PYTHON3 SHELL
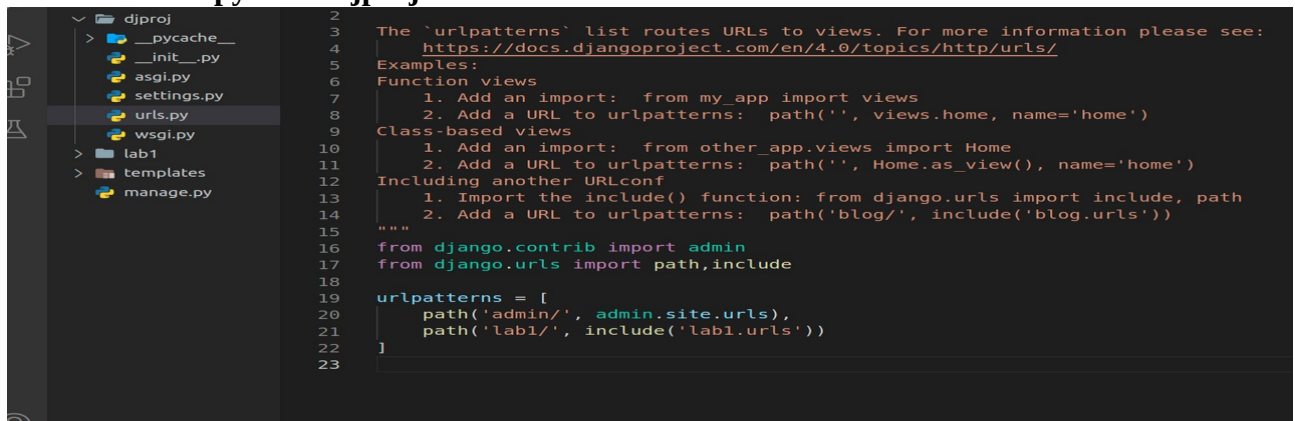
1) **source env/bin/activate [activate the virtualenv]**
2) **cd djproj [open the django project]**
3) **python manage.py shell**
4) **from lab1.models import Student,Track**
5) **Track.objects.create(track_name='system admin')**
6) **Track.objects.all()**
7) **Track.objects.all()[0] to get first index**
8) **Track.objects.all()[2:4] to get index range from 2 to 4**
9) **Track.objects.get(track_name='system admin')**
10) **sa = Track.objects.get(track_name='system admin') [variable sa]**
11) **Student.objects.create(fname='hamada', lname='hamadan', age=6, student_track=sa) [sa is a variable from track object]**
12) **Student.objects.all()**
13) **Student.objects.get(fname='hamada') [use only with primary key it expect only one result not dublicated values instead of get use filter]**
14) **Student.objects.get(id=1)**
15) **Student.objects.filter(fname='hamada')**
16) **Student.objects.filter(fname__startswith='m')**
17) **Student.objects.filter(fname__endswith='d')**
18) **Student.objects.filter(fname__exact='Nourhan')**
19) **Student.objects.filter(age__gt='5') [age greater than 5]**
20) **Student.objects.filter(age__lt='5') [age less than 5]**
21) **Student.objects.order_by('-fname') [- before the fname means ascending]**
22) **exit() [to end the shell]**

TO CHANGE URLS

1. **in the urls.py main djproj**


```
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('lab1/', include('lab1.urls'))
22   ]
23
```

2. **from django.contrib import admin**
3. **from django.urls import path,include [add include]**
4. **urlpatterns = [**
5.   **path('admin/', admin.site.urls),**
6.   **path('lab1/', include('lab1.urls')) [add this line with the django app name]**
7. **]**
8. **in your app i.e lab1 create urls.py file**
9. **from django.urls import path**
10. **from . import views #. means the views on the same level of files**
11. **urlpatterns = [**
12.   **path('home/', views.home, name='home'), #call the home func from view**
13.   **path('office/', views.office, name='office'), #call the home office from view**
14.   **path('detail/<st_id>', views.studentDetails, name='st-details'), #<st_id> variable**
15. **]**
16. **in views.py create functions**
17. **from django.http import HttpResponse #like print() in the browser**
18. **from .models import Student, Track**
19. **def home(request):**
20.   **# st=Student.objects.all()[0].fname #get the first index of fname**
21.   **# resp='<h1>Welcome Mr '+ st+'</h1>'**
22.   **# return HttpResponse(resp)**
23.   **# st=Student.objects.all()[0].fname**
24.   **# context = {'student':st} # dictionary the key value will be rendered in the html page**
25.   **all_students=Student.objects.all()**
26.   **context={'students': all_students}**
27.   **return render(request,'lab1/home.html',context)**
28.
29. **def office(request):**
30.   **return HttpResponse('<h1>this is office view function</h1>')**
31. **def studentDetails(request, st_id):**
32.   **st=Student.objects.get(id=st_id)**
33.   **context={'stobj':st}**
34.   **return render(request,'lab1/details.html',context)**
35. **python3 manage.py runserver [in the terminal]**
36. **in the url /lab1/home/ or /lab1/office/ or /lab1/detail**
37.

TO CHANGE templates
1. **create inside the template directory another directory with the app name [i.e lab1]**
2. **inside the app name directory create home.html file**
3. **to write any expression in html templates**
4. **{% expression %} i.e {% if statement %}**
5. **{{ to print variable from the function in the views.py }}**
6. **{% end expression %} i.e {% endif %}**

urls.py

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


urlpatterns = [
path('home/', views.home, name='home'), #call the home func from view
path('office', views.office, name='office'), #call the home office from view
path('detail/<st_id>', views.studentDetails, name='st-details'), #<st_id> variable
path('del/<st_id>', views.deleteStudent, name='st-del'),
]
```

Views.py

```python
from multiprocessing import context
from django.shortcuts import render,redirect
from django.http import HttpResponse #like print() in the browser
from .models import Student, Track
# Create your views here.
def home(request):
# st=Student.objects.all()[0].fname #get the first index of fname
# resp='<h1> Welcome Mr '+ st +'</h1>'
# return HttpResponse(resp)
all_students=Student.objects.all()
# st=Student.objects.all()[0].fname
# context = {'student':st} # dictionary the key value will be rendered in the html page
context={'students': all_students}
return render(request,'lab1/home.html', context)
def office(request):
return HttpResponse('<h1>this is office view function</h1>')
def studentDetails(request, st_id):
st=Student.objects.get(id=st_id)
context={'stobj':st}
return render(request,'lab1/details.html',context)
def deleteStudent(request, st_id):
st=Student.objects.get(id=st_id)
st.delete()
return redirect('home')
```

home.html

```html
<html>
<head>
<body>
        <h1>This is HOME HTML </h1>
        <table border="1">
                <tr>
                        <th>First Name</th>
                        <th>Last Name</th>
                        <th>Age</th>
                        <th>Track</th>
                        <th>actions</th>
                </tr>
                {% for student in students %}
                <tr>
                        <td>{{student.fname}}</td>
                        <td>{{student.lname}}</td>
                        <td>{{student.age}}</td>
                        <td>{{student.student_track}}</td>
                        <td><a href="/lab1/detail/{{student.id}}">show more1</a></td>
                        <td><a href="{% url 'st-details' student.id %}">show
                                more2</a></td>
                        <!--url st-details name in the url-->
                        <td><a href="{% url 'st-del' student.id %}">delete</a></td>
                        <!--url st-del name in the url-->
                </tr>
                {% endfor %}
        </table>
</body>
</head>
</html>
```

details.html

```html
<html>
<head>
<body>
        <h1>This is Student Details </h1>
        <b>First Name:</b> {{stobj.fname}}
        <b>Last Name:</b> {{stobj.lname}}
        <b>Age:</b> {{stobj.age}}
        <b>Student Track:</b> {{stobj.student_track}}
</body>
</head>
</html>
```