

MODELS \rightarrow DB

- ✓ **Model** uses to create tables, their fields, and various constraints.
- ✓ Model form is a class, used to create HTML form by using the Model. It represents database tables.

1. PROJECT: CREATE A WEB APPLICATION WITH MODELS

1. Create Project , Application and run the server.

```
Windows\system32\cmd.exe - python manage.py runserver
D:\Django>django-admin startproject project6
D:\Django>cd project6
D:\Django\project6>python manage.py startapp apps
D:\Django\project6>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 f
or app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
January 21, 2022 15:50:07
Django version 4.0.1, using settings 'project6.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

2. Add an application name in settings file

settings.py

```
# Application definition

INSTALLED_APPS = [
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
    'apps'
```

]

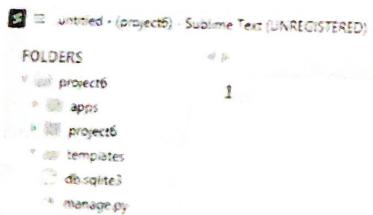
3. Enter the name Ex: templates.



```
untitled - (project6) - Sublime Text (UNREGISTERED)
FOLDERS
> project6 1
```

FolderName: templates

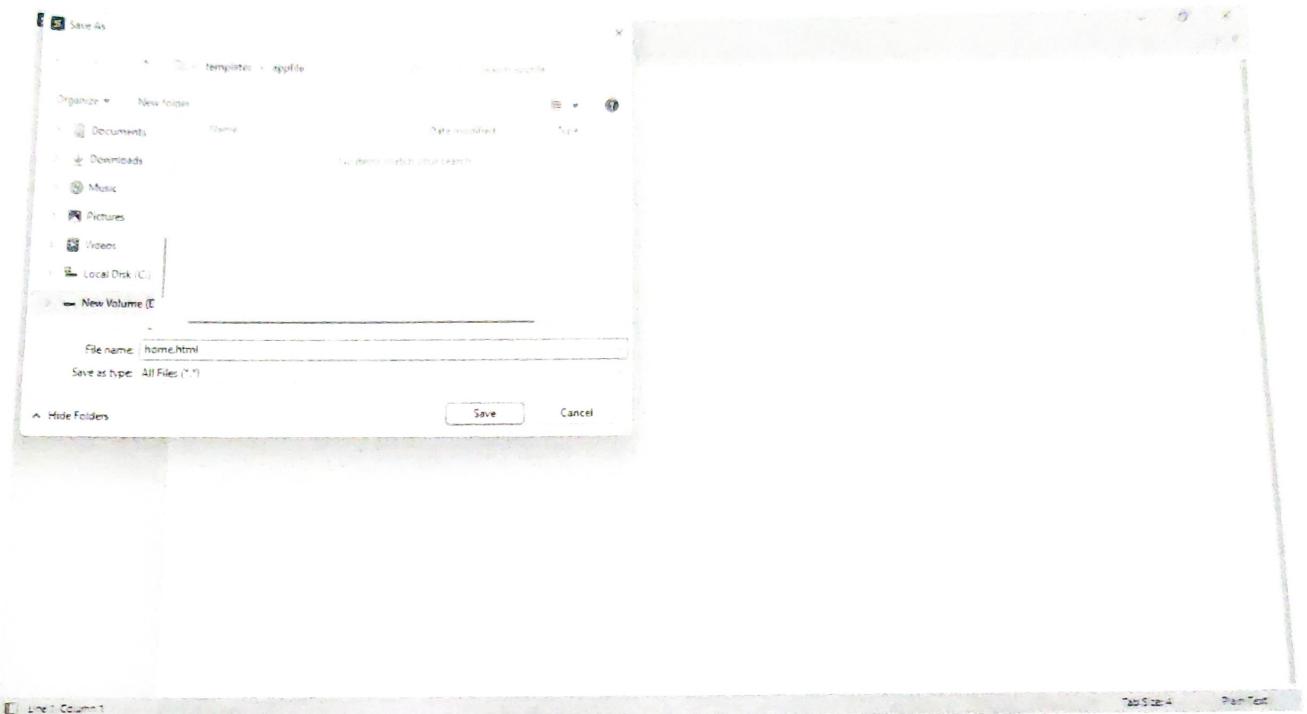
4. Enter the Folder Name in template folder.



```
untitled - (project6) - Sublime Text (UNREGISTERED)
FOLDERS
> project6 1
> apps
> project6
> templates
  db.sqlite3
  manage.py
```

WEB DEVELOPMENT

5. Right click apps and click html file.



6. Configure **Settings** file (Enter templates name in Directory)

```
settings.py
from pathlib import Path
import os
# Build paths inside the project like this: BASE_DIR / 'subdir'.
BASE_DIR = Path(__file__).resolve().parent.parent
Temp_Dir = os.path.join(BASE_DIR, 'templates')

# Quick-start development settings - unsuitable for production
# See https://docs.djangoproject.com/en/4.0/howto/deployment/checklist/
```

7. Configure settings file (Enter the directory name in templates.)

```
settings.py
TEMPLATES = [
    {
        'BACKEND': 'django.template.backends.django.DjangoTemplates',
        'DIRS': [Temp_Dir],
        'APP_DIRS': True,
        'OPTIONS': {
            'context_processors': [
                'django.template.context_processors.debug',
                'django.template.context_processors.request',
                'django.contrib.auth.context_processors.auth',
                'django.contrib.messages.context_processors.messages'
            ],
        },
    },
]
```

8. Configure View file

```
views.py
from django.shortcuts import render
def home(request):
    return render(request, 'appfile/home.html')
```

9. Configure url file

```
urls.py
urlpatterns = [
    path('admin/', admin.site.urls),
    path('home/', views.home),
]
```

WEB DEVELOPMENT

10. Run the server

```
C:\Windows\system32\cmd.exe python manage.py runserver
D:\Django\project6>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 f
or app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
January 21, 2022 - 22:30:17
Django version 4.0.1, using settings 'project6.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
[21/Jan/2022 22:30:19] "GET /home/ HTTP/1.1" 200 0
```

11. Verification



WEB DEVELOPMENT

12. Open model file and type table name and fields (no, name, etc.,)

models.py

```
from django.db import models
```

To
create
DB

```
class Student(models.Model):  
    sno=models.IntegerField()  
    sname=models.CharField(max_length=64)  
    ssalary=models.FloatField()  
    saddress=models.CharField(max_length=64)
```



DB Table

13. Open **command prompt**

Type: python manage.py makemigrations

```
■ Select C:\Windows\system32\cmd.exe  
D:\Django\project6>python manage.py makemigrations  
apps\migrations\0001_initial.py  
- Create model Student  
D:\Django\project6>
```

To change py
to DB

14. Open migrations folder and verify the tables

The screenshot shows a file tree in Sublime Text. The root directory is 'D:\Django\project6'. Inside it are 'db.sqlite3', 'migrations', 'myapp', and 'templates'. The 'migrations' folder contains several subfolders like '0001_initial' and '0002_logentry_remove_auto_add'. A specific file, '0001_initial.py', is open in the editor. Handwritten annotations in pink highlight the 'dependencies' and 'operations' sections of the code.

```

D:\Django\project6> migrations/0001_initial.py (diffuse) Sublime Text (diffuse)
FOLDERS
D:\Django\project6
  - db.sqlite3
  - migrations
  - myapp
    - __init__.py
    - migrations
      - 0001_initial.py
      - 0002_logentry_remove_auto_add.py
      - 0003_logentry_add_action_flag_choices.py
      - 0004_alter_user_username_opts.py
      - 0005_alter_user_last_login_null.py
      - 0006_require_contenttypes_0002.py
      - 0007_alter_validators_add_error_messages.py
      - 0008_alter_user_username_max_length.py
      - 0009_alter_user_last_name_max_length.py
      - 0010_alter_group_name_max_length.py
      - 0011_update_proxy_permissions.py
      - 0012_alter_user_first_name_max_length.py
    - models.py
    - tests.py
    - views.py
  - project6
  - templates
  - db.sqlite3
  - manage.py

```

```

dependencies = []

operations = [
    migrations.CreateModel(
        name='Category',
        fields=[
            ('id', models.AutoField(primary_key=True)),
            ('name', models.CharField(max_length=100)),
        ],
    ),
]

```

15. Open command prompt

Type : python manage.py migrate

The screenshot shows a command prompt window titled 'cmd.exe' running on Windows. The command 'python manage.py migrate' is entered, and the output shows the application of various database migrations across different apps. Each migration step is followed by an 'OK' status message.

```

C:\Windows\system32\cmd.exe
D:\Django\project6>python manage.py migrate
Apply all migrations: admin, apps, auth, contenttypes, sessions
Applying contenttypes.0001_initial... OK
Applying auth.0001_initial... OK
Applying admin.0001_initial... OK
Applying admin.0002_logentry_remove_auto_add... OK
Applying admin.0003_logentry_add_action_flag_choices... OK
Applying apps.0001_initial... OK
Applying contenttypes.0002_remove_content_type_name... OK
Applying auth.0002_alter_permission_name_max_length... OK
Applying auth.0003_alter_user_email_max_length... OK
Applying auth.0004_alter_user_username_opts... OK
Applying auth.0005_alter_user_last_login_null... OK
Applying auth.0006_require_contenttypes_0002... OK
Applying auth.0007_alter_validators_add_error_messages... OK
Applying auth.0008_alter_user_username_max_length... OK
Applying auth.0009_alter_user_last_name_max_length... OK
Applying auth.0010_alter_group_name_max_length... OK
Applying auth.0011_update_proxy_permissions... OK
Applying auth.0012_alter_user_first_name_max_length... OK
Applying sessions.0001_initial... OK

```

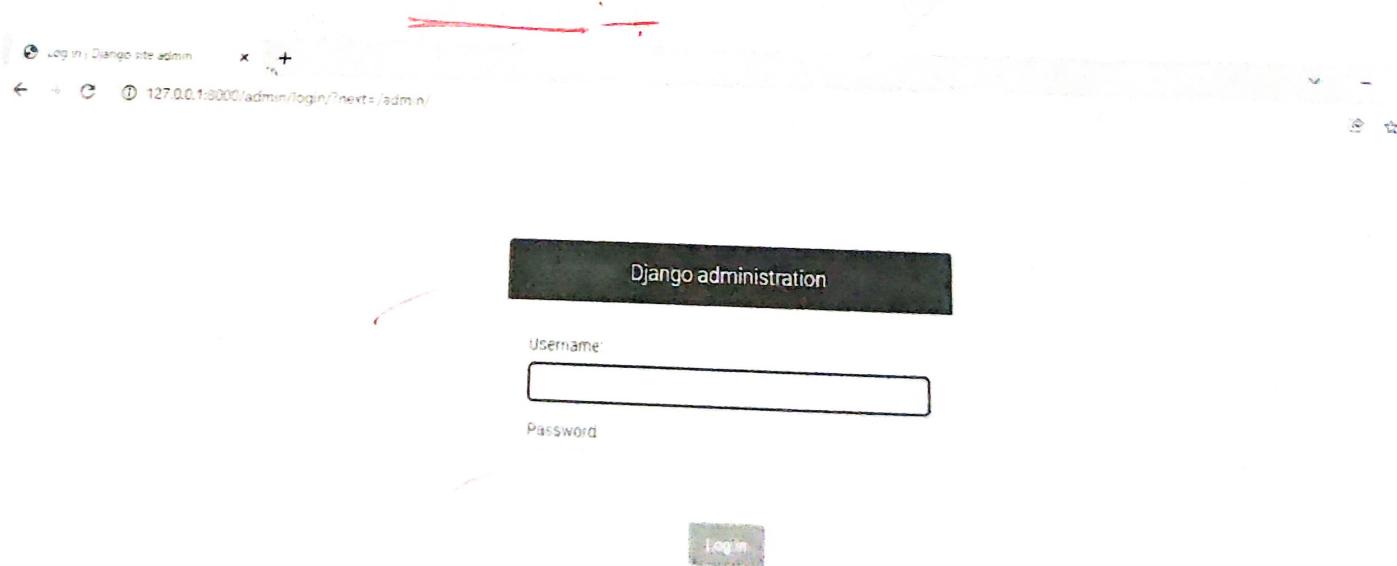
To get
Permissions

D:\Django\project6>

16. Run the server

```
D:\Django\project6>python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...
System check identified no issues (0 silenced).
January 21, 2022 - 22:37:25
Django version 4.0.1, using settings 'project6.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

17. Open browser and type: 127.0.0.1/admin



WEB DEVELOPMENT

18. Creating user credentials for admin panel

Type: `python manage.py createsuperuser`

```
D:\Django\project6>python manage.py createsuperuser
Username (leave blank to use 'mani'): admin
Email address: admin@gmail.com
Password:
Password (again):
This password is too short. It must contain at least 8 characters.
This password is too common.
This password is entirely numeric.
Bypass password validation and create user anyway? [y/N]: y
Superuser created successfully.

D:\Django\project6>
```

19. Run the server.

```
D:\Django\project6>python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...

System check identified no issues (0 silenced).
January 21, 2022 - 22:38:55
Django version 4.0.1, using settings 'project6.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

20. Login with the user credentials in admin

Log in | Django site admin
127.0.0.1:8000/admin/

Django administration

Username
admin

Password
.....

Login

21. Verify the panel

admin panel

Site administration | Django site
127.0.0.1:8000/admin/

Django administration

WELCOME, ADMIN. VIEW SITE / CHANGE PASS

Site administration

AUTHENTICATION AND AUTHORIZATION

Groups

↳ Add ↳ Change

Users

↳ Add ↳ Change

Recent actions

My actions

None available

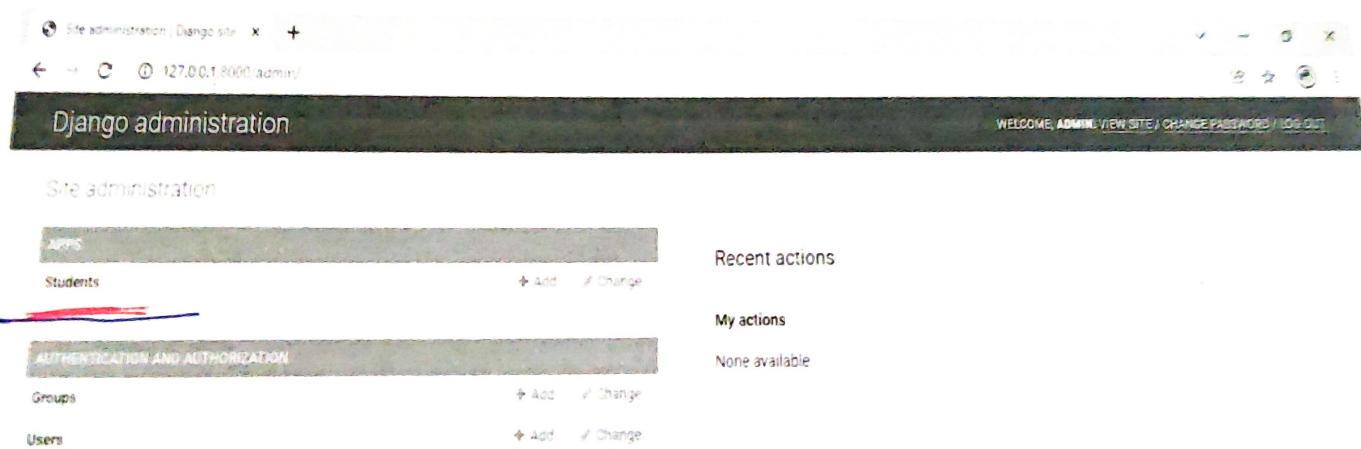
WEB DEVELOPMENT

22. Open admin.py file and create tables

admin.py

```
from django.contrib import admin
from apps.models import Student
admin.site.register(Student)
```

23. Verify the table in admin panel



----- WEB DEVELOPMENT -----

24. Verify the table in admin panel

The screenshot shows the Django Admin interface for the 'Students' model. The top navigation bar includes links for Home, App list, Students, and Add student. The main content area displays a table with two rows of student data. A horizontal bar at the bottom of the table header contains buttons for 'Select all' and 'Deselect all'. Below the table, there are buttons for 'Add another' and 'ADD STUDENT'. The URL in the browser address bar is 127.0.0.1:8000/admin/apps/student/list/.

25. Store the data in table

The screenshot shows the 'Add student' form in the Django Admin interface. The top navigation bar includes links for Home, App list, Students, and Add student. The main content area has a title 'Add student'. It contains several input fields: 'Sno:' (with value '1'), 'Sname:' (with value 'Rahul'), 'Salary:' (with value '1000'), and 'Saddress:' (with value 'Kharar'). At the bottom right, there are three buttons: 'Save and add another', 'Save and continue editing', and a large 'SAVE' button. The URL in the browser address bar is 127.0.0.1:8000/admin/apps/student/add/.

EXPERIMENT

26. Verify the table in admin panel

Django administration

Home | Apps | Changes | Log out | Help

Select student to change: [Django](#) [+ New](#)

Student object (2)

Action

STUDENT

Student object (2)

Student object (1)

2 Students

list & format

27. Go to admin file and register tables and class.

```
admin.py
```

```
from django.contrib import admin
from apps.models import Student
class StudentAdmin (admin.ModelAdmin):
    list_display=['sno','sname','ssalary','saddress']
    list_editable=[saddress]
admin.site.register(Student,StudentAdmin)
```

28. Verify the data

The screenshot shows the Django admin interface with the title "Django administration". In the top right corner, there are links for "WELCOME ADMIN", "VIEW SITE", "CHANGE PASSWORD", and "LOG OUT". On the left, there's a sidebar with "Dashboard", "Log out", and "Logout using...", followed by "APPS" and "Students". Under "APPS", "Students" is selected. Below that is "AUTHENTICATION AND AUTHORIZATION" with "Groups" and "Users". The main area is titled "Select student to change" and shows a table with two rows of data. The columns are labeled "SNO", "SNAME", "SSALARY", and "SADDRESS". The first row has SNO 102, SNAME Raj, SSALARY 40000.0, and SADDRESS Chittagong. The second row has SNO 101, SNAME arjun, SSALARY 20000.0, and SADDRESS Mymensingh. A button "ADD STUDENT" is visible on the right.

SNO	SNAME	SSALARY	SADDRESS
102	Raj	40000.0	Chittagong
101	arjun	20000.0	Mymensingh

29. Configuring the view file

views.py

```
from django.shortcuts import render
from apps.models import Student
def home(request):
    stud=Student.objects.all()
    return render(request,'appfile/home.html',{'s':stud})
```

key value

WEB DEVELOPMENT

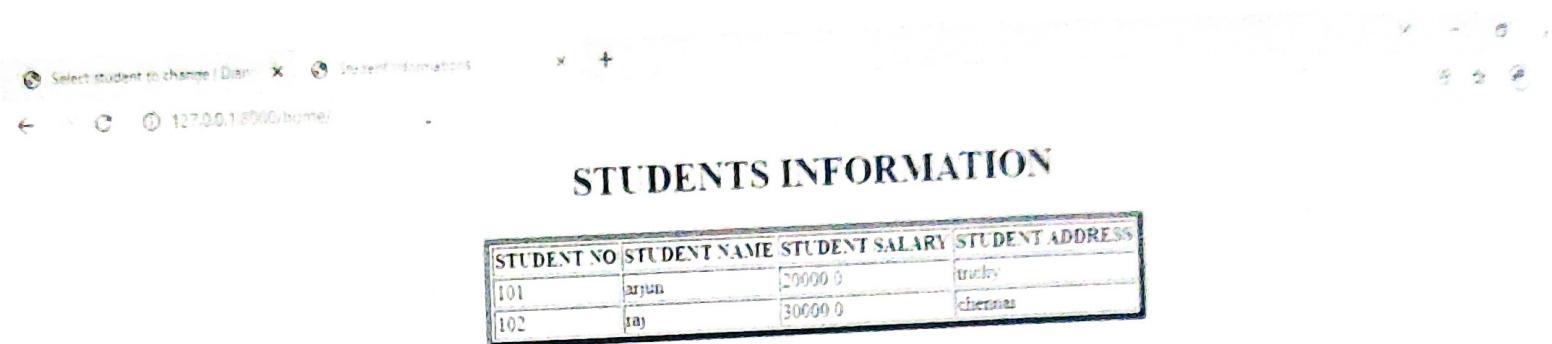
30. Create a html file in appfile folder.

```
<!DOCTYPE html>
<html>
<head>
<title>Student Informations</title>
</head>
<body>
<center>
<h1>STUDENTS INFORMATION</h1>
{%
  if s %}
  <table border=5px;>
    <thead>
      <th>STUDENT NO</th>
      <th>STUDENT NAME</th>
      <th>STUDENT SALARY</th>
      <th>STUDENT ADDRESS</th>
    </thead>
    <% for x in s %>
      <tr>
        <td>{{x.sno}}</td>
        <td>{{x.sname | title}}</td>
        <td>{{x.ssalary}}</td>
        <td>{{x.saddress}}</td>
      </tr>
    <% endfor %>
  </table>
  {%
    else %}
    <p>NO RECORDS FOUND</p>
  {%
    endif %}
</center>
</body>
</html>
```

St. No	8 + N o	S

WEB DEVELOPMENT

OUTPUT:



A screenshot of a web browser window titled "STUDENTS INFORMATION". The browser has two tabs open: "Select student to change (Dian)" and "Insert Information". The address bar shows the URL "127.0.0.1:8000/home". The main content area displays a table with four columns: STUDENT NO, STUDENT NAME, STUDENT SALARY, and STUDENT ADDRESS. There are two rows of data: one for student ID 101 with name Arjun and salary 20000.0, and another for student ID 102 with name Raj and salary 30000.0.

STUDENT NO	STUDENT NAME	STUDENT SALARY	STUDENT ADDRESS
101	Arjun	20000.0	trichy
102	Raj	30000.0	chennai

2. PROJECT: CREATE A WEB APPLICATION WITH MODELS

1. Create Project , Application and run the server.

```
D:\Django>django-admin startproject project6
D:\Django>cd project6
D:\Django\project6>python manage.py startapp apps
D:\Django\project6>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 at
or app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
January 21, 2022 - 15:58:07
Django version 4.0.1, using settings 'project6.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

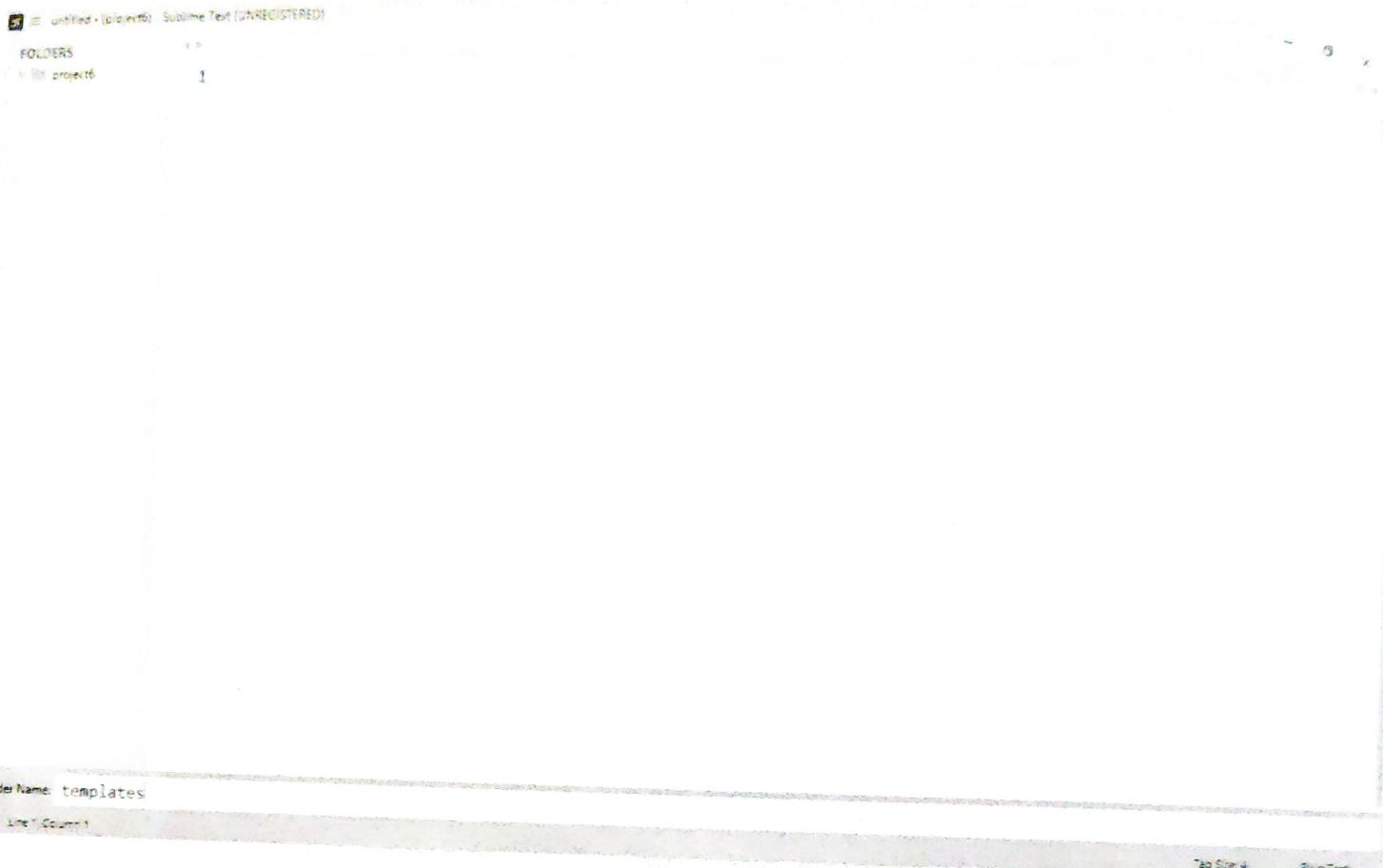
2. Add an application name in settings file

settings.py

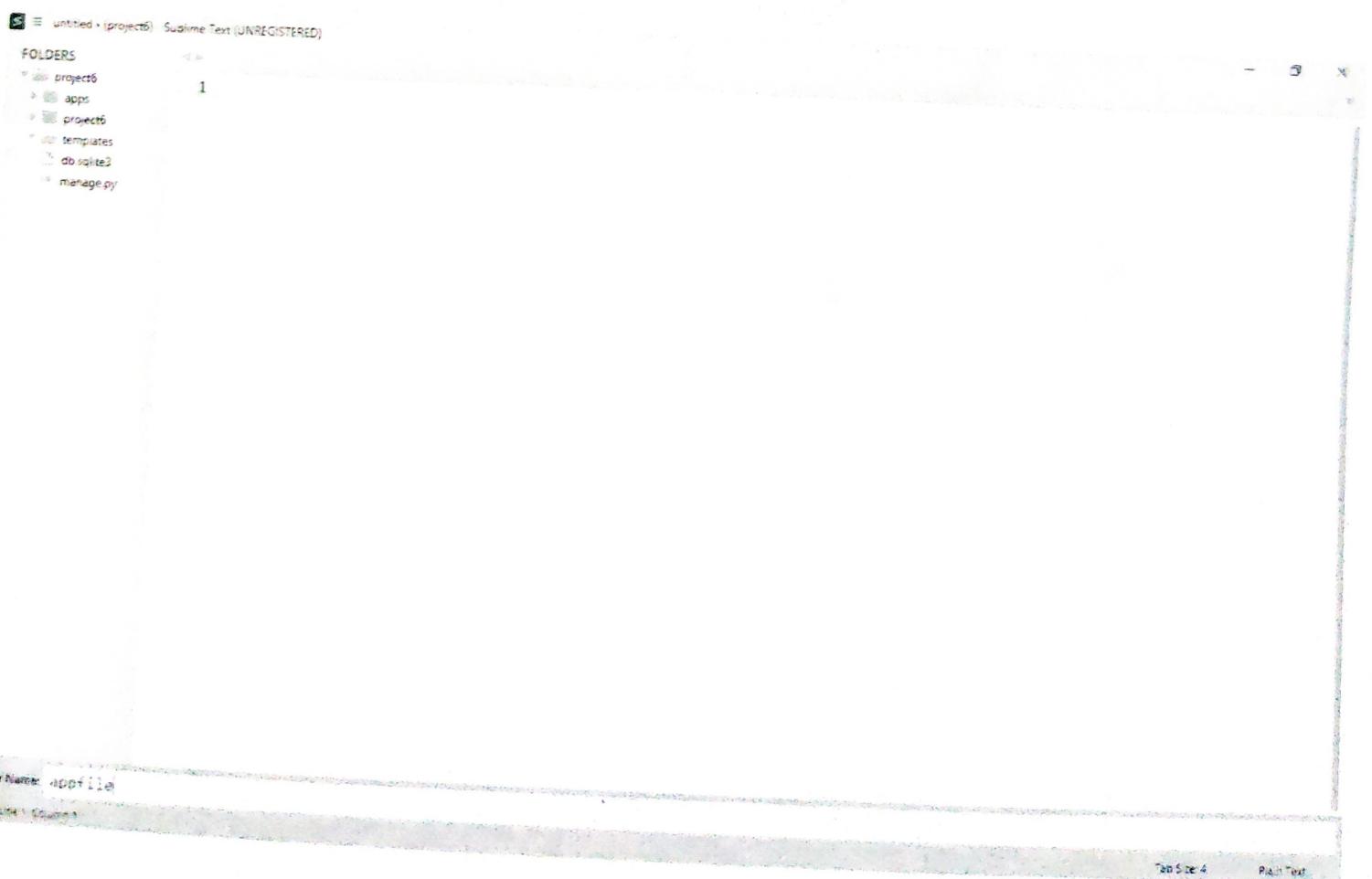
Application definition

```
INSTALLED_APPS = [
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
    'apps'
]
```

3. Enter the name Ex: templates.

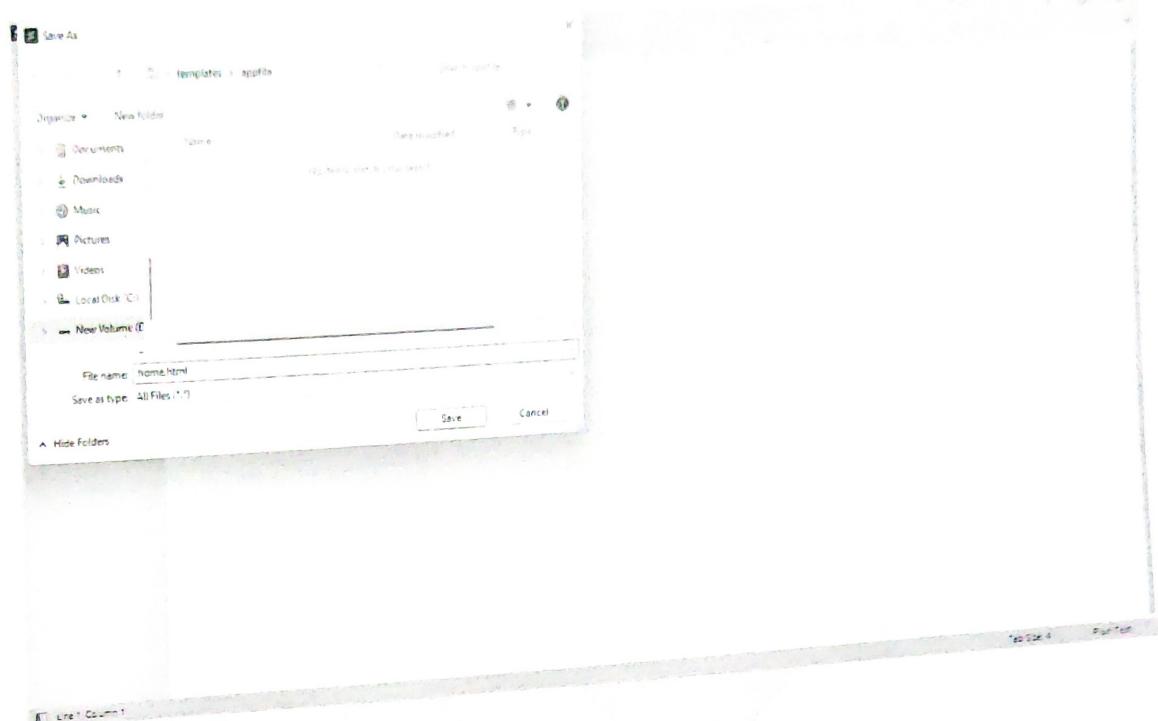


4. Enter the Folder Name in template folder.



WEB DEVELOPMENT

5. Right click apps and click html file.



6. Configure Settings file (Enter templates name in Directory)

```
settings.py
from pathlib import Path
import os
# Build paths inside the project like this: BASE_DIR / 'subdir'.
BASE_DIR = Path(__file__).resolve().parent.parent
Temp_Dir = os.path.join(BASE_DIR, 'templates')
# Quick-start development settings - unsuitable for production
# See https://docs.djangoproject.com/en/4.0/howto/deployment/checklist/
#
```

7. Configure settings file (Enter the directory name in templates.)

```
settings.py
-----
TEMPLATES = [
    {
        'BACKEND': 'django.template.backends.django.DjangoTemplates',
        'DIRS': [Temp_Dir],
        'APP_DIRS': True,
        'OPTIONS': {
            'context_processors': [
                'django.template.context_processors.debug',
                'django.template.context_processors.request',
                'django.contrib.auth.context_processors.auth',
                'django.contrib.messages.context_processors.messages',
            ],
        },
    },
]
```

8. Configure View file

```
views.py
-----
from django.shortcuts import render
def home(request):
    return render(request, 'appfile/home.html')
```

9. Configure url file

```
urls.py
-----
urlpatterns = [
    path('admin/', admin.site.urls),
    path('home/', views.home),
]
```

WEB DEVELOPMENT

10. Run the server

```
C:\Windows\system32\cmd.exe python manage.py runserver
D:\Django\project6>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
or app(s): admin, auth, contenttypes, sessions.
Run 'python manage.py migrate' to apply them.
January 21, 2022 - 22:30:17
Django version 4.0.1, using settings 'project6.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
[21/Jan/2022 22:30:19] "GET /home/ HTTP/1.1" 200 0
```

11. Verification



12. Open **model file** and type table name and fields (no, name, etc.,)

```
models.py      x
from django.db import models

class Student(models.Model):
    sno=models.IntegerField()
    sname=models.CharField(max_length=64)
    ssalary=models.FloatField()
    saddress=models.CharField(max_length=64)
```

13. Open **command prompt**

Type: python manage.py makemigrations

```
D:\Django\project6>python manage.py makemigrations
apps\migrations\0001_initial.py
- Create model Student

D:\Django\project6>
```

14. Open migrations folder and verify the tables

```
D:\Django\project6\apps\migrations>0001_initial.py (project) - Sublime Text (UNLINKED)
```

```
FOLDERS
- projects
  - apps
    - __pycache__
    - migrations
    - __pycache__
      - 0001_initial.py
      - __init__.py
    - admin.py
    - apps.py
    - models.py
    - tests.py
    - views.py
  - project6
  - templates
  - db.sqlite3
  - manage.py

1 # Generated by Django 1.11.13 on 2018-01-05 11:03.

2 class Migration(migrations.Migration):
3     dependencies = [
4         ('contenttypes', '0002_remove_content_type_name'),
5     ]
6 
7     operations = [
8         migrations.CreateModel(
9             name='User',
10            fields=[
11                ('id', models.AutoField(auto_created=True, primary_key=True, serialize=False, verbose_name='ID')),
12                ('password', models.CharField(max_length=128, verbose_name='password')),
13                ('last_login', models.DateTimeField(null=True, verbose_name='last login')),
14                ('is_superuser', models.BooleanField(default=False, verbose_name='superuser status')),
15                ('is_staff', models.BooleanField(default=False, verbose_name='staff status')),
16                ('is_active', models.BooleanField(default=True, verbose_name='active')),
17                ('date_joined', models.DateTimeField(auto_now_add=True, verbose_name='date joined')),
18                ('first_name', models.CharField(max_length=30, verbose_name='first name')),
19                ('last_name', models.CharField(max_length=30, verbose_name='last name')),
20                ('email', models.EmailField(max_length=254, verbose_name='email address')),
21            ],
22        ),
23    ],
24 ]
25 
```

15. Open command prompt

Type : python manage.py migrate

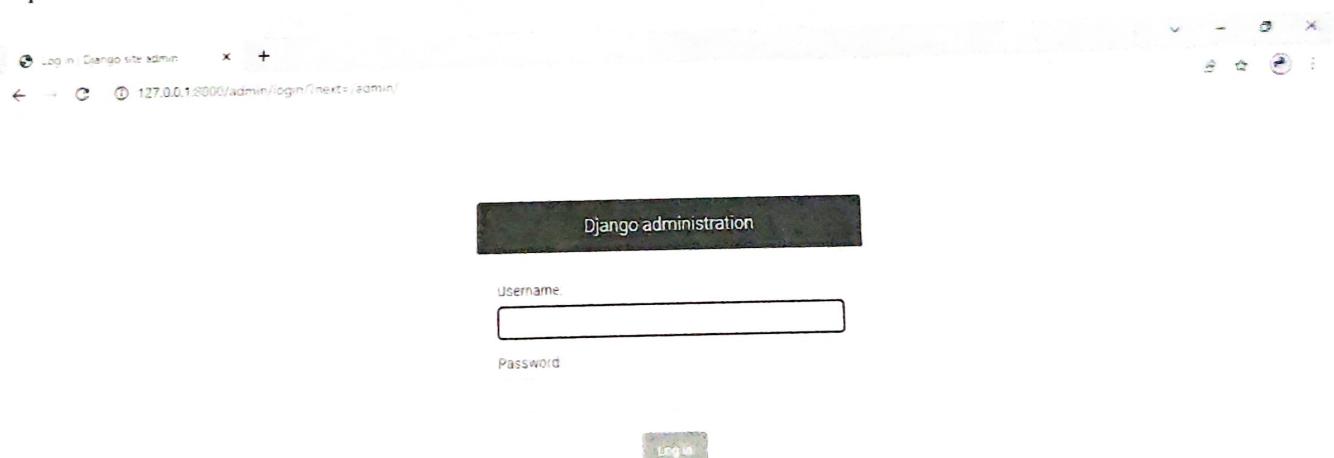
```
C:\Windows\system32\cmd.exe
D:\Django\project6>python manage.py migrate
Apply all migrations: admin, apps, auth, contenttypes, sessions
 Applying contenttypes.0001_initial... OK
 Applying auth.0001_initial... OK
 Applying admin.0001_initial... OK
 Applying admin.0002_logentry_remove_auto_add... OK
 Applying admin.0003_logentry_add_action_flag_choices... OK
 Applying apps.0001_initial... OK
 Applying contenttypes.0002_remove_content_type_name... OK
 Applying auth.0002_alter_permission_name_max_length... OK
 Applying auth.0003_alter_user_email_max_length... OK
 Applying auth.0004_alter_user_username_opts... OK
 Applying auth.0005_alter_user_last_login_null... OK
 Applying auth.0006_require_contenttypes_0002... OK
 Applying auth.0007_alter_validators_add_error_messages... OK
 Applying auth.0008_alter_user_username_max_length... OK
 Applying auth.0009_alter_user_last_name_max_length... OK
 Applying auth.0010_alter_group_name_max_length... OK
 Applying auth.0011_update_proxy_permissions... OK
 Applying auth.0012_alter_user_first_name_max_length... OK
 Applying sessions.0001_initial... OK
```

```
D:\Django\project6>
```

16. Run the server

```
C:\Windows\system32\cmd.exe python manage.py runserver
D:\Django\project6>python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...
System check identified no issues (0 silenced).
January 21, 2022 - 22:37:25
Django version 4.0.1, using settings 'project6.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

17. Open browser and type: 127.0.0.1/admin



18. Creating user credentials for admin panel

Type: python manage.py createsuperuser

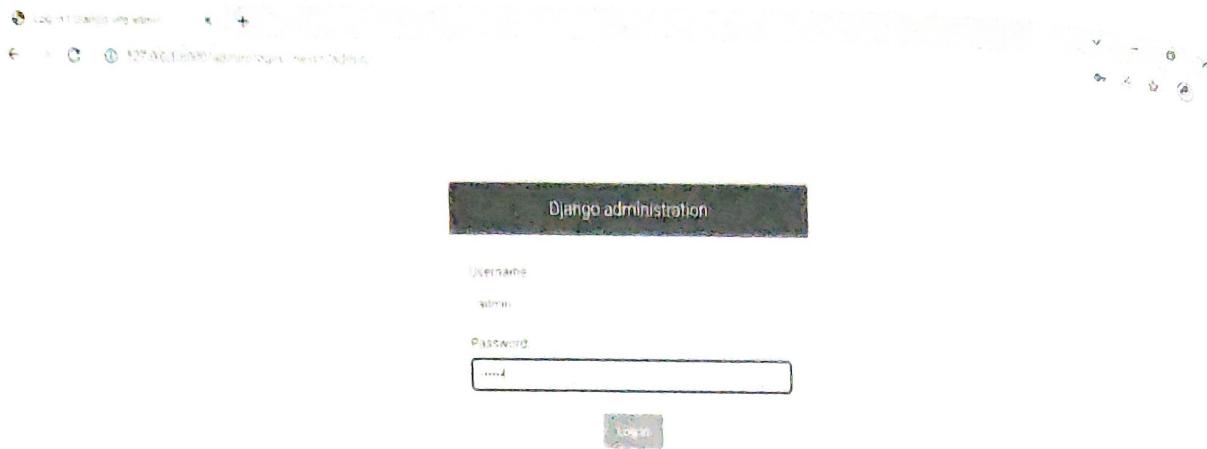
```
D:\Django\project6>python manage.py createsuperuser
Username (leave blank to use 'mani'): admin
Email address: admin@gmail.com
Password:
Password (again):
This password is too short. It must contain at least 8 characters.
This password is too common.
This password is entirely numeric.
Bypass password validation and create user anyway? [y/N]: y
Superuser created successfully.

D:\Django\project6>
```

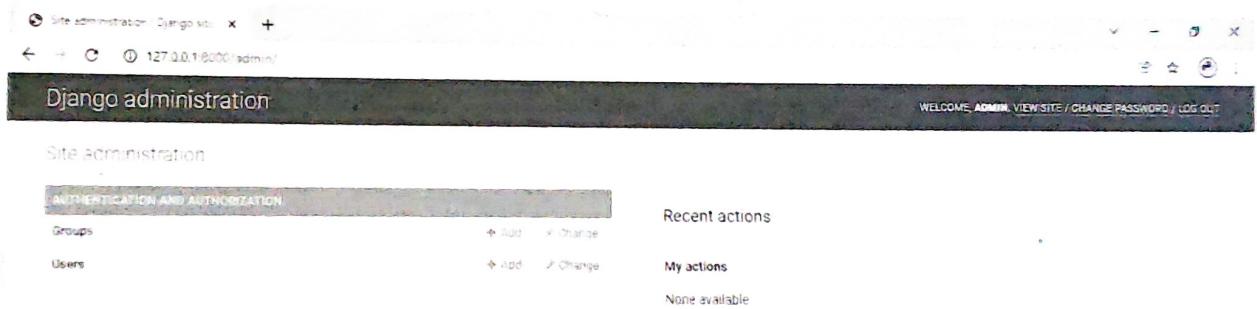
19. Run the server.

```
D:\Windows\system32\cmd.exe: python manage.py runserver
D:\Django\project6>python manage.py runserver
Watching for file changes with StatReloader
Performing system checks...
System check identified no issues (0 silenced).
January 21, 2022 - 22:38:55
Django version 4.0.1, using settings 'project6.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CTRL-BREAK.
```

20. Login with the user credentials in admin panel.



21. Verify the panel

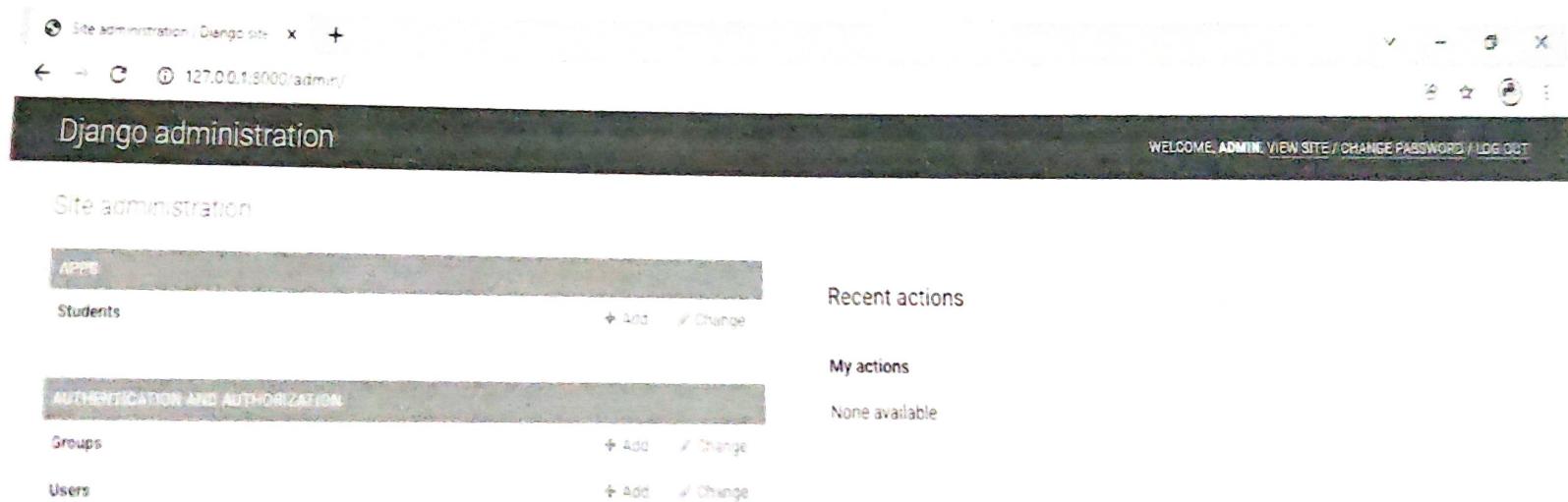


22. Open admin.py file and create tables

admin.py

```
from django.contrib import admin
from apps.models import Student
admin.site.register(Student)
```

23. Verify the table in admin panel

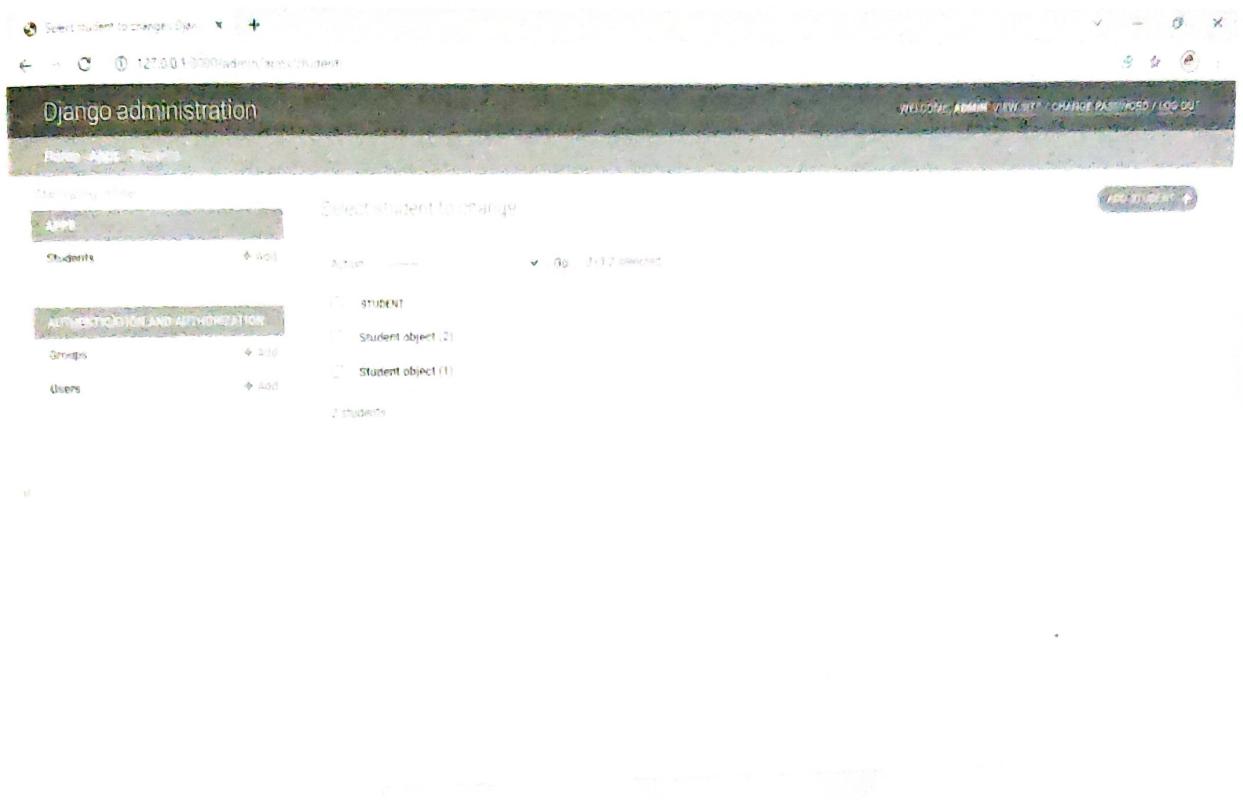


24. Verify the table in admin panel

The screenshot shows the Django administration interface for the 'Students' app. The URL is 127.0.0.1:8000/admin/applications/students/. The page title is 'Django administration'. The main content area shows a table with student data:

Sno	Name	Salary	Address
1	John Doe	10000	123 Main St, New York, NY 10001
2	Jane Smith	12000	456 Elm St, Boston, MA 02111
3	Bob Johnson	15000	789 Oak St, Los Angeles, CA 90001
4	Sarah Williams	18000	234 Pine St, Chicago, IL 60601
5	David Miller	20000	567 Cedar St, San Francisco, CA 94101
6	Emily Davis	22000	345 Birch St, Seattle, WA 98101
7	Alexander Green	25000	678 Pine St, Atlanta, GA 30301
8	Mia Wilson	28000	901 Cedar St, Denver, CO 80201
9	Christopher Brown	30000	100 Birch St, Phoenix, AZ 85001
10	Karen Taylor	32000	121 Pine St, Houston, TX 77001
11	Michael Wilson	35000	142 Cedar St, Dallas, TX 75201
12	Natalie Green	38000	163 Birch St, Austin, TX 78701
13	Christopher Brown	40000	184 Pine St, San Antonio, TX 78201
14	Karen Taylor	42000	205 Cedar St, Fort Worth, TX 76101
15	Michael Wilson	45000	226 Birch St, Dallas, TX 75201
16	Natalie Green	48000	247 Pine St, Houston, TX 77001
17	Christopher Brown	50000	268 Cedar St, Austin, TX 78701
18	Karen Taylor	52000	289 Birch St, Fort Worth, TX 76101
19	Michael Wilson	55000	310 Pine St, Dallas, TX 75201
20	Natalie Green	58000	331 Cedar St, Houston, TX 77001
21	Christopher Brown	60000	352 Birch St, Austin, TX 78701
22	Karen Taylor	62000	373 Pine St, Fort Worth, TX 76101
23	Michael Wilson	65000	394 Cedar St, Dallas, TX 75201
24	Natalie Green	68000	415 Birch St, Houston, TX 77001
25	Christopher Brown	70000	436 Pine St, Austin, TX 78701
26	Karen Taylor	72000	457 Cedar St, Fort Worth, TX 76101
27	Michael Wilson	75000	478 Birch St, Dallas, TX 75201
28	Natalie Green	78000	499 Pine St, Houston, TX 77001
29	Christopher Brown	80000	520 Cedar St, Austin, TX 78701
30	Karen Taylor	82000	541 Birch St, Fort Worth, TX 76101
31	Michael Wilson	85000	562 Pine St, Dallas, TX 75201
32	Natalie Green	88000	583 Cedar St, Houston, TX 77001
33	Christopher Brown	90000	604 Birch St, Austin, TX 78701
34	Karen Taylor	92000	625 Pine St, Fort Worth, TX 76101
35	Michael Wilson	95000	646 Cedar St, Dallas, TX 75201
36	Natalie Green	98000	667 Birch St, Houston, TX 77001
37	Christopher Brown	100000	688 Pine St, Austin, TX 78701
38	Karen Taylor	102000	710 Cedar St, Fort Worth, TX 76101
39	Michael Wilson	105000	731 Birch St, Dallas, TX 75201
40	Natalie Green	108000	752 Pine St, Houston, TX 77001
41	Christopher Brown	110000	773 Cedar St, Austin, TX 78701
42	Karen Taylor	112000	794 Birch St, Fort Worth, TX 76101
43	Michael Wilson	115000	815 Pine St, Dallas, TX 75201
44	Natalie Green	118000	836 Cedar St, Houston, TX 77001
45	Christopher Brown	120000	857 Birch St, Austin, TX 78701
46	Karen Taylor	122000	878 Pine St, Fort Worth, TX 76101
47	Michael Wilson	125000	900 Cedar St, Dallas, TX 75201
48	Natalie Green	128000	921 Birch St, Houston, TX 77001
49	Christopher Brown	130000	942 Pine St, Austin, TX 78701
50	Karen Taylor	132000	963 Cedar St, Fort Worth, TX 76101
51	Michael Wilson	135000	984 Birch St, Dallas, TX 75201
52	Natalie Green	138000	1005 Pine St, Houston, TX 77001
53	Christopher Brown	140000	1026 Cedar St, Austin, TX 78701
54	Karen Taylor	142000	1047 Birch St, Fort Worth, TX 76101
55	Michael Wilson	145000	1068 Pine St, Dallas, TX 75201
56	Natalie Green	148000	1089 Cedar St, Houston, TX 77001
57	Christopher Brown	150000	1110 Birch St, Austin, TX 78701
58	Karen Taylor	152000	1131 Cedar St, Fort Worth, TX 76101
59	Michael Wilson	155000	1152 Birch St, Dallas, TX 75201
60	Natalie Green	158000	1173 Pine St, Houston, TX 77001
61	Christopher Brown	160000	1194 Cedar St, Austin, TX 78701
62	Karen Taylor	162000	1215 Birch St, Fort Worth, TX 76101
63	Michael Wilson	165000	1236 Pine St, Dallas, TX 75201
64	Natalie Green	168000	1257 Cedar St, Houston, TX 77001
65	Christopher Brown	170000	1278 Birch St, Austin, TX 78701
66	Karen Taylor	172000	1299 Cedar St, Fort Worth, TX 76101
67	Michael Wilson	175000	1320 Birch St, Dallas, TX 75201
68	Natalie Green	178000	1341 Pine St, Houston, TX 77001
69	Christopher Brown	180000	1362 Cedar St, Austin, TX 78701
70	Karen Taylor	182000	1383 Birch St, Fort Worth, TX 76101
71	Michael Wilson	185000	1404 Pine St, Dallas, TX 75201
72	Natalie Green	188000	1425 Cedar St, Houston, TX 77001
73	Christopher Brown	190000	1446 Birch St, Austin, TX 78701
74	Karen Taylor	192000	1467 Cedar St, Fort Worth, TX 76101
75	Michael Wilson	195000	1488 Birch St, Dallas, TX 75201
76	Natalie Green	198000	1509 Pine St, Houston, TX 77001
77	Christopher Brown	200000	1530 Cedar St, Austin, TX 78701
78	Karen Taylor	202000	1551 Birch St, Fort Worth, TX 76101
79	Michael Wilson	205000	1572 Pine St, Dallas, TX 75201
80	Natalie Green	208000	1593 Cedar St, Houston, TX 77001
81	Christopher Brown	210000	1614 Birch St, Austin, TX 78701
82	Karen Taylor	212000	1635 Cedar St, Fort Worth, TX 76101
83	Michael Wilson	215000	1656 Birch St, Dallas, TX 75201
84	Natalie Green	218000	1677 Pine St, Houston, TX 77001
85	Christopher Brown	220000	1698 Cedar St, Austin, TX 78701
86	Karen Taylor	222000	1719 Birch St, Fort Worth, TX 76101
87	Michael Wilson	225000	1740 Pine St, Dallas, TX 75201
88	Natalie Green	228000	1761 Cedar St, Houston, TX 77001
89	Christopher Brown	230000	1782 Birch St, Austin, TX 78701
90	Karen Taylor	232000	1803 Cedar St, Fort Worth, TX 76101
91	Michael Wilson	235000	1824 Birch St, Dallas, TX 75201
92	Natalie Green	238000	1845 Pine St, Houston, TX 77001
93	Christopher Brown	240000	1866 Cedar St, Austin, TX 78701
94	Karen Taylor	242000	1887 Birch St, Fort Worth, TX 76101
95	Michael Wilson	245000	1908 Pine St, Dallas, TX 75201
96	Natalie Green	248000	1929 Cedar St, Houston, TX 77001
97	Christopher Brown	250000	1950 Birch St, Austin, TX 78701
98	Karen Taylor	252000	1971 Cedar St, Fort Worth, TX 76101
99	Michael Wilson	255000	1992 Birch St, Dallas, TX 75201
100	Natalie Green	258000	2013 Pine St, Houston, TX 77001
101	Christopher Brown	260000	2034 Cedar St, Austin, TX 78701
102	Karen Taylor	262000	2055 Birch St, Fort Worth, TX 76101
103	Michael Wilson	265000	2076 Pine St, Dallas, TX 75201
104	Natalie Green	268000	2097 Cedar St, Houston, TX 77001
105	Christopher Brown	270000	2118 Birch St, Austin, TX 78701
106	Karen Taylor	272000	2139 Cedar St, Fort Worth, TX 76101
107	Michael Wilson	275000	2160 Birch St, Dallas, TX 75201
108	Natalie Green	278000	2181 Pine St, Houston, TX 77001
109	Christopher Brown	280000	2202 Cedar St, Austin, TX 78701
110	Karen Taylor	282000	2223 Birch St, Fort Worth, TX 76101
111	Michael Wilson	285000	2244 Pine St, Dallas, TX 75201
112	Natalie Green	288000	2265 Cedar St, Houston, TX 77001
113	Christopher Brown	290000	2286 Birch St, Austin, TX 78701
114	Karen Taylor	292000	2307 Cedar St, Fort Worth, TX 76101
115	Michael Wilson	295000	2328 Birch St, Dallas, TX 75201
116	Natalie Green	298000	2349 Pine St, Houston, TX 77001
117	Christopher Brown	300000	2370 Cedar St, Austin, TX 78701
118	Karen Taylor	302000	2391 Birch St, Fort Worth, TX 76101
119	Michael Wilson	305000	2412 Pine St, Dallas, TX 75201
120	Natalie Green	308000	2433 Cedar St, Houston, TX 77001
121	Christopher Brown	310000	2454 Birch St, Austin, TX 78701
122	Karen Taylor	312000	2475 Cedar St, Fort Worth, TX 76101
123	Michael Wilson	315000	2496 Birch St, Dallas, TX 75201
124	Natalie Green	318000	2517 Pine St, Houston, TX 77001
125	Christopher Brown	320000	2538 Cedar St, Austin, TX 78701
126	Karen Taylor	322000	2559 Birch St, Fort Worth, TX 76101
127	Michael Wilson	325000	2580 Pine St, Dallas, TX 75201
128	Natalie Green	328000	2601 Cedar St, Houston, TX 77001
129	Christopher Brown	330000	2622 Birch St, Austin, TX 78701
130	Karen Taylor	332000	2643 Cedar St, Fort Worth, TX 76101
131	Michael Wilson	335000	2664 Birch St, Dallas, TX 75201
132	Natalie Green	338000	2685 Pine St, Houston, TX 77001
133	Christopher Brown	340000	2706 Cedar St, Austin, TX 78701
134	Karen Taylor	342000	2727 Birch St, Fort Worth, TX 76101
135	Michael Wilson	345000	2748 Pine St, Dallas, TX 75201
136	Natalie Green	348000	2769 Cedar St, Houston, TX 77001
137	Christopher Brown	350000	2790 Birch St, Austin, TX 78701
138	Karen Taylor	352000	2811 Cedar St, Fort Worth, TX 76101
139	Michael Wilson	355000	2832 Birch St, Dallas, TX 75201
140	Natalie Green	358000	2853 Pine St, Houston, TX 77001
141	Christopher Brown	360000	2874 Cedar St, Austin, TX 78701
142	Karen Taylor	362000	2895 Birch St, Fort Worth, TX 76101
143	Michael Wilson	365000	2916 Pine St, Dallas, TX 75201
144	Natalie Green	368000	2937 Cedar St, Houston, TX 77001
145	Christopher Brown	370000	2958 Birch St, Austin, TX 78701
146	Karen Taylor	372000	2979 Cedar St, Fort Worth, TX 76101
147	Michael Wilson	375000	2990 Birch St, Dallas, TX 75201
148	Natalie Green	378000	3011 Pine St, Houston, TX 77001
149	Christopher Brown	380000	3032 Cedar St, Austin, TX 78701
150	Karen Taylor	382000	3053 Birch St, Fort Worth, TX 76101
151	Michael Wilson	385000	3074 Pine St, Dallas, TX 75201
152	Natalie Green	388000	3095 Cedar St, Houston, TX 77001
153	Christopher Brown	390000	3116 Birch St, Austin, TX 78701
154	Karen Taylor	392000	3137 Cedar St, Fort Worth, TX 76101
155	Michael Wilson	395000	3158 Birch St, Dallas, TX 75201
156	Natalie Green	398000	3179 Pine St, Houston, TX 77001
157	Christopher Brown	400000	3190 Cedar St, Austin, TX 78701
158	Karen Taylor	402000	3211 Birch St, Fort Worth, TX 76101
159	Michael Wilson	405000	3232 Pine St, Dallas, TX 75201
160	Natalie Green	408000	3253 Cedar St, Houston, TX 77001
161	Christopher Brown	410000	3274 Birch St, Austin, TX 78701
162	Karen Taylor	412000	3295 Cedar St, Fort Worth, TX 76101
163	Michael Wilson	415000	3316 Birch St, Dallas, TX 75201
164	Natalie Green	418000	3337 Pine St, Houston, TX 77001
165	Christopher Brown	420000	3358 Cedar St, Austin, TX 78701
166	Karen Taylor	422000	3379 Birch St, Fort Worth, TX 76101
167	Michael Wilson	425000	3390 Pine St, Dallas, TX 75201
168	Natalie Green	428000	3411 Cedar St, Houston, TX 77001
169	Christopher Brown	430000	3432 Birch St, Austin, TX 78701
170	Karen Taylor	432000	3453 Cedar St, Fort Worth, TX 76101
171	Michael Wilson	435000	3474 Birch St, Dallas, TX 75201
172	Natalie Green	438000	3495 Pine St, Houston, TX 77001
173	Christopher Brown	440000	3516 Cedar St, Austin, TX 78701
174	Karen Taylor	442000	3537 Birch St, Fort Worth, TX 76101
175	Michael Wilson	445000	3558 Pine St, Dallas, TX 75201
176	Natalie Green	448000	3579 Cedar St, Houston, TX 77001
177	Christopher Brown	450000	3590 Birch St, Austin, TX 78701
178	Karen Taylor	452000	3611 Cedar St, Fort Worth, TX 76101
179	Michael Wilson	455000	3632 Pine St, Dallas, TX 75201
180	Natalie Green	458000	3653 Cedar St, Houston, TX 77001
181	Christopher Brown	460000	3674 Birch St, Austin, TX 78701
182	Karen Taylor	462000	3695 Cedar St, Fort Worth, TX 76101
183	Michael Wilson	465000	3716 Pine St, Dallas, TX 75201
184	Natalie Green	468000	3737 Cedar St, Houston, TX 77001
185	Christopher Brown	470000	3758 Birch St, Austin, TX 78701
186	Karen Taylor	472000	3779 Cedar St, Fort Worth, TX 76101
187	Michael Wilson	475000	3790 Pine St, Dallas, TX 75201
188	Natalie Green	478000	3811 Cedar St, Houston, TX 77001
189	Christopher Brown	480000	3832 Birch St, Austin, TX 78701
190	Karen Taylor	482000	3853 Cedar St, Fort Worth, TX 76101
191	Michael Wilson	485000	3874 Pine St, Dallas, TX 75201
192	Natalie Green	488000	3895 Cedar St, Houston, TX 77001
193	Christopher Brown	490000	3916 Birch St, Austin, TX 78701
194	Karen Taylor	492000	3937 Cedar St, Fort Worth, TX 76101
195	Michael Wilson	495000	3958 Pine St, Dallas, TX 75201
196	Natalie Green	498000	3979 Cedar St, Houston, TX 77001
197	Christopher Brown	500000	3990 Birch St, Austin, TX 78701
198	Karen Taylor	502000	4011 Cedar St, Fort Worth, TX 76101
199	Michael Wilson	505000	4032 Pine St, Dallas, TX 75201
200	Natalie Green	508000	4053 Cedar St, Houston, TX 77001
201	Christopher Brown	510000	4074 Birch St, Austin, TX 78701
202	Karen Taylor	512000	4095 Cedar St, Fort Worth, TX 76101
203	Michael Wilson	515000	4116 Pine St, Dallas, TX 75201
204	Natalie Green	518000	4137 Cedar St, Houston, TX 77001
205	Christopher Brown	520000	4158 Birch St, Austin, TX 78701
206	Karen Taylor	522000	4179 Cedar St, Fort Worth, TX 76101
207	Michael Wilson	525000	4190 Pine St, Dallas, TX 75201
208	Natalie Green	528000	4211 Cedar St, Houston, TX 77001
209	Christopher Brown	530000	4232 Birch St, Austin, TX 78701
210	Karen Taylor	532000	4253 Cedar St, Fort Worth, TX 76101
211	Michael Wilson	535000	4274 Pine St, Dallas, TX 75201
212	Natalie Green	538000	4295 Cedar St, Houston, TX 77001
213	Christopher Brown	540000	4316 Birch St, Austin, TX 78701
214	Karen Taylor	542000	4337 Cedar St, Fort Worth, TX 76101
215	Michael Wilson	545000	4358 Pine St, Dallas, TX 75201
216	Natalie Green	548000	4379 Cedar St, Houston, TX 77001
217	Christopher Brown	550000	4

26. Verify the table in admin panel



27. Go to admin file and register tables and class.

```
admin.py
from django.contrib import admin
from apps.models import Student
class StudentAdmin (admin.ModelAdmin):
    list_display=['sno','sname','ssalary','saddress']
admin.site.register(Student,StudentAdmin)
```

28. Verify the data

The screenshot shows the Django admin interface for a 'Students' model. The page title is 'Select student(s) to change'. It displays two rows of student data:

SNO	GNAME	SSALARY	GENDER
102	Raj	30000.0	Male
101	Arun	20000.0	Female

At the bottom, it says '2 Students'.

29. Configuring the view file

```
views.py
from django.shortcuts import render
from apps.models import Student
def home(request):
    stud=Student.objects.all()
    return render(request,'appfile/home.html',{'s':stud})
```

30. Create a html file in appfile folder.

```
home.htm x
<!DOCTYPE html>
<html>
<head>
<title>Student Informations</title>
</head>
<body>
<center>
<h1>STUDENTS INFORMATION</h1>
{%
  if s %}
  <table border=5px;>
  <thead>
    <th>STUDENT NO</th>
    <th>STUDENT NAME</th>
    <th>STUDENT SALARY</th>
    <th>STUDENT ADDRESS</th>
  </thead>
  {%
    for x in s %}

    <tr>
      <td>{{x.sno}}</td>
      <td>{{x.sname | title}}</td>
      <td>{{x.ssalary}}</td>
      <td>{{x.saddress}}</td>
    </tr>
  {%
    endfor %}
  </table>
{%
  else %}
  <p>NO RECORDS FOUND</p>
{%
  endif %}
</center>
</body>
</html>
```

31. Verify the result.

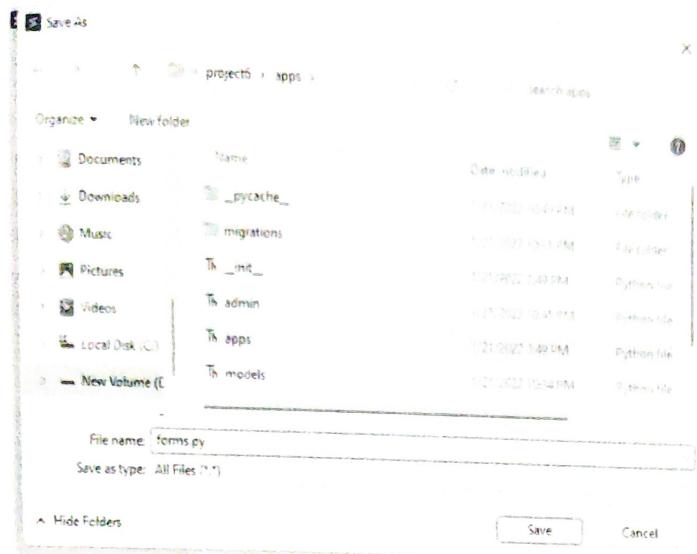
The screenshot shows a Microsoft Excel window with two tabs: 'Select student to change: Diana' and 'Student Information'. The 'Student Information' tab is active, displaying a table titled 'STUDENTS INFORMATION' with four columns: 'STUDENT NO', 'STUDENT NAME', 'STUDENT SALARY', and 'STUDENT ADDRESS'. The table contains two rows of data:

STUDENT NO	STUDENT NAME	STUDENT SALARY	STUDENT ADDRESS
101	Suman	120000.0	Mumbai
102	Amit	40000.0	Chennai

32. Create new file.



33. Create file (form.py)



34. Configure the form file

```
forms.py
from django import forms
from apps.models import Student

class StudentForm(forms.ModelForm):
    class Meta:
        model = Student
        fields = '__all__'
```

35. Configure the View file

```
views.py
from django.shortcuts import render
from apps.models import Student
from apps.forms import StudentForm

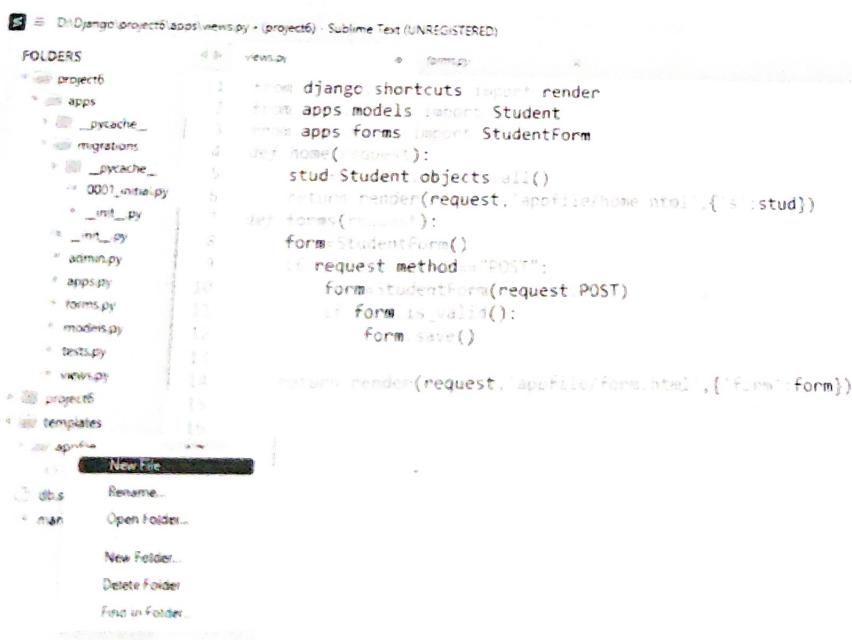
def home(request):
    stud=Student.objects.all()
    return render(request,'appfile/home.html',{'s':stud})

def forms(request):
    form=StudentForm()
    if request.method=="POST":
        form=StudentForm(request.POST)
        if form.is_valid():
            form.save()

    return render(request,'appfile/form.html',{'form':form})
```

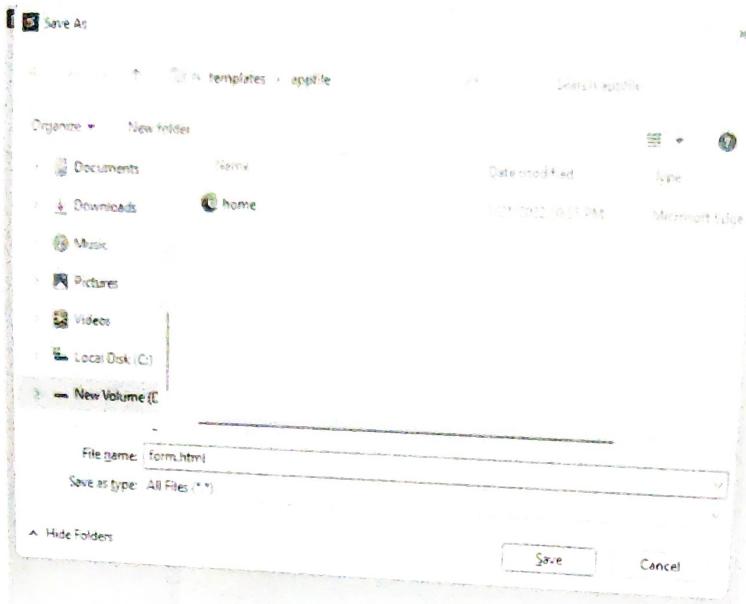
POST ~~Get~~

36. Right click appfile and create new html file



----- WEB DEVELOPMENT -----

37. Right click appfile and create new file (form.html)



38. Configuring url file.

urls.py

```
urlpatterns = [
    path('admin/', admin.site.urls),
    path('home/', views.home),
    path('insert/', views.forms)
]
```

39. Verify the output**40. Creating html file for insertion.**

```
form.html
<!DOCTYPE html>
<html>
<head>
    <title>INSERT RECORD</title>
</head>
<center>
<body>
<h2>INSERT STUDENT INFORMATION</h2>
<form method="POST">
    {{form}}
    <input type="submit" value="SUBMIT">
</form>
</body>
</center>
</html>
```

41. Verify the output

The screenshot shows a web page titled "INSERT STUDENT INFORMATION". At the top, there are tabs for "Select student to change" (Open), "Student Information", and "Logout". Below the tabs, there is a search bar with placeholder text "Search". The main content area contains four input fields: "Sno", "Name", "Rollno", and "Address", each with a text input field and a "Required" validation message. A "SUBMIT" button is located at the bottom right of the form.

42. Creating html file for insertion

```
form.html
•
<!DOCTYPE html>
<html>
<head>
    <title>INSERT RECORD</title>
</head>
<center>
<body>
    <h2>INSERT STUDENT INFORMATION</h2>
    <form method="POST">
        {{form.as_p}}
        {%csrf_token%}
        <input type="submit" value="SUBMIT">
    </form>
</body>
</center>
</html>
```

WEB DEVELOPMENT

43. Verify the output.

The screenshot shows a web browser window with the title "Student Information". The URL in the address bar is "127.0.0.1:8000/insert/". The page displays an "INSERT STUDENT INFORMATION" form with four input fields: "Sno", "Sname", "Salary", and "Saddress", followed by a "SUBMIT" button.

Field	Value
Sno	
Sname	
Salary	
Saddress	

SUBMIT

44. Inserting the student information.

The screenshot shows a web browser window with the title "Student Information". The URL in the address bar is "127.0.0.1:8000/insert/". The page displays an "INSERT STUDENT INFORMATION" form with four input fields: "Sno" (value: 103), "Sname" (value: c), "Salary" (value: 20000), and "Saddress" (value: TRICHY), followed by a "SUBMIT" button.

Field	Value
Sno	103
Sname	c
Salary	20000
Saddress	TRICHY

SUBMIT

WEB DEVELOPMENT

45. Verify in admin panel.

SNO	SNAME	SSALARY	SEADDRESS
103	c	20000.0	TRICHY
102	raj	30000.0	chennai
101	arjun	20000.0	trichy

46. Verify the result.

STUDENT NO	STUDENT NAME	STUDENT SALARY	STUDENT ADDRESS
103	c	20000.0	TRICHY
102	raj	30000.0	chennai
101	arjun	20000.0	trichy

47. Create a html file (final.html) in appfile folder.



48. Type the html file

```
final.html x
<!DOCTYPE html>
<html>
<head>
    <title></title>
</head>
<body>
<h1>Form Submitted Successfully</h1>
</body>
</html>
```