

Lab: URL's and Templates

1. Create new Django Project

Open the terminal and create **new Django project** as shown in the picture

```
C:\Windows\System32\cmd.exe

C:\Users\User\Desktop\django-test>django-admin startproject urls_and_templates

C:\Users\User\Desktop\django-test>
```

Navigate to the project folder and create **two apps: main_app** and **secondary_app**

```
C:\Windows\System32\cmd.exe

C:\Users\User\Desktop\django-test>django-admin startproject urls_and_templates
C:\Users\User\Desktop\django-test>cd urls_and_templates
C:\Users\User\Desktop\django-test\urls_and_templates>django-admin startapp main_app
C:\Users\User\Desktop\django-test\urls_and_templates>django-admin startapp secondary_app
C:\Users\User\Desktop\django-test\urls_and_templates>
```

Now, we need to **add** our apps to the project **settings**

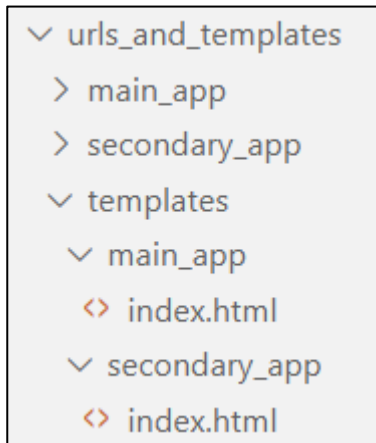
```
OPEN EDITORS  urls_and_templates > urls_and_templates > settings.py > ...

X settings.py urls_and_templates\urls_a...
Django-TEST
  urls_and_templates
    > main_app
    > secondary_app
    urls_and_templates
      __init__.py
      asgi.py
      settings.py
      urls.py
      wsgi.py
      manage.py

22  # SECURITY WARNING: keep the secret key used in production secret!
23  SECRET_KEY = 'l##1&z$23pr%=0v2vg25p87-n*yg-b)g5_s33lhfhwrCG(fc)'
24
25  # SECURITY WARNING: don't run with debug turned on in production!
26  DEBUG = True
27
28  ALLOWED_HOSTS = []
29
30
31  # Application definition
32
33  INSTALLED_APPS = [
34      'main_app',
35      'secondary_app',
36      'django.contrib.admin',
37      'django.contrib.auth',
38      'django.contrib.contenttypes',
39      'django.contrib.sessions',
40      'django.contrib.messages',
41      'django.contrib.staticfiles',
42  ]
```

2. Create all Templates

Let us now create a **template folder** with **two sub-folders** named after the apps. Each folder will contain an **index.html** file. At the end, the folder structure should look like this



Now, we need to add the **templates directory** to our project **settings**

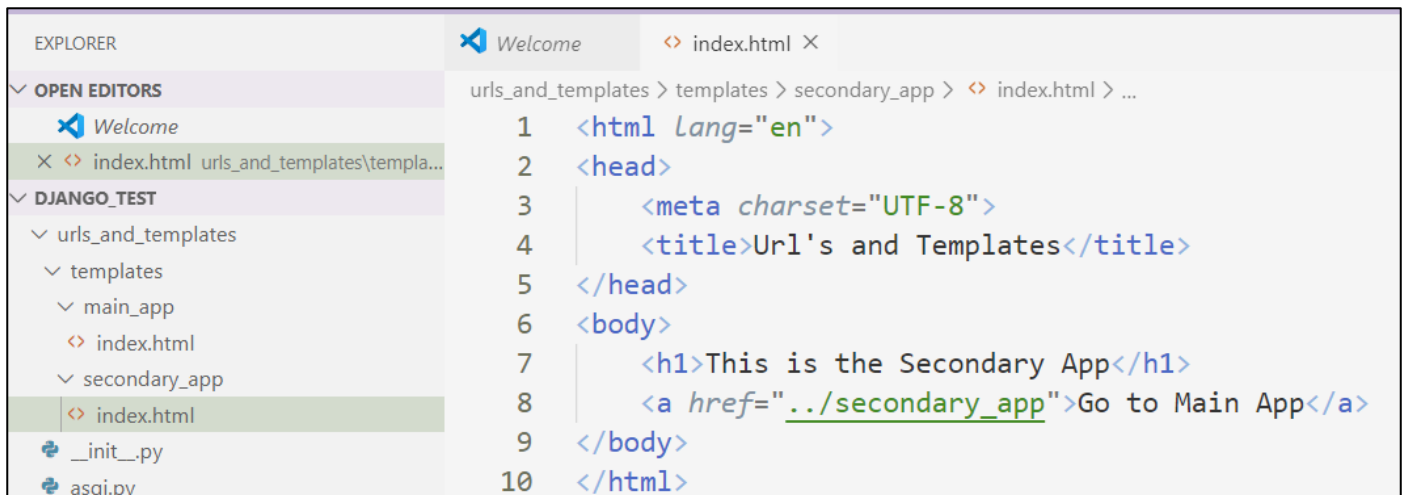


Now let us go to the main app **index.html** file and add the following code



- We just add **h1** and a link to the **secondary_app**, so we can navigate between the two apps

In the **index.html** in the secondary app, add the following, so we can return to the **main app**




```
EXPLORER
OPEN EDITORS
Welcome
index.html urls_and_templates\templa...
DJANGO_TEST
urls_and_templates
templates
main_app
index.html
secondary_app
index.html
__init__.py
asgi.py

Welcome
index.html X
urls_and_templates > templates > secondary_app > index.html > ...
1 <html Lang="en">
2 <head>
3     <meta charset="UTF-8">
4     <title>Url's and Templates</title>
5 </head>
6 <body>
7     <h1>This is the Secondary App</h1>
8     <a href=" ../secondary_app">Go to Main App</a>
9 </body>
10 </html>
```

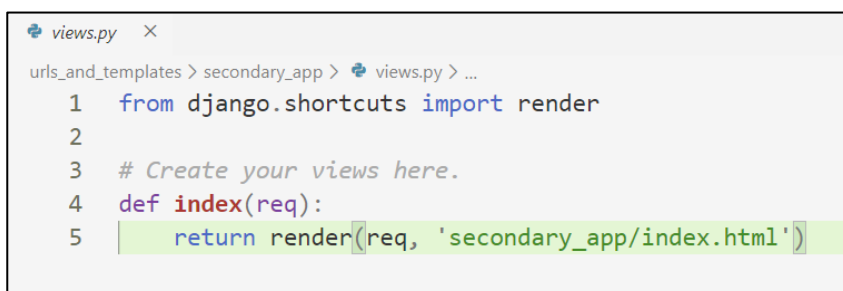
3. Implement the views.py files

Now let us implement the **views** for both apps, starting with the **main app**. In there we are going to create a function called **index**, which will be responsible for rendering the **index.html** file



```
views.py X
urls_and_templates > main_app > views.py > ...
1 from django.shortcuts import render
2
3 # Create your views here.
4 def index(req):
5     return render(req, 'main_app/index.html')
```

And then, the same for the **secondary app**



```
views.py X
urls_and_templates > secondary_app > views.py > ...
1 from django.shortcuts import render
2
3 # Create your views here.
4 def index(req):
5     return render(req, 'secondary_app/index.html')
```

4. Implementing the urls.py files

Now, for those functions to be executed, we need the **urls.py** files for both our apps. Since they are not automatically generated, we need to **create them**. So, let us start with the **main app**

```
urls.py ×
urls_and_templates > main_app > urls.py > ...
1 from django.urls import path
2 from main_app import views
3
4 urlpatterns = [
5     path('', views.index),
6 ]
```

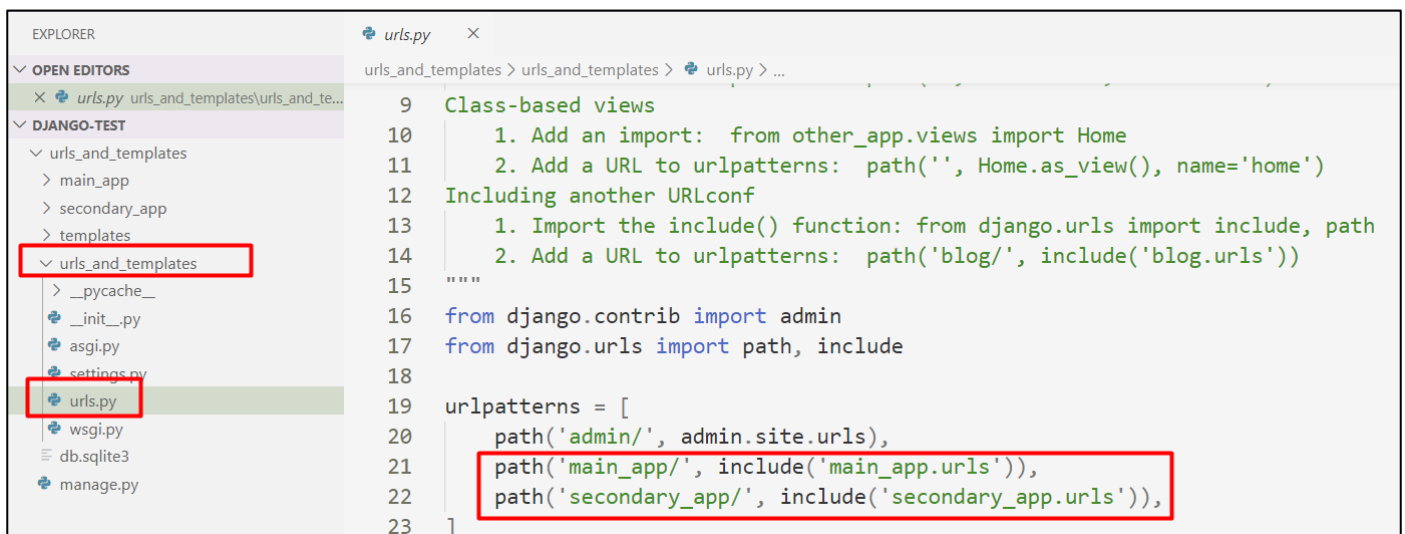
And then the **secondary app**

```
urls.py ...\main_app  urls.py ...\secondary_app ×
urls_and_templates > secondary_app > urls.py > ...
1 from django.urls import path
2 from secondary_app import views
3
4 urlpatterns = [
5     path('', views.index),
6 ]
```

In both cases the path is "", because as soon as we hit 'main_app' or 'secondary_app' url's, we want to execute the **index** functions and render the **index.html** file

5. Including the urls.py Files in the Project

Finally, we want to include those **urls.py** files in our project, so it knows about them



The screenshot shows the VS Code interface. On the left, the Explorer pane displays the project structure. The 'urls_and_templates' folder is expanded, and the 'urls.py' file is highlighted with a red box. The main editor shows the content of 'urls.py' in the 'urls_and_templates' context. The code includes comments for 'Class-based views' and 'Including another URLconf', followed by imports for 'django.contrib.admin' and 'django.urls'. The 'urlpatterns' list is defined, including paths for 'admin/', 'main_app/', and 'secondary_app/', each using the 'include' function to reference their respective 'urls.py' files. The 'main_app' and 'secondary_app' include statements are highlighted with a red box.

```
9 Class-based views
10 1. Add an import: from other_app.views import Home
11 2. Add a URL to urlpatterns: path('', Home.as_view(), name='home')
12 Including another URLconf
13 1. Import the include() function: from django.urls import include, path
14 2. Add a URL to urlpatterns: path('blog/', include('blog.urls'))
15 """
16 from django.contrib import admin
17 from django.urls import path, include
18
19 urlpatterns = [
20     path('admin/', admin.site.urls),
21     path('main_app/', include('main_app.urls')),
22     path('secondary_app/', include('secondary_app.urls')),
23 ]
```

6. Testing

Now, let us test the app by **running our project**

```
C:\Users\User\Desktop\django-test\urls_and_templates>python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).
February 19, 2020 - 13:20:51
Django version 3.0.3, using settings 'urls_and_templates.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

Now in order to see our main app, we need to navigate to http://localhost:8000/main_app



And if we click on the link, we will see the second app

