ltr">

<head>

  <meta charset="utf-8">
  <title>{{title}}</title>
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
  <script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.min.js"></script>
  <!--style-->
  <style>
  .card {

   box-shadow: 0 4px 8px 0 rgba(0,0,0,0.5),
               0 6px 20px 0 rgba(0,0,0,0.39);
   background: lightpink;
   margin-bottom : 5%;
   border-radius: 25px;
   padding : 2%;
   overflow: auto;
   resize: both;
   text-overflow: ellipsis;
  }
```

```
    .card:hover{
      background: lightblue;
    }

    .submit_form{

      text-align: center;
      padding: 3%;
      background: pink;
      border-radius: 25px;
      box-shadow: 0 4px 8px 0 rgba(0,0,0,0.4),
                  0 6px 20px 0 rgba(0,0,0,0.36);
    }
    </style>

</head>

<body  class="container-fluid">

    {% if messages %}
    {% for message in messages %}
    <div class="alert alert-info">
      <strong>{{message}}</strong>
    </div>
    {% endfor %}
    {% endif %}

    <center class="row">
      <h1><i>__TODO LIST__</i></h1>
      <hr />
    </center>

    <div class="row">

      <div class="col-md-8">

        {% for i in list %}
        <div class="card">
          <center><b>{{i.title}}</b></center>
          <hr/>
          {{i.date}}
          <hr/>
          {{i.details}}
```

```
            <br />
            <br />
            <form action="/del/{{i.id}}" method="POST" style="
    padding-right: 4%; padding-bottom: 3%;">
              {% csrf_token %}
              <button value="remove" type="submit"  class="btn
    btn-primary" style="float: right;"><span class="glyphicon
    glyphicon-trash"></span>   remove</button>
            </form>
          </div>
          {% endfor%}
        </div>
        <div class="col-md-1"> </div>
        <div class="col-md-3" >
          <div  class="submit_form">
          <form  method="POST">
            {% csrf_token %}
            {{forms}}
            <center>
            <input type="submit" class="btn btn-default"
    value="submit" />
          </center>
          </form>
        </div>
      </div>
    </div>
    </body>

    </html>
```

Step 11: Migrations Files to the Database

```
python manage.py makemigrations
python manage.py migrate
```

Step 12: Start the server by typing the following command in the terminal

```
python manage.py runserver
```

Output:

Open the web browser and enter http://127.0.0.1:8000/ as the URL.

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