

## Topic: Project Setup, Modern Admin Panel Part 1

Speaker: Udemy Instructor Destiny / Notebook: Health Management System Using Django

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1. Create a new folder and a new environment. Activate it.

```
$ python -m venv venv
$ source venv/scripts/activate
$ pip freeze
$ pip install django
```

2. Create a new project: in this new folder.

```
$ django-admin startproject HMS_main.
```

3. Run the server:

```
$ python manage.py runserver
```

<http://localhost:8000/>

4. Open now a VS Code with this folder or type:

```
$ code .
```

\* we have to use PIP INSTALL DJANGO again in VS Code's terminal.

MINGW64:/c/Users/Rosilie/OneDrive/Desktop/LEARNING DJANGO PROJECTS/Health\_Mgt\_System

```
Rosilie@DELL MINGW64 ~/OneDrive/Desktop/LEARNING DJANGO PROJECTS/Health_Mgt_System
$ python -m venv venv

Rosilie@DELL MINGW64 ~/OneDrive/Desktop/LEARNING DJANGO PROJECTS/Health_Mgt_System
$ venv\scripts\activate
bash: venv\scripts\activate: command not found

Rosilie@DELL MINGW64 ~/OneDrive/Desktop/LEARNING DJANGO PROJECTS/Health_Mgt_System
$ source venv\scripts\activate
(venv)
Rosilie@DELL MINGW64 ~/OneDrive/Desktop/LEARNING DJANGO PROJECTS/Health_Mgt_System
$ pip install django
Collecting django
  Downloading Django-5.1.2-py3-none-any.whl.metadata (4.2 kB)
Collecting asgiref<4,>=3.8.1 (from django)
  Using cached asgiref-3.8.1-py3-none-any.whl.metadata (9.3 kB)
Collecting sqlparse>=0.3.1 (from django)
  Using cached sqlparse-0.5.1-py3-none-any.whl.metadata (3.9 kB)
Collecting tzdata (from django)
  Using cached tzdata-2024.2-py2.py3-none-any.whl.metadata (1.4 kB)
Downloading Django-5.1.2-py3-none-any.whl (8.3 MB)
----- 8.3/8.3 MB 19.7 MB/s eta 0:00:00
Using cached asgiref-3.8.1-py3-none-any.whl (23 kB)
Using cached sqlparse-0.5.1-py3-none-any.whl (44 kB)
Using cached tzdata-2024.2-py2.py3-none-any.whl (346 kB)
Installing collected packages: tzdata, sqlparse, asgiref, django
Successfully installed asgiref-3.8.1 django-5.1.2 sqlparse-0.5.1 tzdata-2024.2
(venv)
Rosilie@DELL MINGW64 ~/OneDrive/Desktop/LEARNING DJANGO PROJECTS/Health_Mgt_System
$ pip freeze
asgiref==3.8.1
Django==5.1.2
sqlparse==0.5.1
tzdata==2024.2
(venv)
Rosilie@DELL MINGW64 ~/OneDrive/Desktop/LEARNING DJANGO PROJECTS/Health_Mgt_System
$ django-admin startproject HMS_main .
bash: django-admin: command not found
(venv)
Rosilie@DELL MINGW64 ~/OneDrive/Desktop/LEARNING DJANGO PROJECTS/Health_Mgt_System
$ django-admin startproject HMS_main .
(venv)
Rosilie@DELL MINGW64 ~/OneDrive/Desktop/LEARNING DJANGO PROJECTS/Health_Mgt_System
$ python manage.py runserver
Watching for file changes with StatReloader
[12/Oct/2024 19:34:46] "GET / HTTP/1.1" 200 12068
Performing system checks...

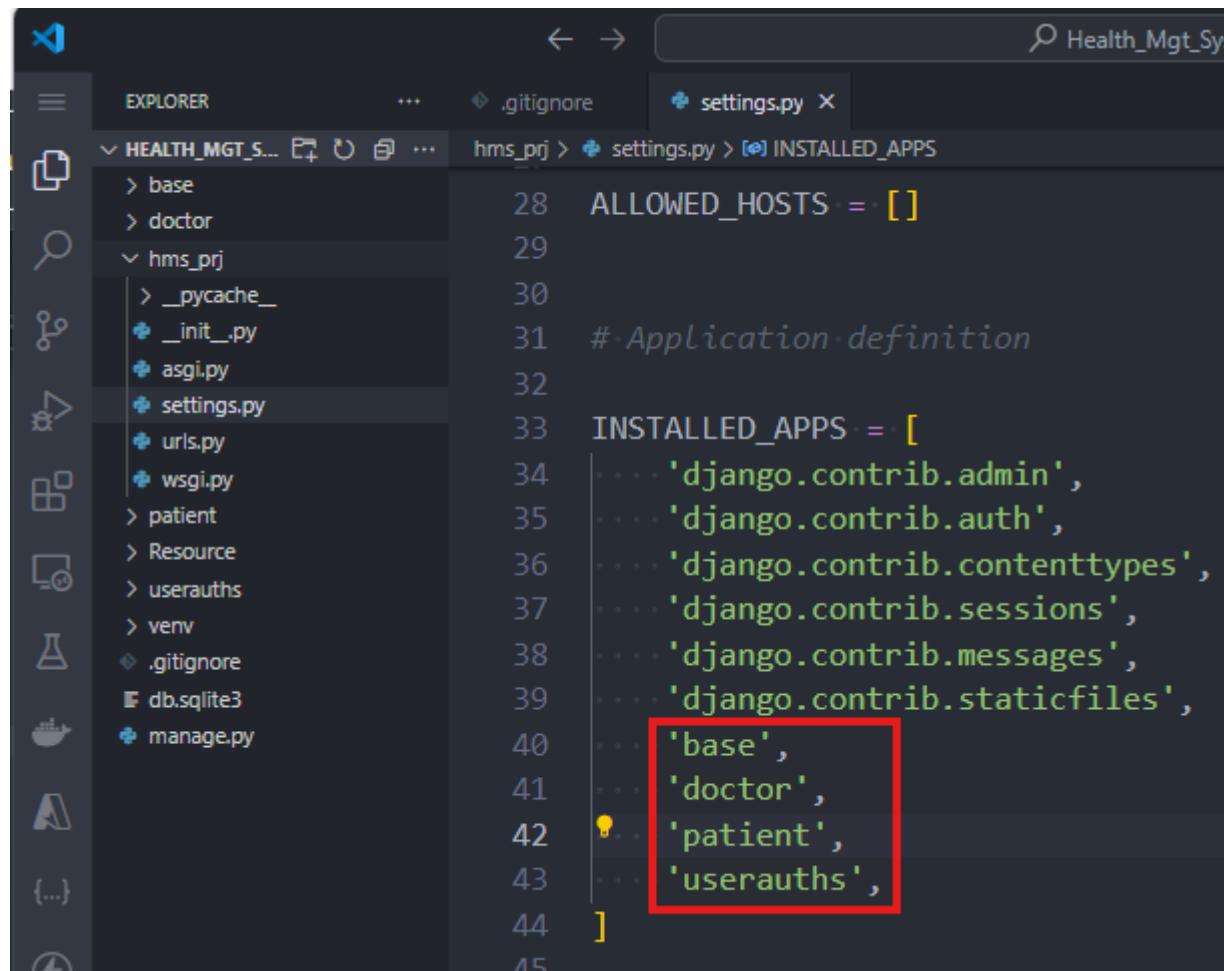
System check identified no issues (0 silenced).

You have 18 unapplied migration(s). Your project may not work properly until you
apply the migrations for app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
October 12, 2024 - 19:33:55
Django version 5.1.2, using settings 'HMS_main.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.

(venv)
Rosilie@DELL MINGW64 ~/OneDrive/Desktop/LEARNING DJANGO PROJECTS/Health_Mgt_System
$ code .
```

5. Create new apps and update SETTINGS.PY. I CHANGED THE PROJECT NAME FROM 'hms\_prj' TO 'HMS\_MAIN'

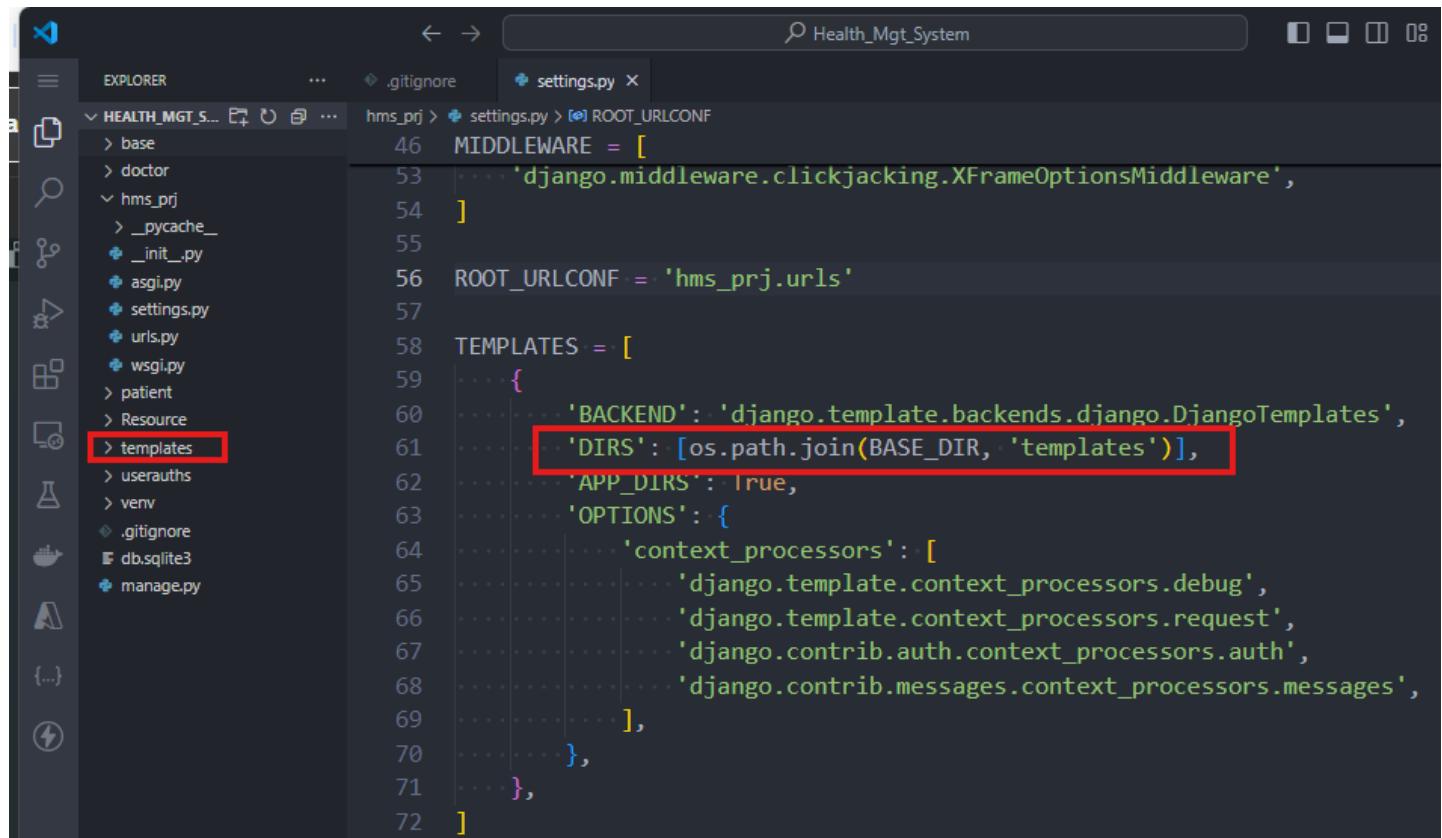
```
$ python manage.py startapp base
$ python manage.py startapp doctor
$ python manage.py startapp patient
$ python manage.py startapp userauths
```



```
EXPLORER             ...  .gitignore  settings.py X
HEALTH_MGT_S...  ...  hms_prj > settings.py > [e] INSTALLED_APPS
> base
> doctor
> hms_prj
> __pycache__
> __init__.py
> asgi.py
> settings.py
> urls.py
> wsgi.py
> patient
> Resource
> userauths
> venv
> .gitignore
> db.sqlite3
> manage.py

28     ALLOWED_HOSTS = []
29
30
31     # Application definition
32
33     INSTALLED_APPS = [
34         'django.contrib.admin',
35         'django.contrib.auth',
36         'django.contrib.contenttypes',
37         'django.contrib.sessions',
38         'django.contrib.messages',
39         'django.contrib.staticfiles',
40         'base',
41         'doctor',
42         'patient',
43         'userauths',
44     ]
45
```

6. Create a new folder, TEMPLATES and update our SETTINGS.PY.



EXPLORER .gitignore settings.py

46 MIDDLEWARE = [

53 'django.middleware.clickjacking.XFrameOptionsMiddleware',

54 ]

55

56 ROOT\_URLCONF = 'hms\_prj.urls'

57

58 TEMPLATES = [

59 {

60 'BACKEND': 'django.template.backends.django.DjangoTemplates',

61 'DIRS': [os.path.join(BASE\_DIR, 'templates')],

62 'APP\_DIRS': True,

63 'OPTIONS': {

64 'context\_processors': [

65 'django.template.context\_processors.debug',

66 'django.template.context\_processors.request',

67 'django.contrib.auth.context\_processors.auth',

68 'django.contrib.messages.context\_processors.messages',

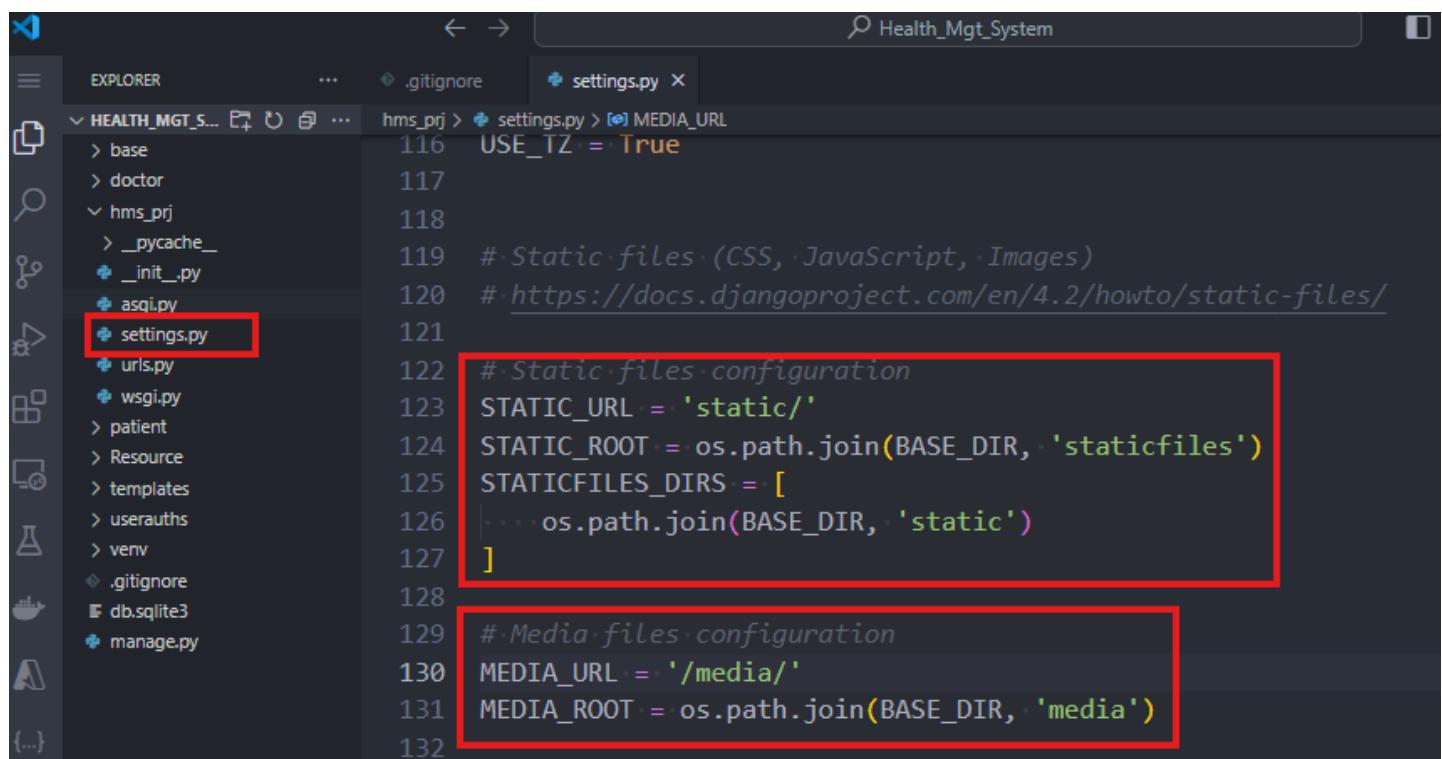
69 ],

70 },

71 },

72 ]

7. Set up the STATIC AND MEDIA configurations.



EXPLORER .gitignore settings.py

116 USE\_TZ = True

117

118

119 # Static files (CSS, JavaScript, Images)

120 # <https://docs.djangoproject.com/en/4.2/howto/static-files/>

121

122 # Static files configuration

123 STATIC\_URL = 'static/'

124 STATIC\_ROOT = os.path.join(BASE\_DIR, 'staticfiles')

125 STATICFILES\_DIRS = [

126 os.path.join(BASE\_DIR, 'static')

127 ]

128

129 # Media files configuration

130 MEDIA\_URL = '/media/'

131 MEDIA\_ROOT = os.path.join(BASE\_DIR, 'media')

132

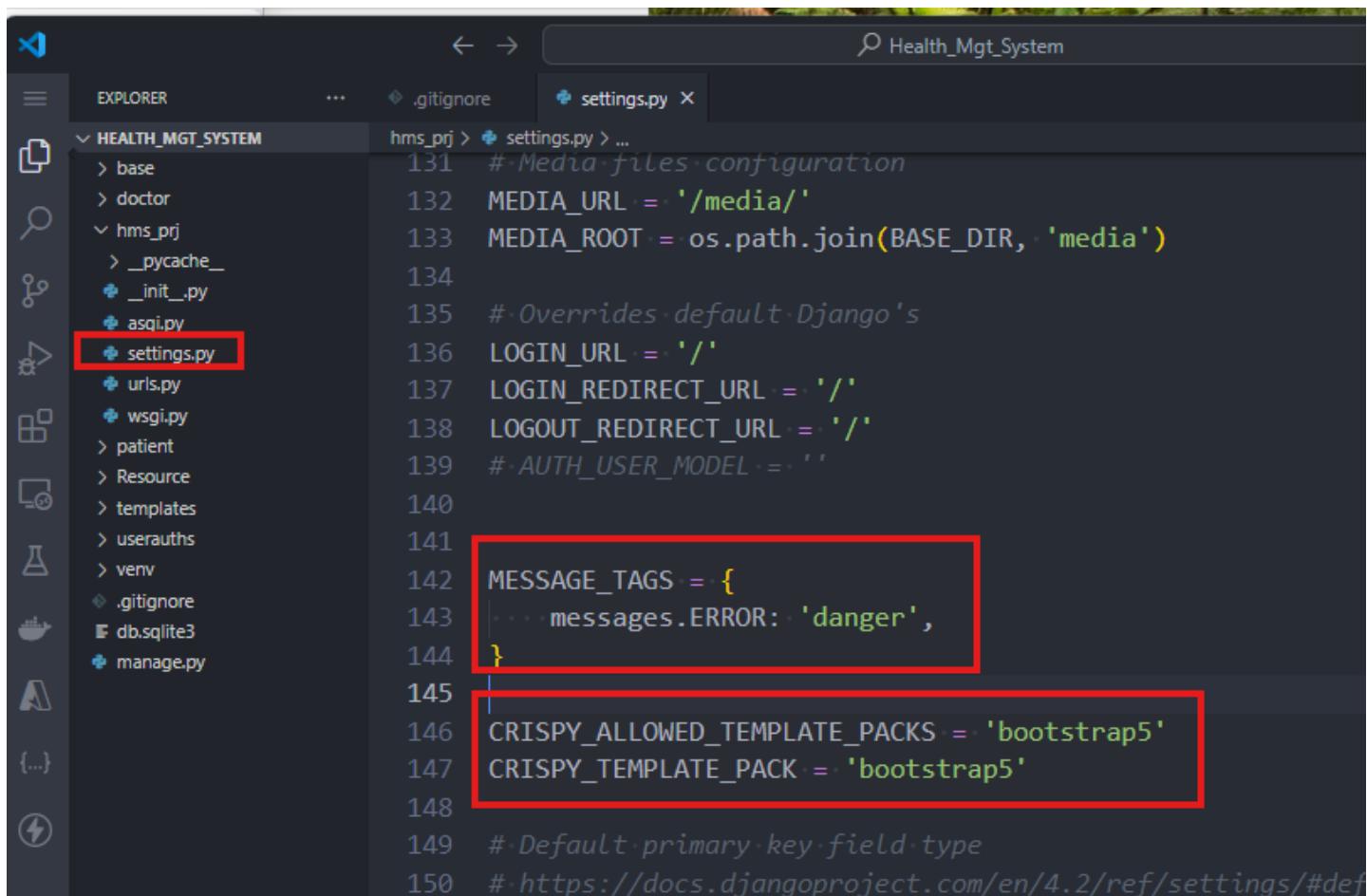
8. Update SETTINGS.PY to override default login/logout and user models:



VS Code interface showing the Explorer and Editor panes. The Explorer pane shows a project structure with a red box around the 'settings.py' file. The Editor pane shows the 'settings.py' file with code. Lines 14 and 15 are highlighted with a red box: 'import os' and 'from django.contrib.messages import constants as messages'.

```
12
13  from pathlib import Path
14  import os
15  from django.contrib.messages import constants as messages
16
17 # Build paths inside the project like this: BASE_DIR / 'subdir'.
18 BASE_DIR = Path(__file__).resolve().parent.parent
19
20
```

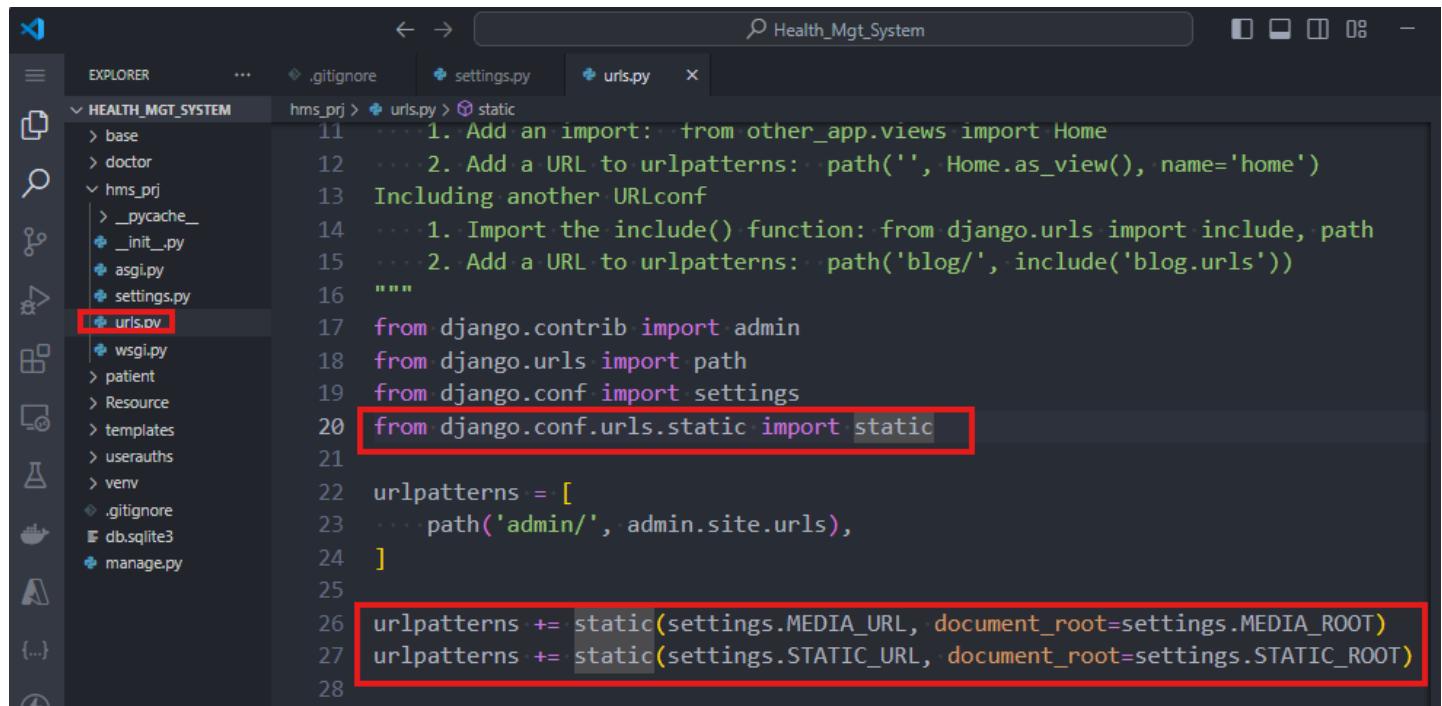
9. For messages and forms configuration, update our SETTINGS.PY:



VS Code interface showing the Explorer and Editor panes. The Explorer pane shows a project structure with a red box around the 'settings.py' file. The Editor pane shows the 'settings.py' file with code. Two sections of code are highlighted with red boxes: 'MESSAGE\_TAGS' and 'CRISPY\_ALLOWED\_TEMPLATE\_PACKS'.

```
131 # Media files configuration
132 MEDIA_URL = '/media/'
133 MEDIA_ROOT = os.path.join(BASE_DIR, 'media')
134
135 # Overrides default Django's
136 LOGIN_URL = '/'
137 LOGIN_REDIRECT_URL = '/'
138 LOGOUT_REDIRECT_URL = '/'
139 # AUTH_USER_MODEL = ''
140
141 MESSAGE_TAGS = {
142     messages.ERROR: 'danger',
143 }
144
145 CRISPY_ALLOWED_TEMPLATE_PACKS = 'bootstrap5'
146 CRISPY_TEMPLATE_PACK = 'bootstrap5'
147
148
149 # Default primary key field type
150 # https://docs.djangoproject.com/en/4.2/ref/settings/#def
```

10. Update our project URLs.PY to include the path to our static and media files:



```
11     1. Add an import: from other_app.views import Home
12     2. Add a URL to urlpatterns: path('', Home.as_view(), name='home')
13 Including another URLconf
14     1. Import the include() function: from django.urls import include, path
15     2. Add a URL to urlpatterns: path('blog/', include('blog.urls'))
16 """
17 from django.contrib import admin
18 from django.urls import path
19 from django.conf import settings
20 from django.conf.urls.static import static
21
22 urlpatterns = [
23     path('admin/', admin.site.urls),
24 ]
25
26 urlpatterns += static(settings.MEDIA_URL, document_root=settings.MEDIA_ROOT)
27 urlpatterns += static(settings.STATIC_URL, document_root=settings.STATIC_ROOT)
28
```

11. To access our ADMIN PANEL, run the migrations to see the default model.

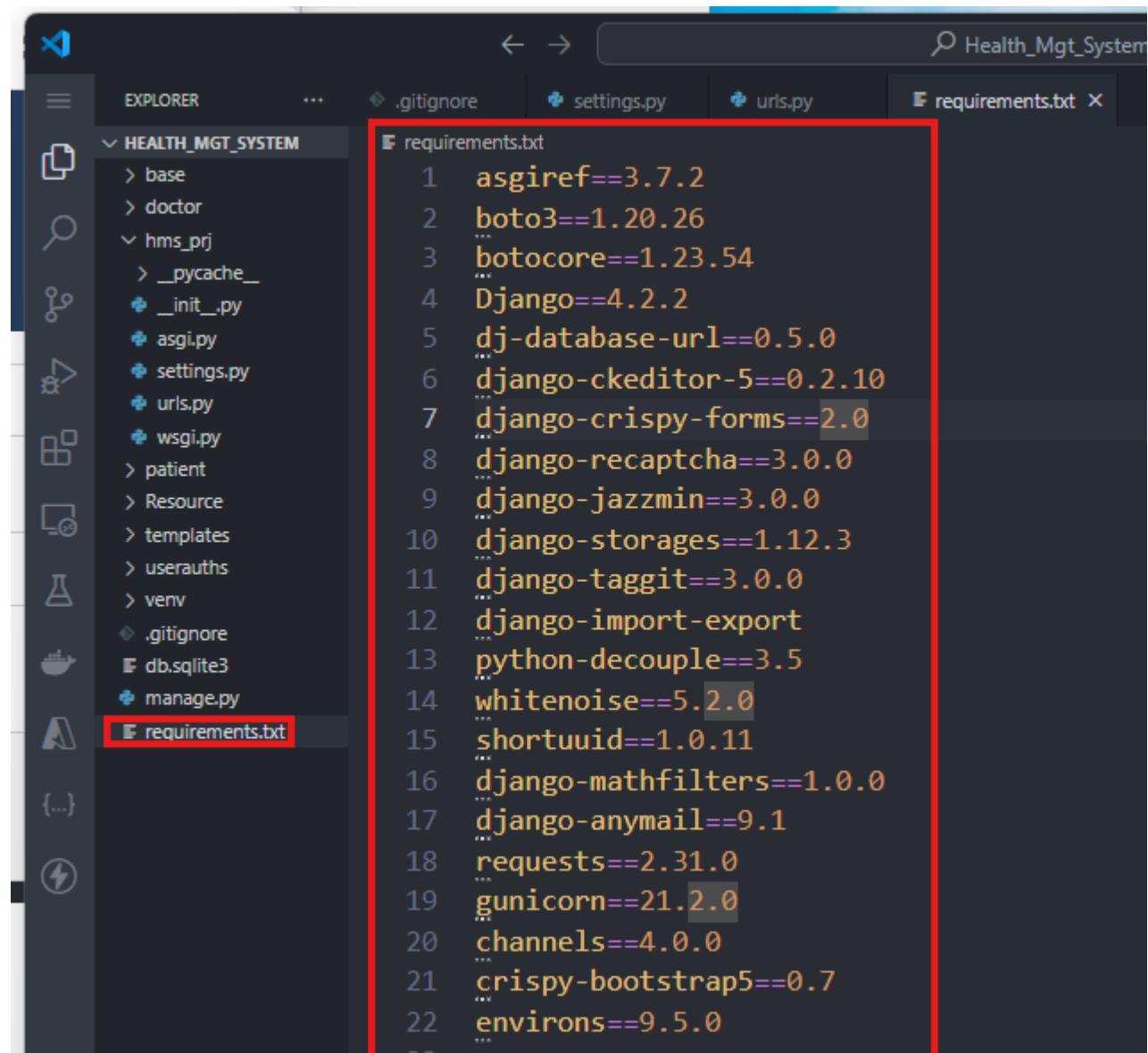
```
$ python manage.py migrate
```

12. Create your superuser

```
$ python manage.py createsuperuser
```

13. Install the packages from the RESOURCE folder. This will install the packages used by the instructor.

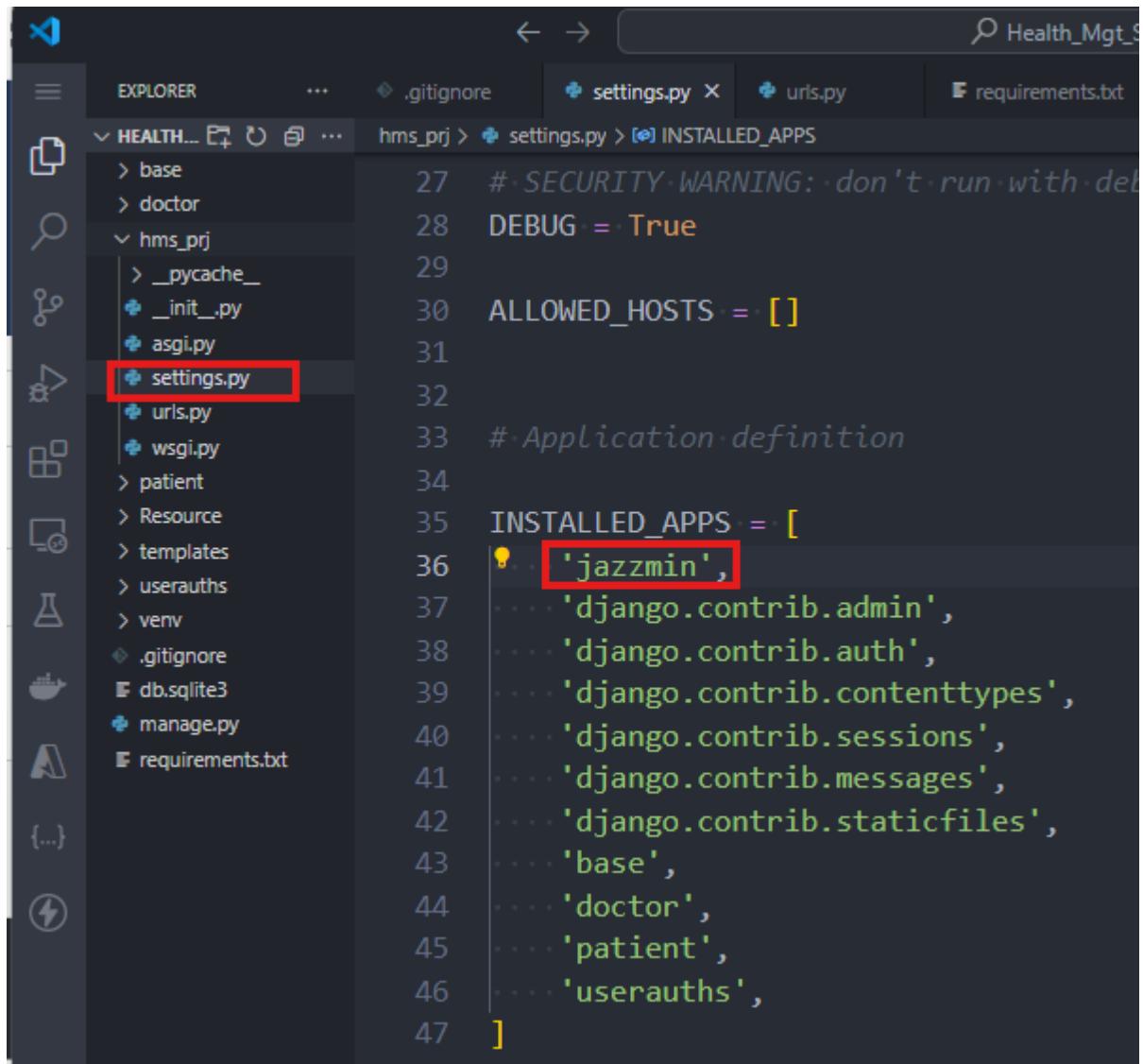
```
$ pip install -r requirements.txt
```



```
1 asgiref==3.7.2
2 boto3==1.20.26
3 botocore==1.23.54
4 Django==4.2.2
5 dj-database-url==0.5.0
6 django-ckeditor-5==0.2.10
7 django-crispy-forms==2.0
8 django-recaptcha==3.0.0
9 django-jazzmin==3.0.0
10 django-storages==1.12.3
11 django-taggit==3.0.0
12 django-import-export
13 python-decouple==3.5
14 whitenoise==5.2.0
15 shortuuid==1.0.11
16 django-mathfilters==1.0.0
17 django-anymail==9.1
18 requests==2.31.0
19 gunicorn==21.2.0
20 channels==4.0.0
21 crispy-bootstrap5==0.7
22 environs==9.5.0
```

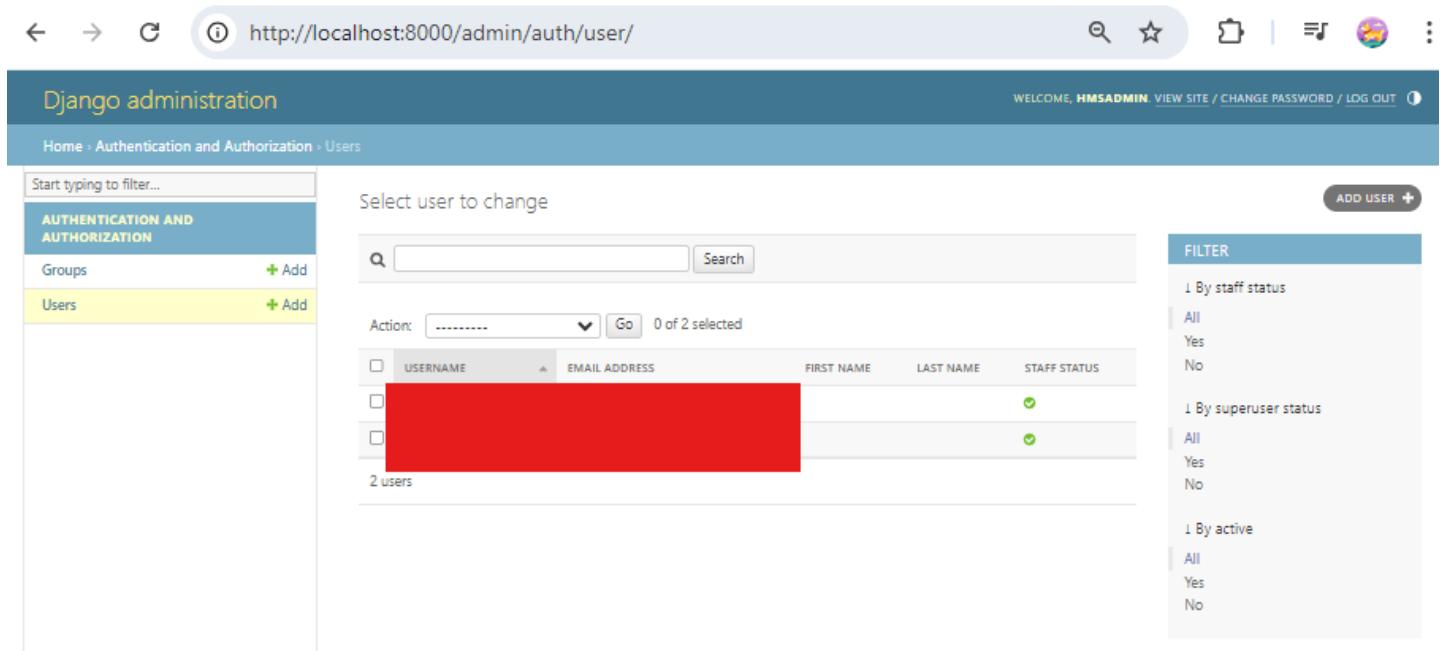
14. Instead of using default DJANGO ADMIN DASHBOARD, we use the package [DJANGO JAZZMIN](#) for a more customizable and modern look.

Include JAZZMIN in your INSTALLED\_APPS in SETTINGS.PY



```
27 # SECURITY WARNING: don't run with debug=True in production!
28 DEBUG = True
29
30 ALLOWED_HOSTS = []
31
32
33 # Application definition
34
35 INSTALLED_APPS = [
36     'jazzmin',
37     'django.contrib.admin',
38     'django.contrib.auth',
39     'django.contrib.contenttypes',
40     'django.contrib.sessions',
41     'django.contrib.messages',
42     'django.contrib.staticfiles',
43     'base',
44     'doctor',
45     'patient',
46     'userauths',
47 ]
```

BEFORE JAZZMIN:



http://localhost:8000/admin/auth/user/

Django administration

Home > Authentication and Authorization > Users

Start typing to filter...

AUTHENTICATION AND AUTHORIZATION

Groups [+ Add](#)

Users [+ Add](#)

Select user to change

Action: [.....](#) Go 0 of 2 selected

<input type="checkbox"/>	USERNAME	EMAIL ADDRESS	FIRST NAME	LAST NAME	STAFF STATUS
<input type="checkbox"/>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	<input checked="" type="checkbox"/>
<input type="checkbox"/>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	<input checked="" type="checkbox"/>

2 users

FILTER

By staff status

All Yes No

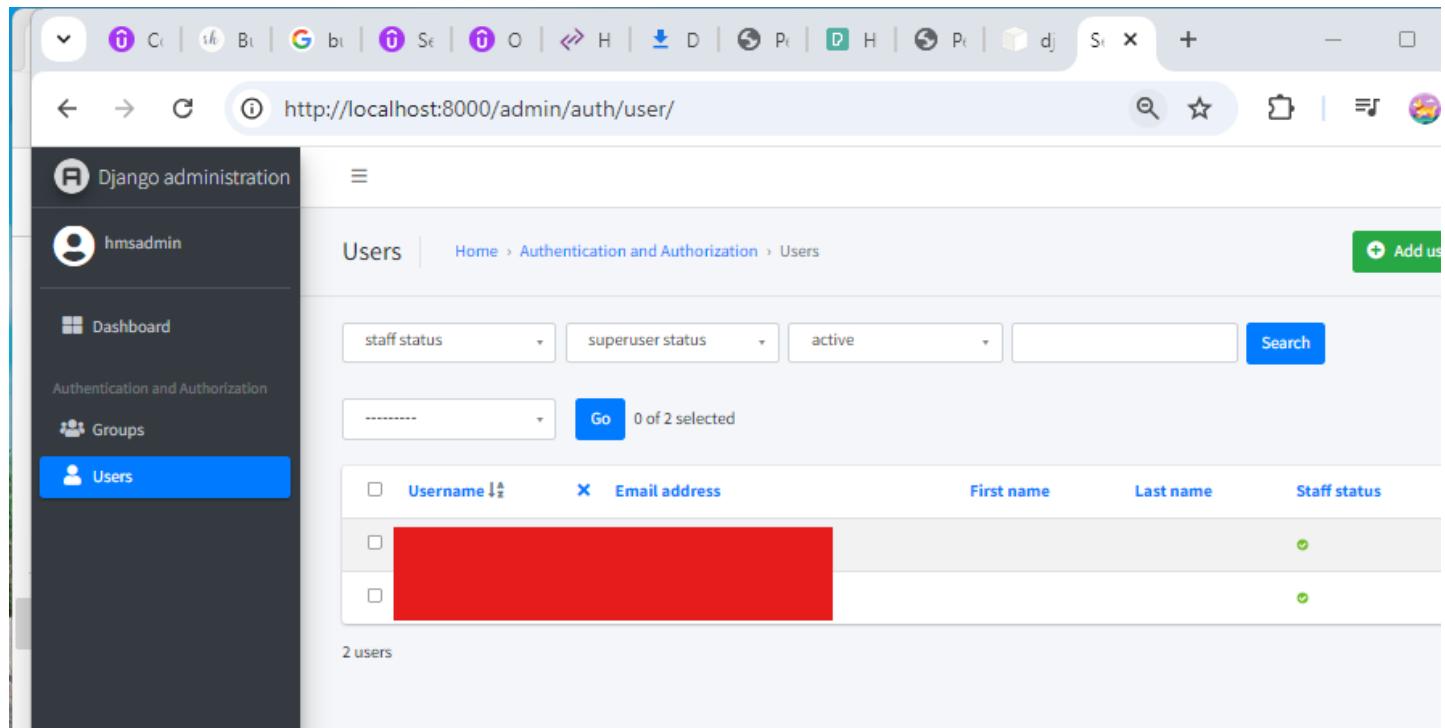
By superuser status

All Yes No

By active

All Yes No

AFTER JAZZMIN:



The screenshot shows the Django admin interface for the 'Users' list page, using the JAZZMIN theme. The left sidebar has a dark background with white text and icons. The 'Users' link is highlighted in blue. The main content area has a light background. At the top, there are filter dropdowns for 'staff status' (set to 'active'), 'superuser status' (set to 'superuser'), and 'active'. A search bar and a 'Search' button are also present. Below the filters, a dropdown menu shows '0 of 2 selected'. The table header includes columns for 'First name', 'Last name', and 'Staff status'. Two user entries are listed, both with their 'First name' and 'Last name' columns redacted. The 'Staff status' column for both users shows a green checkmark. The bottom of the table shows the text '2 users'.

First name	Last name	Staff status
[REDACTED]	[REDACTED]	✓
[REDACTED]	[REDACTED]	✓

15. To add a more customizable look to the admin panel, add in the SETTINGS.PY the JAZZMIN\_SETTINGS. [Documentation here.](#)

```
154
155 #·Jazzmin·Configuration
156 JAZZMIN_SETTINGS = {
157     ...#·title·of·the·window·(Will·default·to·current_admin_site.site_title)
158     ..."site_title": "RNL·HealthCare | Health Management System",
159
160     ...#·Title·on·the·Login·screen·(19·chars·max)·(defaults·to·current_admin_site.site_header)
161     ..."site_header": "Health Management System",
162
163     ...#·Title·on·the·brand·(19·chars·max)·(defaults·to·current_admin_site.site_brand)
164     ..."site_brand": "RNL·HealthCare | Health Management System",
165
166     ...#·Welcome·text·on·the·Login·screen
167     ..."welcome_sign": "Welcome to the RNL·HealthCare, Login Now",
168
169     ...#·Copyright·on·the·footer
170     ..."copyright": "RNL·Web·Solutions",
171
172     ...#·List·of·apps·(and/or·models)·to·base·side·menu·ordering·off·order
173     ..."order_with_respect_to": ["base", ],
174
175     ...#·Custom·icons·for·side·menu·apps/models·See·https://fontawesome.com
176     ...#·for·the·full·list·of·5.13.0·free·icon·classes
177     ..."icons": {
178         ..."auth": "fas fa-users-cog",
179         ..."auth.user": "fas fa-user",
180         ..."auth.Group": "fas fa-users",
181     },
182
183     ..."show_ui_builder": True,
184 }
185
186 JAZZMIN_UI_TWEAKS = {
187     ..."navbar_small_text": False,
188     ..."footer_small_text": False,
```

16. Reload your page and in the admin dashboard, you will see the UI builder, you need to copy this code and add this as JAZZMIN\_TWEAKS. COPY THIS CODE INTO YOUR SETTINGS.PY.

