

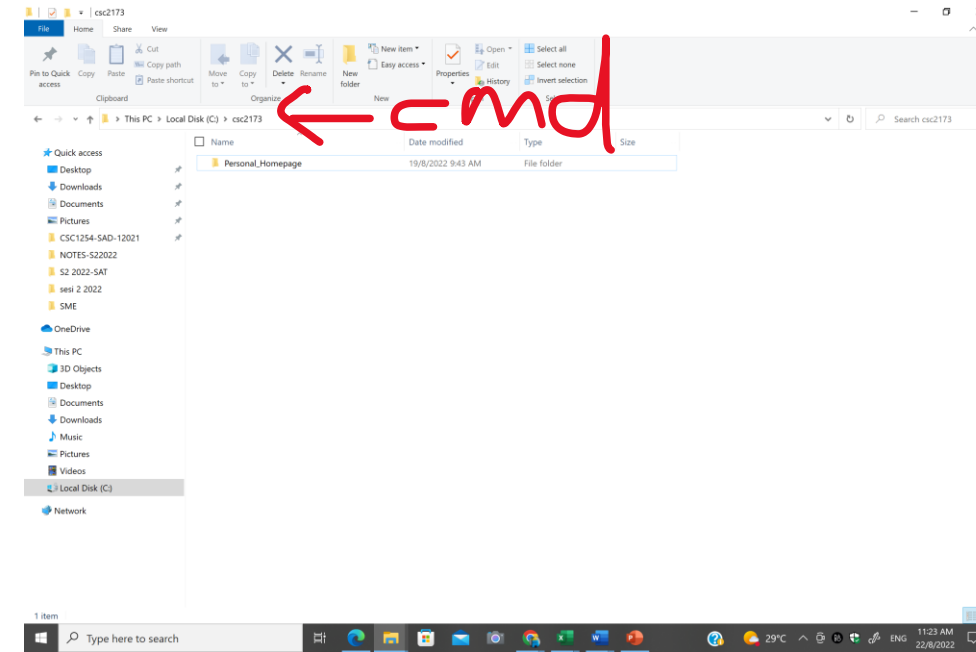


**WAD**

# **FRAMEWORK AND INSTALLATION**

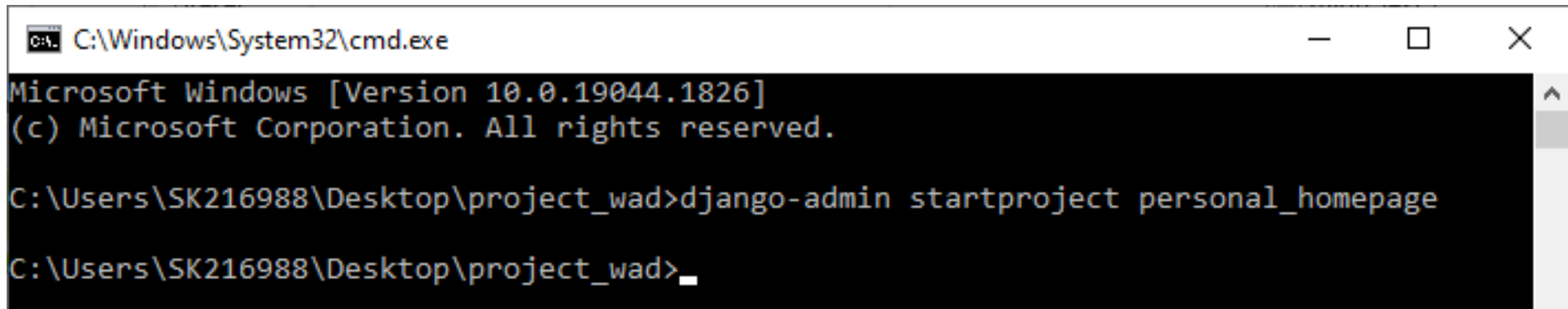
# Installation

1. Go to <https://www.python.org/>
  - Install Python3
2. Create new folder - example project\_wad
3. Get into the project using command prompt
4. Install Django using command prompt
  - `pip3 install django` / `pip install django`



# How to create django project

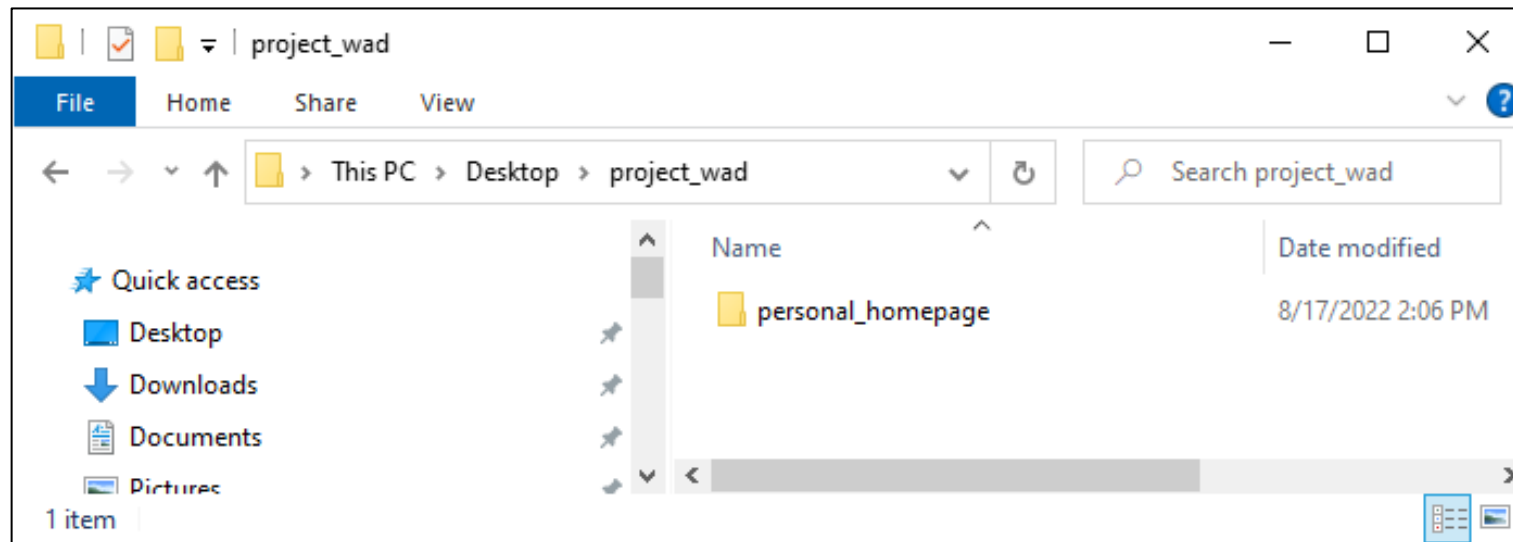
1. Create a new project, example **Personal\_Homepage**
  - `django-admin startproject Personal_Homepage`



```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19044.1826]
(c) Microsoft Corporation. All rights reserved.

C:\Users\SK216988\Desktop\project_wad>django-admin startproject personal_homepage

C:\Users\SK216988\Desktop\project_wad>_
```



# How to create django project

2. Go inside **Personal\_Homepage** folder

- Using command prompt – change directory
- `cd Personal_Homepage`

3. Run the server

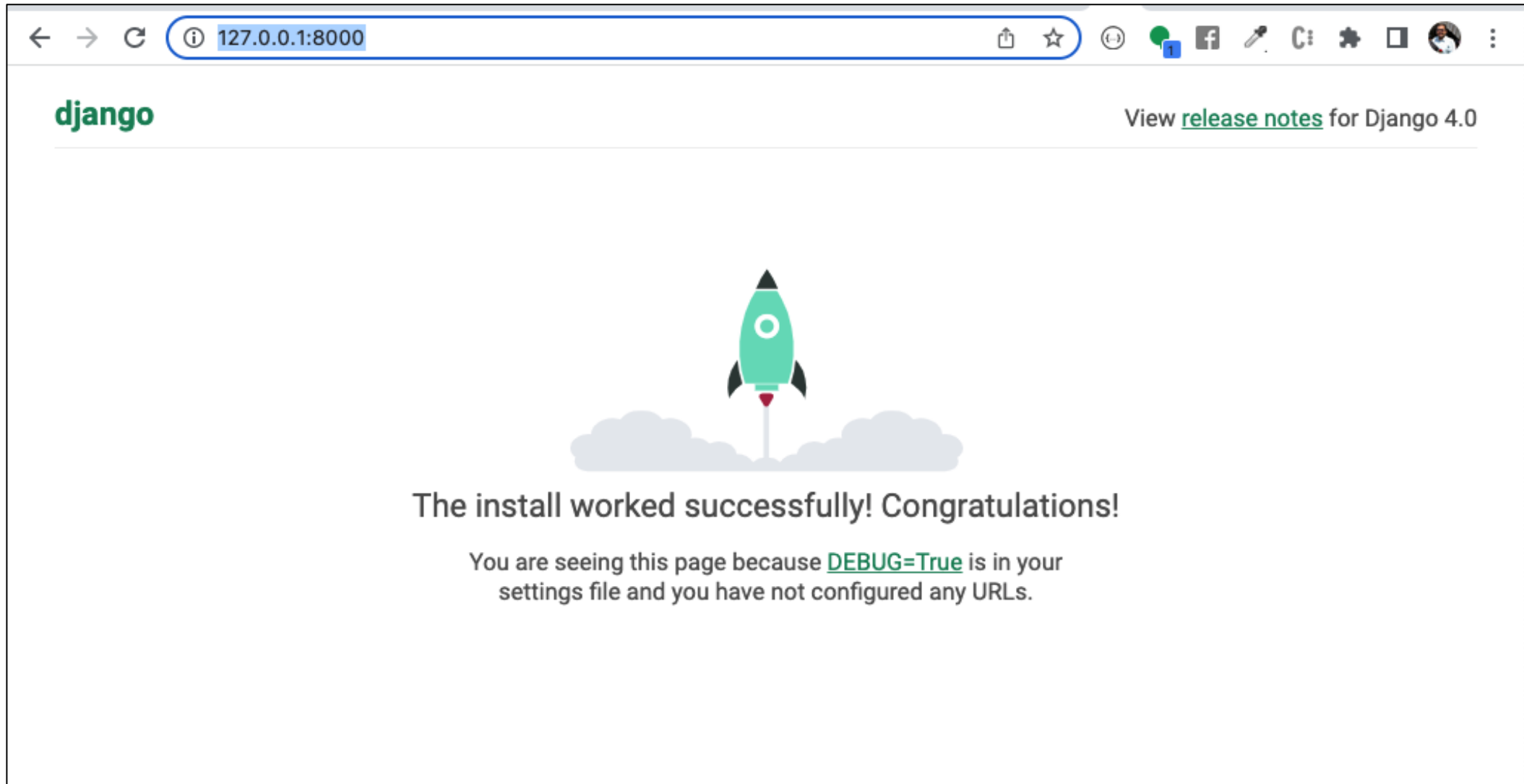
- `python manage.py runserver`

4. Open browser

```
June 15, 2022 - 06:48:48
Django version 4.0.5, using settings 'hello_django.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CONTROL-C.
```

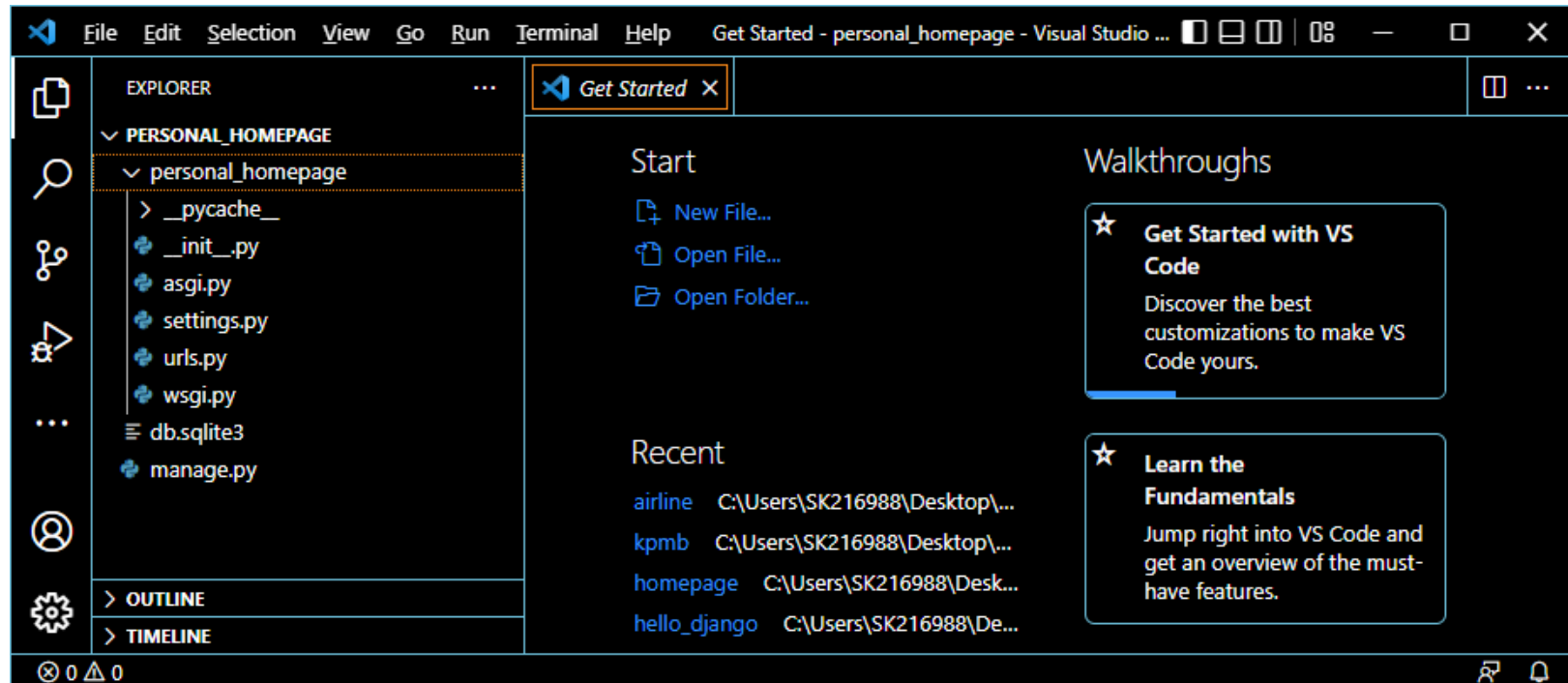
- Open this url on browser 127.0.0.1:8000

# How to create django project



# Open Folder

1. Open Visual Studio Code
2. File -> Open Folder
3. Look for the Personal\_Hompagae subfolder inside project\_wad folder
4. Type select folder
5. Ok



# Important files

a. `manage.py`

- help us to execute commands on our terminal. Don't EDIT this file!

b. `settings.py`

- contains some important configuration settings for our new project, for example the database that we use. We will use default settings first but at the end of the course we might change a little bit (for deployment subject)

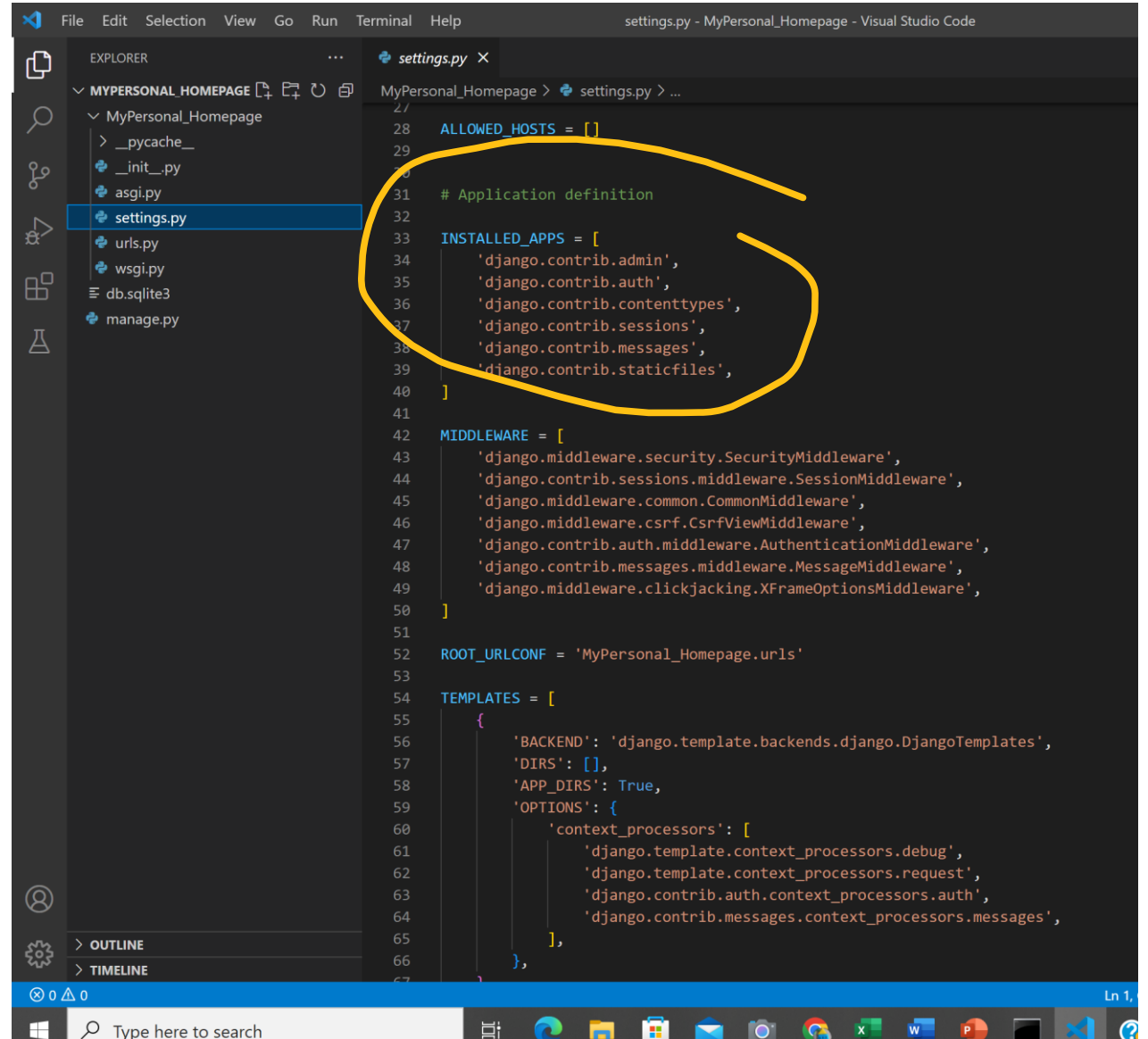
c. `urls.py`

- contains directions for where users should be routed after navigating to a certain URL. We will change this a lot

# Important files

## b. `settings.py`

- contains some important configuration settings for our new project, for example the database that we use. We will use default settings first but at the end of the course we might change a little bit (for deployment subject)



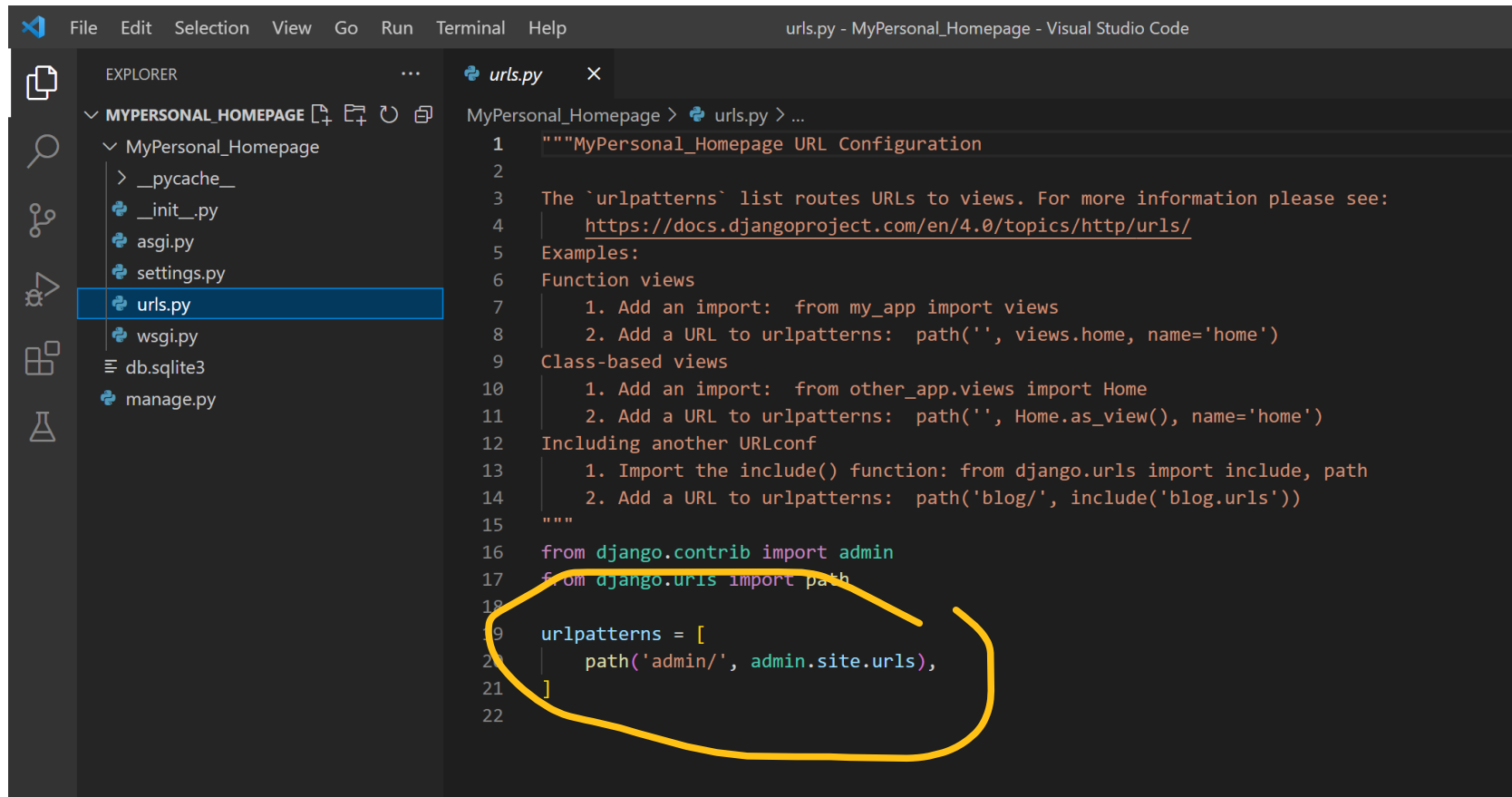
```
27
28 ALLOWED_HOSTS = []
29
30 # Application definition
31
32 INSTALLED_APPS = [
33     'django.contrib.admin',
34     'django.contrib.auth',
35     'django.contrib.contenttypes',
36     'django.contrib.sessions',
37     'django.contrib.messages',
38     'django.contrib.staticfiles',
39 ]
40
41 MIDDLEWARE = [
42     'django.middleware.security.SecurityMiddleware',
43     'django.contrib.sessions.middleware.SessionMiddleware',
44     'django.middleware.common.CommonMiddleware',
45     'django.middleware.csrf.CsrfViewMiddleware',
46     'django.contrib.auth.middleware.AuthenticationMiddleware',
47     'django.contrib.messages.middleware.MessageMiddleware',
48     'django.middleware.clickjacking.XFrameOptionsMiddleware',
49 ]
50
51 ROOT_URLCONF = 'MyPersonal_Homepage.urls'
52
53 TEMPLATES = [
54     {
55         'BACKEND': 'django.template.backends.django.DjangoTemplates',
56         'DIRS': [],
57         'APP_DIRS': True,
58         'OPTIONS': {
59             'context_processors': [
60                 'django.template.context_processors.debug',
61                 'django.template.context_processors.request',
62                 'django.contrib.auth.context_processors.auth',
63                 'django.contrib.messages.context_processors.messages',
64             ],
65         },
66     ],
67 ]
```



# Important files

## c. `urls.py`

- contains directions for where users should be routed after navigating to a certain URL. We will change this a lot

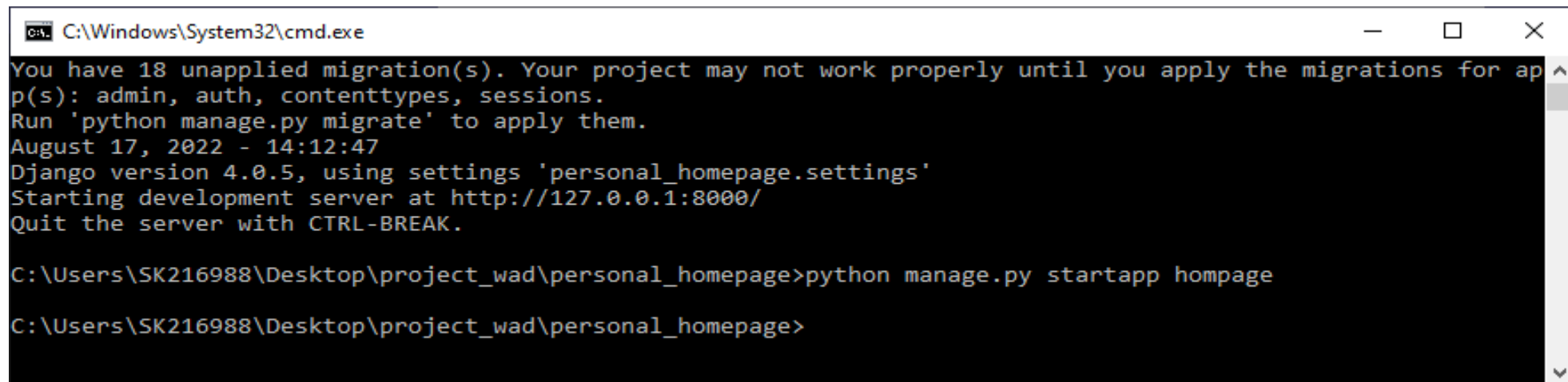


The screenshot shows the Visual Studio Code interface with a Django project named 'MyPersonal\_Homepage'. The Explorer sidebar on the left shows the project structure, with 'urls.py' selected under the 'MyPersonal\_Homepage' directory. The main editor window displays the content of 'urls.py'. The file contains a docstring explaining the purpose of the file and providing examples of how to use Django's URL routing system. A yellow circle highlights the 'urlpatterns' list, which is currently empty except for a single entry: 'path('admin/', admin.site.urls)'. The code is as follows:

```
1 """MyPersonal_Homepage URL Configuration
2
3 The `urlpatterns` list routes URLs to views. For more information please see:
4     https://docs.djangoproject.com/en/4.0/topics/http/urls/
5 Examples:
6 Function views
7     1. Add an import: from my_app import views
8     2. Add a URL to urlpatterns: path('', views.home, name='home')
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
18
19 urlpatterns = [
20     path('admin/', admin.site.urls),
21 ]
22
```

# Create subproject

- In a Django project (Personal\_Hompage) you can have multiple subprojects, eg: traveloka might have a flight subprojects, hotels subprojects etc..
- But normally in small to medium project, we only have 1 subproject
- We have to create the subproject
  - `python manage.py startapp hello_subproject`

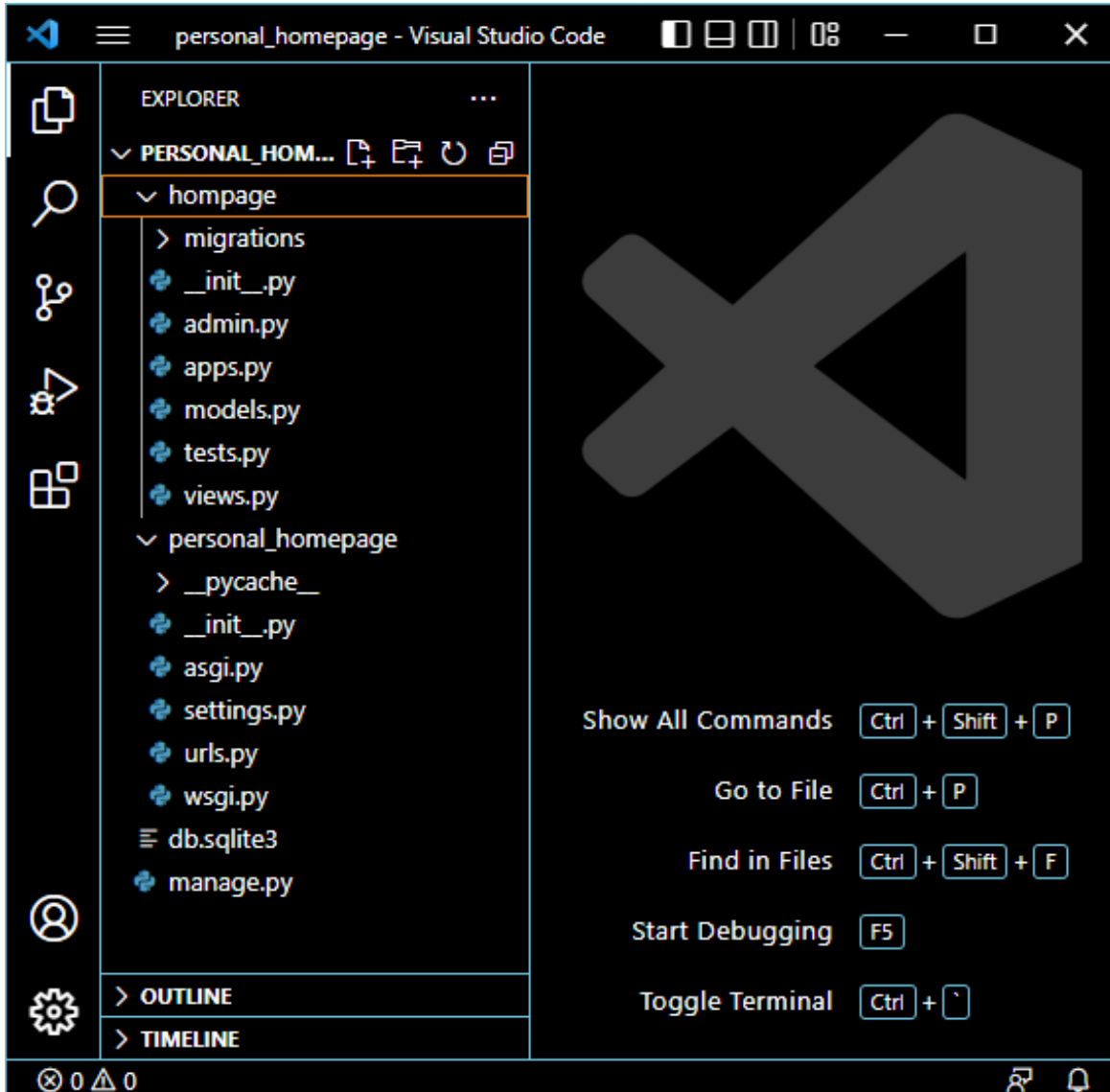


```
C:\Windows\System32\cmd.exe
You have 18 unapplied migration(s). Your project may not work properly until you apply the migrations for ap
p(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
August 17, 2022 - 14:12:47
Django version 4.0.5, using settings 'personal_homepage.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.

C:\Users\SK216988\Desktop\project_wad\personal_homepage>python manage.py startapp homepage

C:\Users\SK216988\Desktop\project_wad\personal_homepage>
```

# Important files



Important files will be generated

1. models.py

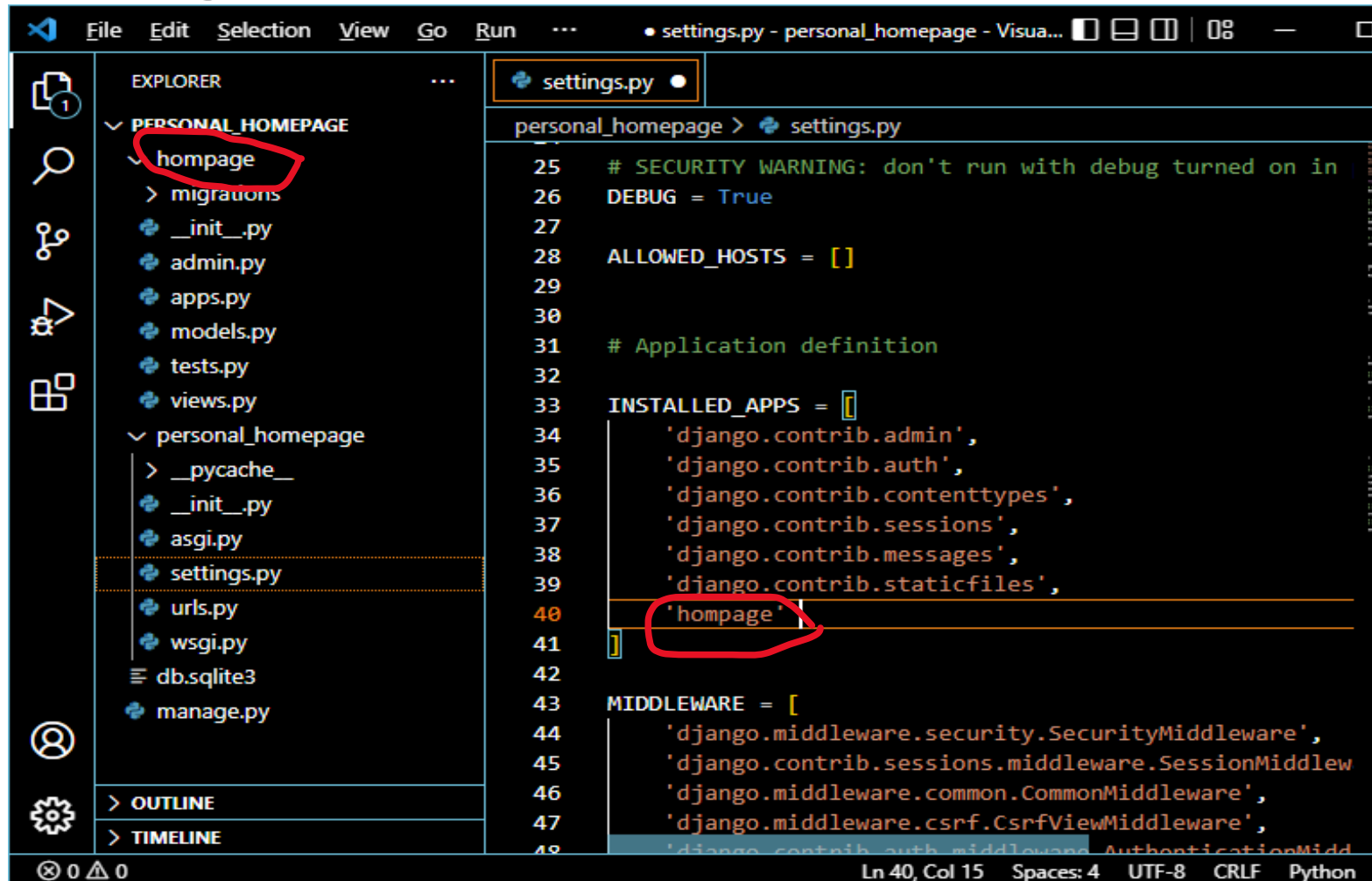
- To define our model (data/tables in database)

2. views.py

- Controller (logic of our application)

# Setup that you need to do

## 1. Add homepage inside Settings.py under “INSTALLED\_APPS”



```
File Edit Selection View Go Run ... settings.py - personal_homepage - Visua... 0% — □
```

EXPLORER

- PERSONAL\_HOMEPAGE
  - hompage
  - migrations
  - \_\_init\_\_.py
  - admin.py
  - apps.py
  - models.py
  - tests.py
  - views.py
- personal\_homepage
  - \_\_pycache\_\_
  - \_\_init\_\_.py
  - asgi.py
  - settings.py
  - urls.py
  - wsgi.py
  - db.sqlite3
  - manage.py

personal\_homepage > settings.py

```
25 # SECURITY WARNING: don't run with debug turned on in
26 DEBUG = True
27
28 ALLOWED_HOSTS = []
29
30 # Application definition
31
32 INSTALLED_APPS = [
33     'django.contrib.admin',
34     'django.contrib.auth',
35     'django.contrib.contenttypes',
36     'django.contrib.sessions',
37     'django.contrib.messages',
38     'django.contrib.staticfiles',
39     'hompage'
40 ]
41
42 MIDDLEWARE = [
43     'django.middleware.security.SecurityMiddleware',
44     'django.contrib.sessions.middleware.SessionMiddlew
45     'django.middleware.common.CommonMiddleware',
46     'django.middleware.csrf.CsrfViewMiddleware',
47     'django.contrib.auth.middleware.AuthenticationMidd
48 ]
```

Ln 40, Col 15 Spaces: 4 UTF-8 CRLF Python

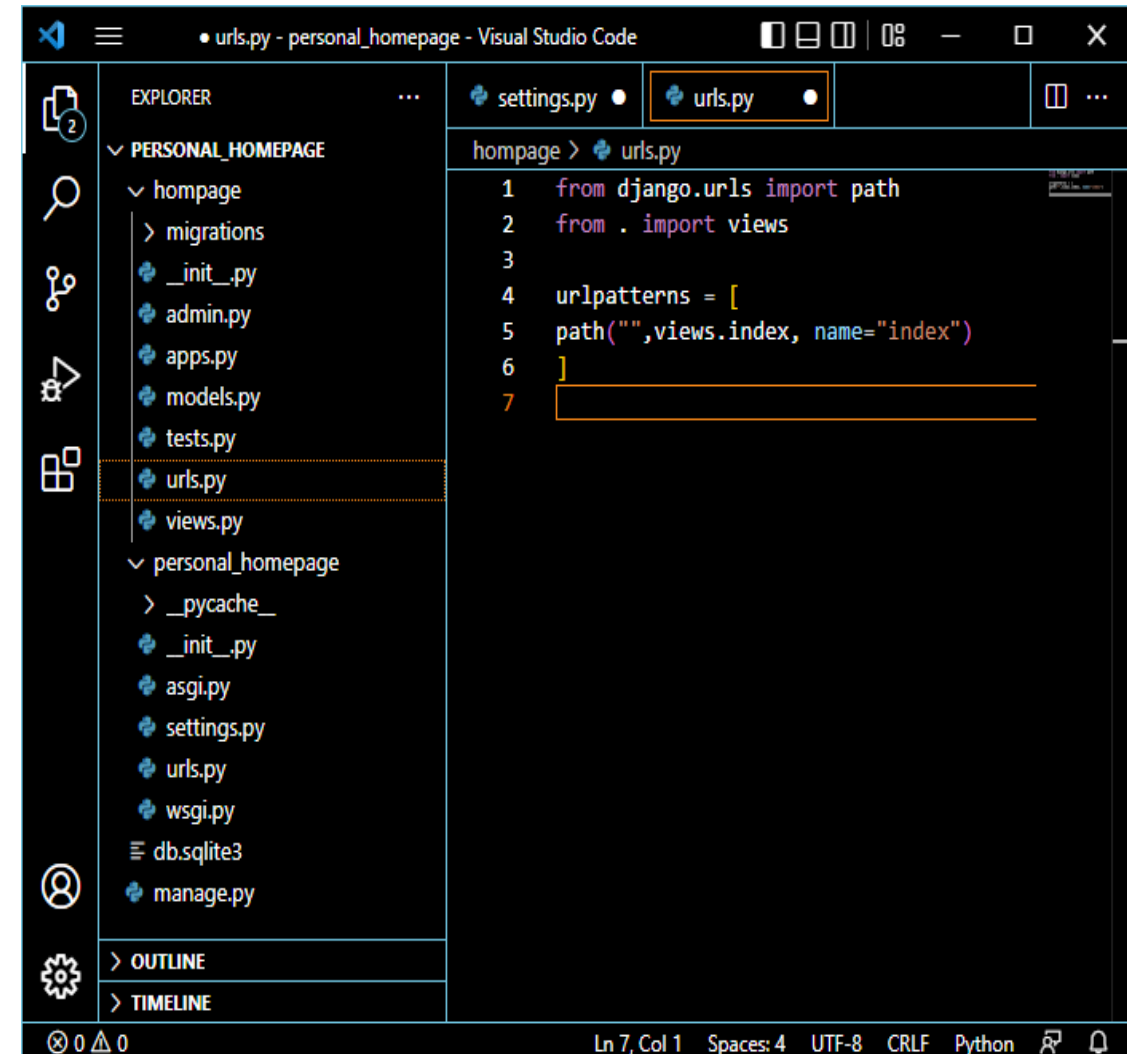
# Setup that you need to do

## 2. Create and link url files

- a) Add new file in (subproject) hello\_subproject-> urls.py
- b) Add the following code:

```
from django.urls import path
from . import views
```

```
urlpatterns = [
    path("", views.index, name="index"),
]
```



Add codings inside `urls.py` in the subproject/app folder

```
from django.urls import path
from . import views

urlpatterns = [
    path("", views.index, name="index"),
]
```

# Setup that you need to do

Add codings inside **urls.py** in the personalhomepage

The screenshot shows the Visual Studio Code interface with the Django project structure on the left and the `urls.py` file open in the editor. A green line connects the `urls.py` file in the Explorer to the code in the editor.

**EXPLORER**

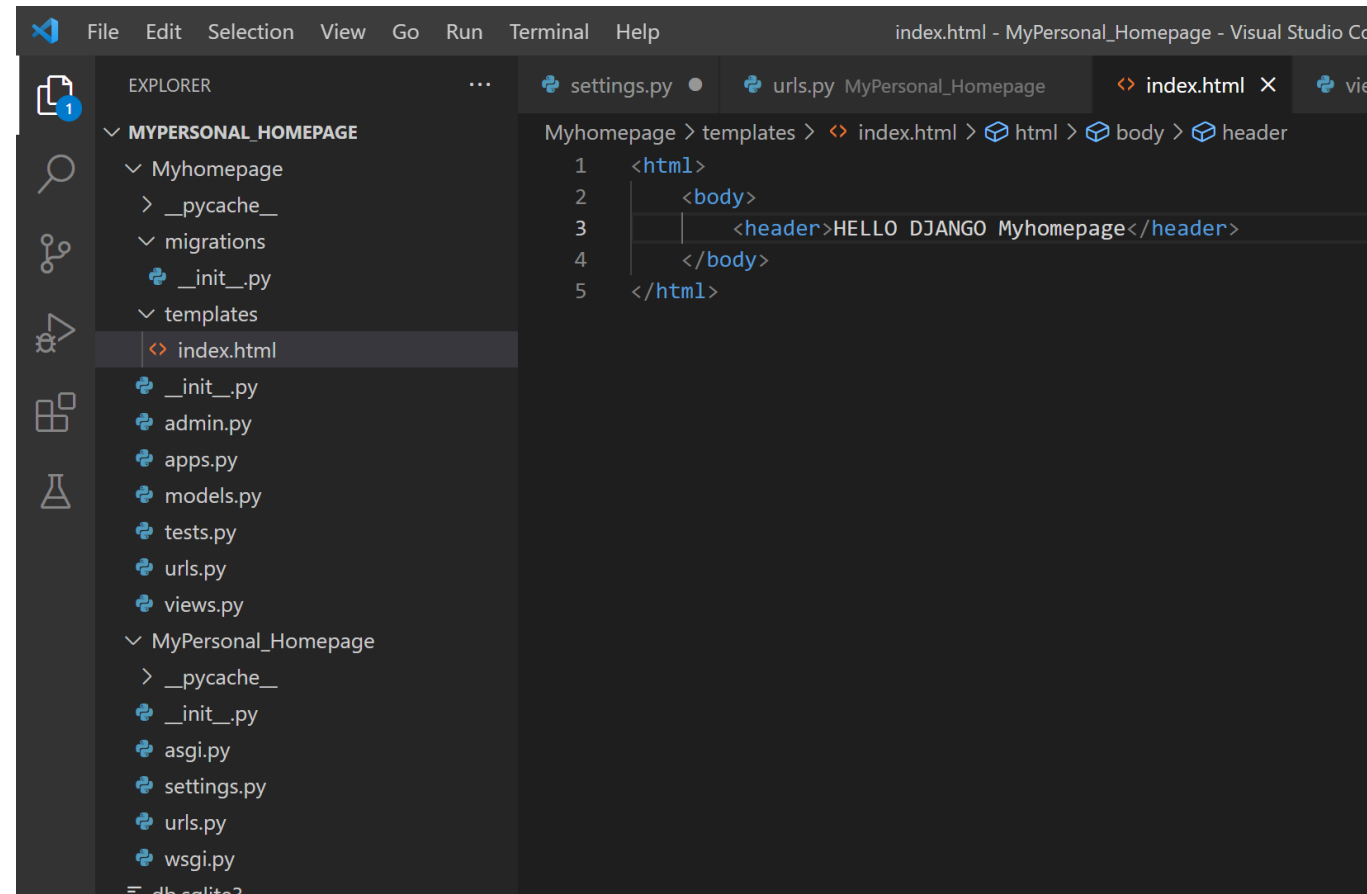
- MYPERSONAL\_HOMEPAGE
  - Myhomepage
    - migrations
      - \_\_init\_\_.py
    - \_\_init\_\_.py
    - admin.py
    - apps.py
    - models.py
    - tests.py
    - urls.py
    - views.py
  - MyPersonal\_Homepage
    - > \_\_pycache\_\_
    - \_\_init\_\_.py
    - asgi.py
    - settings.py
    - urls.py
    - wsgi.py
    - db.sqlite3
    - manage.py

**urls.py - MyPersonal\_Homepage - Visual Studio Code**

```
1  """MyPersonal_Homepage URL Configuration
2
3  The `urlpatterns` list routes URLs to views. For more information please see:
4  |   https://docs.djangoproject.com/en/4.0/topics/http/urls/
5  |   Examples:
6  |   Function views
7  |       1. Add an import:  from my_app import views
8  |       2. Add a URL to urlpatterns:  path('', views.home, name='home')
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('my_page/', include('Myhomepage.urls'))
22  ]
```

# Setup that you need to do

3. Create folder templates in subproject (hello\_subproject)
4. In the templates folder, create a html file which is index.html
5. Create design for your main page



The screenshot shows the Visual Studio Code interface. The Explorer panel on the left displays the project structure for 'MyPersonal\_Homepage'. The 'templates' folder is expanded, showing 'index.html' as the selected file. The main editor area shows the content of 'index.html', which is a simple HTML template with a header containing 'HELLO DJANGO Myhomepage'.

```
File Edit Selection View Go Run Terminal Help
index.html - MyPersonal_Homepage - Visual Studio Co

EXPLORER
MyPERSONAL_HOMEPAGE
  Myhomepage
    __pycache__
    migrations
    __init__.py
    templates
      index.html
    __init__.py
    admin.py
    apps.py
    models.py
    tests.py
    urls.py
    views.py
  MyPersonal_Homepage
    __pycache__
    __init__.py
    asgi.py
    settings.py
    urls.py
    wsgi.py
    db.sqlite3

Myhomepage > templates > index.html > html > body > header
1 <html>
2   <body>
3     <header>HELLO DJANGO Myhomepage</header>
4   </body>
5 </html>
```



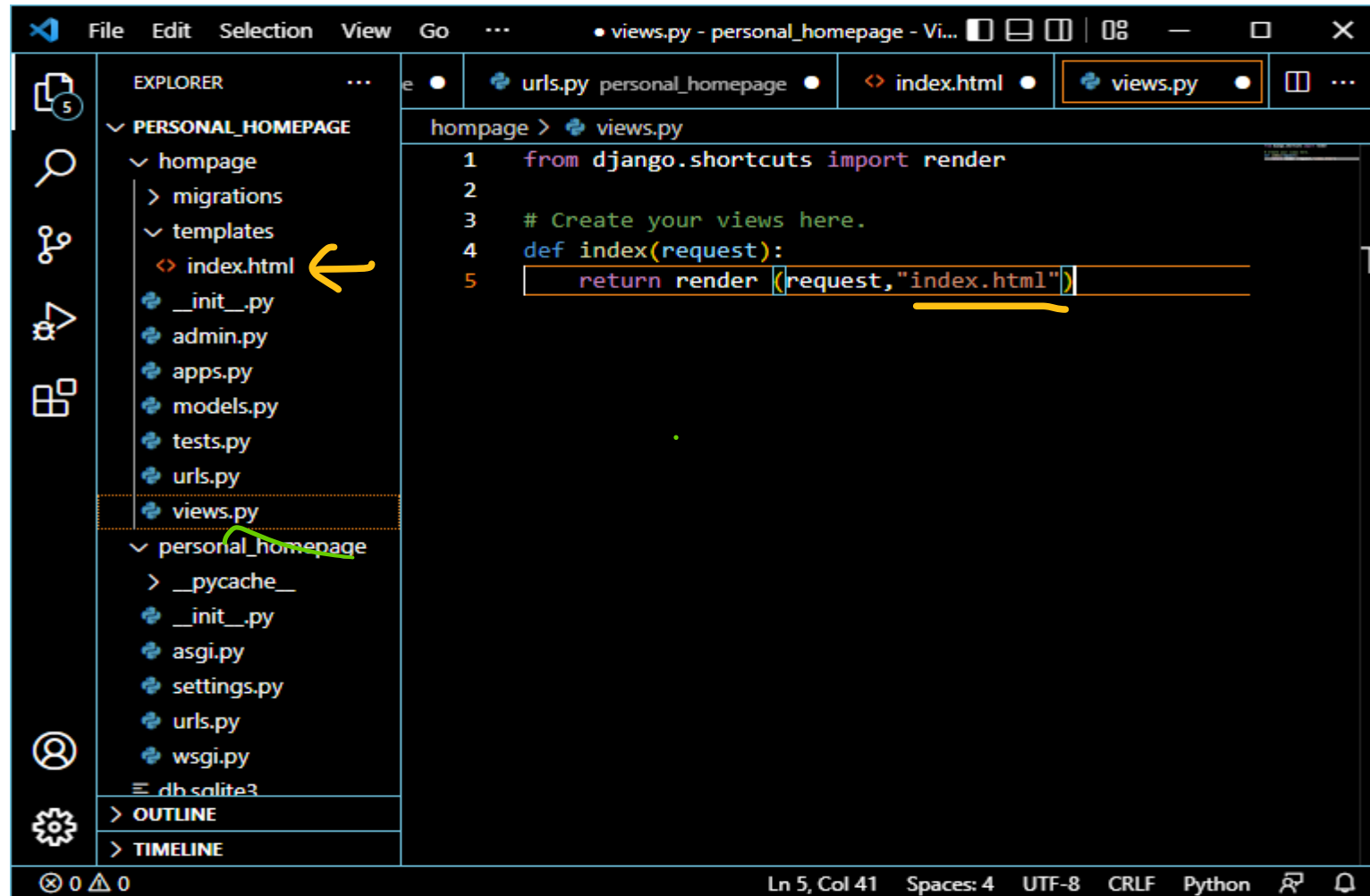
# Setup that you need to do

## 6. Inside views.py in hello\_subproject add the following code

```
from django.shortcuts import render
```

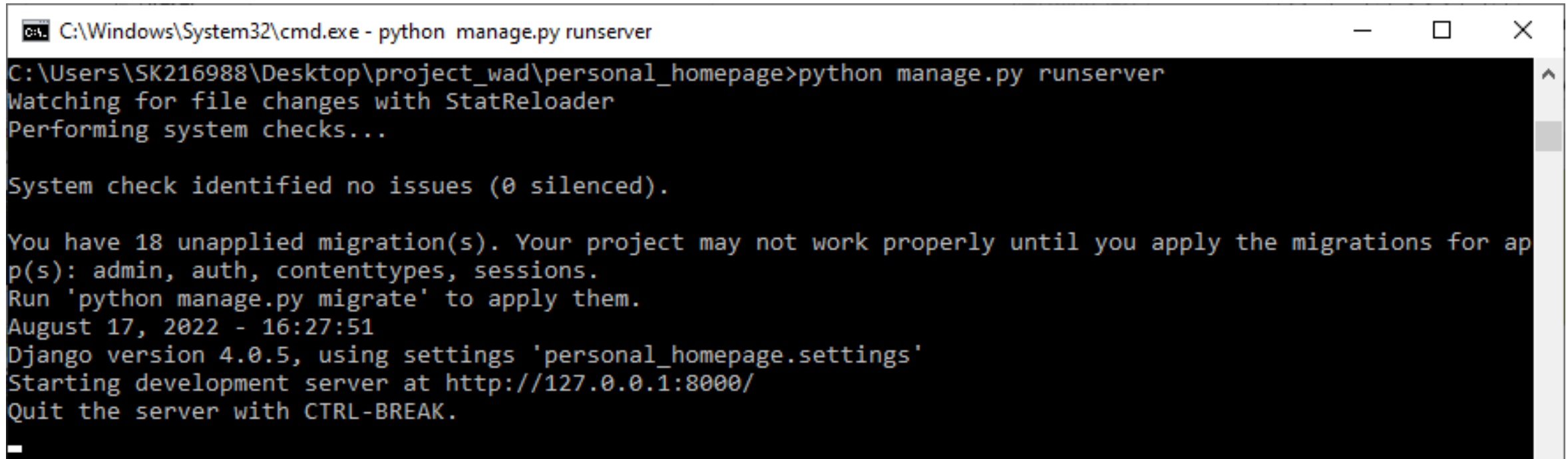
```
# Create your views here.
```

```
def index(request):  
    return render (request,"index.html")
```



# Setup that you need to do

7. Save document (setting, urls, view, html )
8. Runserver using command prompt
  - **python manage.py runserver**



```
C:\Windows\System32\cmd.exe - python manage.py runserver

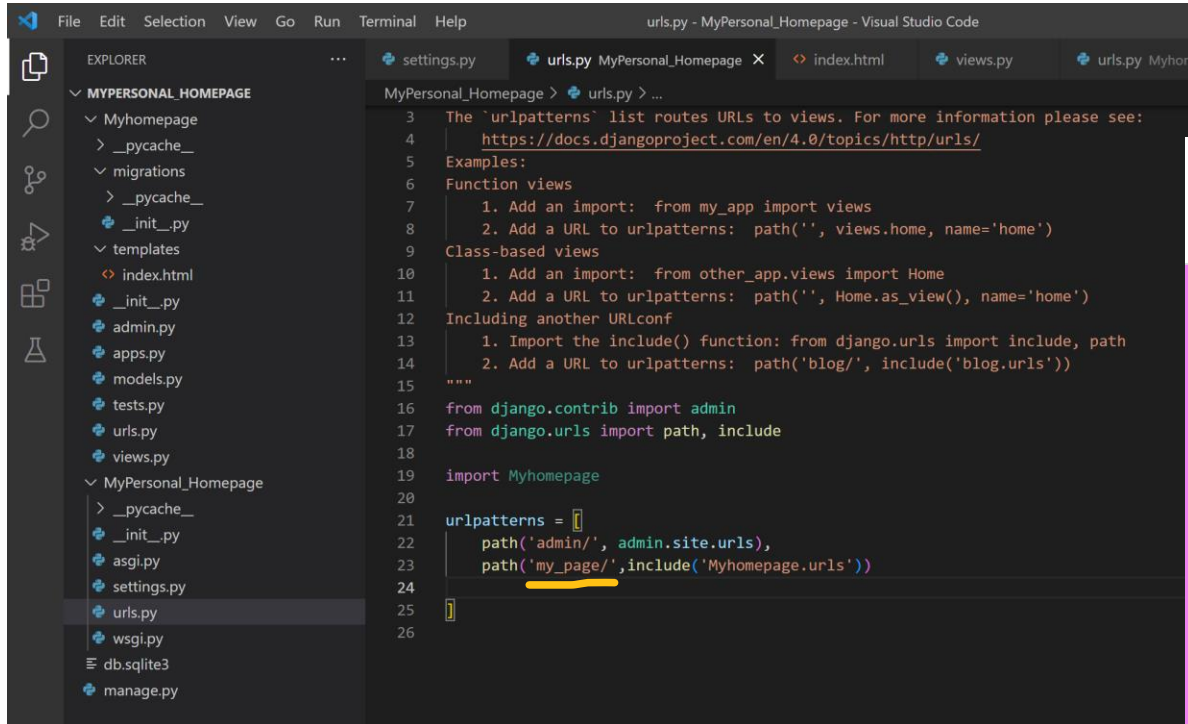
C:\Users\SK216988\Desktop\project_wad\personal_homepage>python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you apply the migrations for ap
p(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
August 17, 2022 - 16:27:51
Django version 4.0.5, using settings 'personal_homepage.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.

_
```

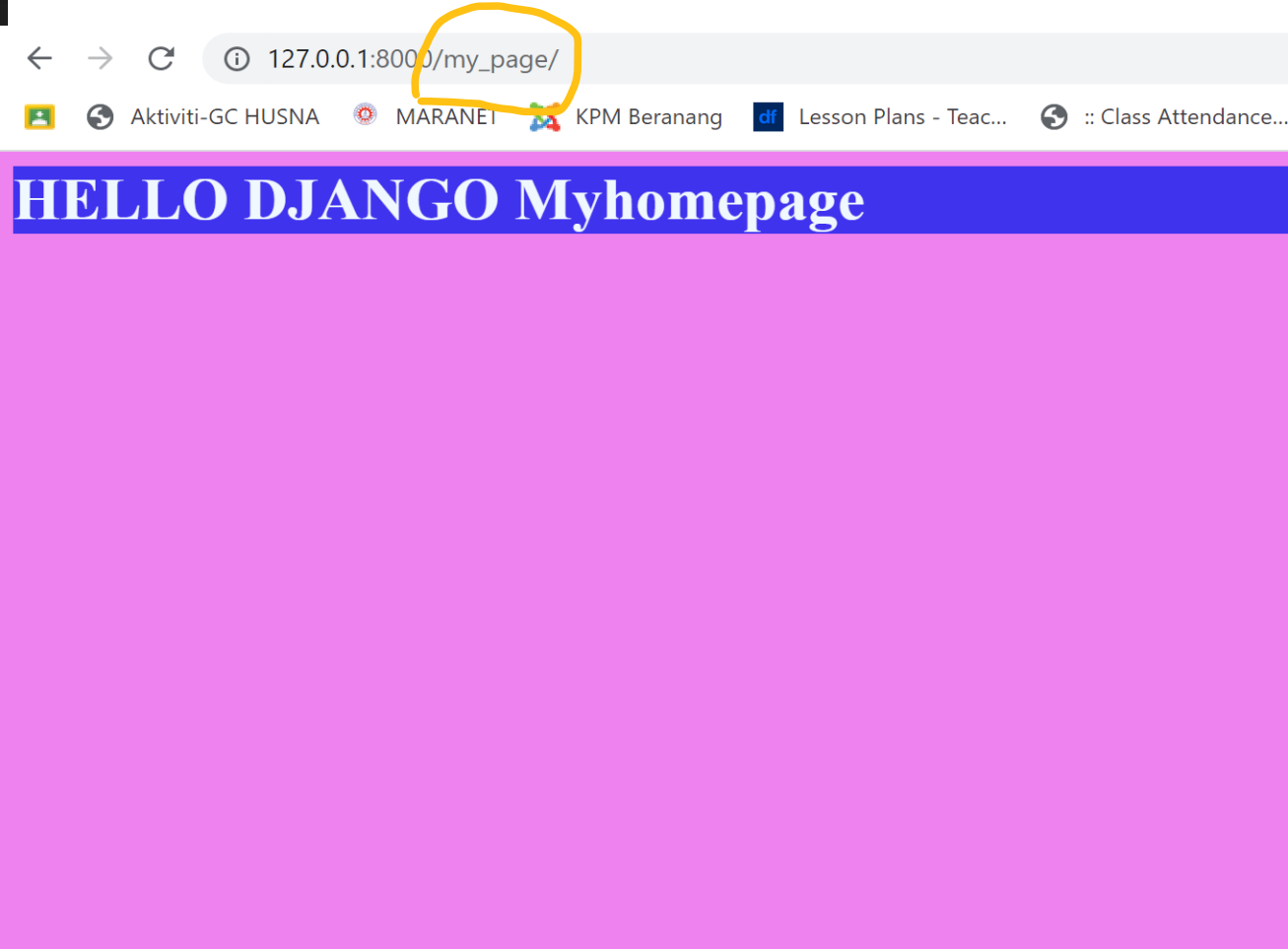
# Setup that you need to do



```
File Edit Selection View Go Run Terminal Help
urls.py - MyPersonal_Homepage - Visual Studio Code

EXPLORER
MyPERSONAL_HOMEPAGE
  Myhomepage
    > __pycache__
  migrations
    > __pycache__
  > __init__.py
  templates
    index.html
  > __init__.py
  admin.py
  apps.py
  models.py
  tests.py
  urls.py
  views.py
  MyPersonal_Homepage
    > __pycache__
    > __init__.py
    asgi.py
    settings.py
    urls.py
    wsgi.py
    db.sqlite3
    manage.py

MyPersonal_Homepage > urls.py > ...
3 The 'urlpatterns' list routes URLs to views. For more information please see:
4   https://docs.djangoproject.com/en/4.0/topics/http/urls/
5 Examples:
6 Function views
7     1. Add an import: from my_app import views
8     2. Add a URL to urlpatterns: path('', views.home, name='home')
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 import Myhomepage
20
21 urlpatterns = [
22     path('admin/', admin.site.urls),
23     path('my_page/', include('Myhomepage.urls'))
24 ]
25
26
```



# Try to add page about.

1. Create file about.html
2. Create design for your page
3. Edit your view.py

```
def about(request):  
    return render(request, "about.html")
```

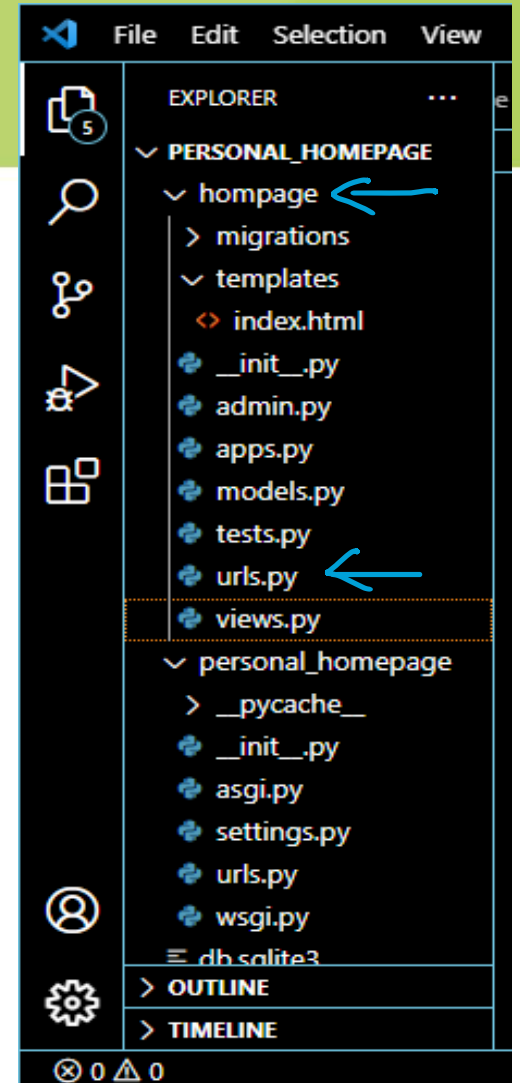
4. Add path in homepage urls.py (subproject)

```
path("about/", views.about, name="about")
```

5. Edit index.html link for li About Me

```
<li><a href="{% url 'about' %}">About Me</a></li>
```

6. Add link in page about to view page index.



**Try this**

**Create page hobbies and link from homepage**