SUBJECT: FULLSTACK DEVELOPMENT (21CS62)

LAB COMPONENT SOLUTIONS

Develop a Django app to produce following web page

Save water

pos.html inside templates folder

```
{% load static %}
<html>
    <link rel="stylesheet" href="{% static 'pos.css' %}">
    <body>
        <p id="p1">Save Water</p>
        <img id="i1" src="{% static 'banner1.jpeg' %}" width="1200"
height="1000" >
        <img id="i2" src="{% static 'wpot.gif' %}">
    </body>
</html>
```

pos.css inside static folder

```
#p1 {color:blue;font-size:20pt;font-weight:bold}
#i2 {position:absolute;top:400px;left:250px;opacity:0.3}
```

views.py

```
from datetime import date
from django.http import HttpResponse
from django.shortcuts import render
```

```
from django.template import Context, Template
def getpos(request):
   return render(request,'pos.html')
```

urls.py

```
from django.contrib import admin
from django.urls import path, re_path
from ap1.views import check_number, current_date_time
from ap1.views import four_hours_after, four_hours_before
from ap1.views import n_hours_after,display_string
from ap2.views import create_table_of_squares,vc,find_mode
from ap2.views import template_test,showlist,list_of_subjects
from ap2.views import aboutus,home,contactus,getpos
urlpatterns = [
    path('admin/', admin.site.urls),
    path('cdt/', current_date_time),
    path('fha/', four_hours_after),
    path('fhb/', four_hours_before),
    path('nha/<int:num>', n_hours_after),
    path('display_string/<slug:sentence>', display_string),
    re_path('check_number/(\d){1,2}/',check_number),
    path('cts/<int:s>/<int:n>', create_table_of_squares),
    path('vc/<str:sentence>', vc),
    path('find_mode/<str:listofnum>', find_mode),
    path('template_test/', template_test),
    path('showlist/', showlist),
    path('list_of_subjects/', list_of_subjects),
    path('aboutus/', aboutus),
    path('home/', home),
    path('contactus/', contactus),
    path('getpos/', getpos),



]
```

Output:

Save Water

Develop a Django app to produce following web page

stable.html in templates folder

```
{% load static %}
<html>
    <link rel="stylesheet" href="{% static 'stable.css' %}">
    <body>
        <table border>
            <tr>
                <th>Name</th>
                <th>USN</th>
                <th>Marks</th>
            </tr>
            <tr>
                <td>Mani</td>
                <td>4JN22AI019</td>
                <td>80</td>
            </tr>
```

```
            <tr>
                <td>Gani</td>
                <td>4JN22AI020</td>
                <td>70</td>
            </tr>
            <tr>
                <td>Pani</td>
                <td>4JN22AI021</td>
                <td>82</td>
            </tr>
        </table>
    </body>
</html>
```

stable.css in static folder

```
td,th {padding:35px}
table {background-image:url(tp.png);background-repeat:no-repeat;
background-position: center;}
```

views.py

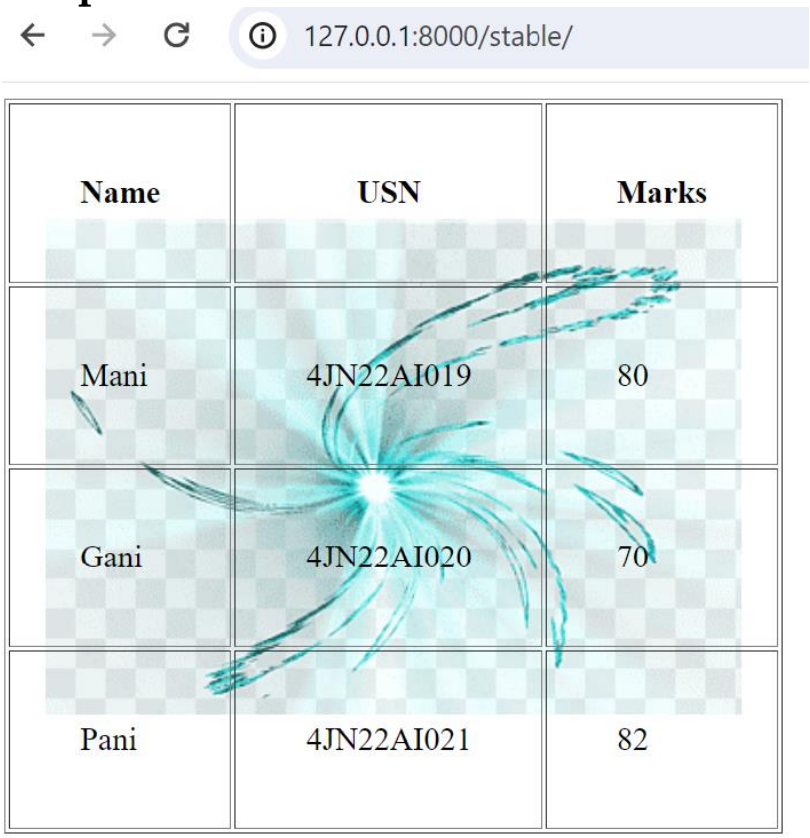
```
from datetime import date
from django.http import HttpResponse
from django.shortcuts import render
from django.template import Context, Template
def getpos(request):
   return render(request,'pos.html')
def stable(request):
   return render(request,'stable.html')
```

urls.py

```
from django.contrib import admin
from django.urls import path, re_path
from ap1.views import check_number, current_date_time
from ap1.views import four_hours_after, four_hours_before
from ap1.views import n_hours_after,display_string
from ap2.views import create_table_of_squares,vc,find_mode
from ap2.views import template_test,showlist,list_of_subjects
from ap2.views import aboutus,home,contactus,getpos,stable
urlpatterns = [
    path('admin/', admin.site.urls),
    path('cdt/', current_date_time),
    path('fha/', four_hours_after),
    path('fhb/', four_hours_before),
    path('nha/<int:num>', n_hours_after),
    path('display_string/<slug:sentence>', display_string),
```

```
    re_path('check_number/(\d){1,2}/',check_number),
    path('cts/<int:s>/<int:n>', create_table_of_squares),
    path('vc/<str:sentence>', vc),
    path('find_mode/<str:listofnum>', find_mode),
    path('template_test/', template_test),
    path('showlist/', showlist),
    path('list_of_subjects/', list_of_subjects),
    path('aboutus/', aboutus),
    path('home/', home),
    path('contactus/', contactus),
    path('getpos/', getpos),
    path('stable/', stable),


]
```

Output:



Develop a Django app that demonstrates all CRUD operations for an onlinemeeting database

models.py

```
from django.db import models

# Create your models here.
```

```
class Meeting(models.Model):
    meeting_code=models.CharField(max_length=100)
    meeting_dt=models.DateField(auto_now_add=True)
    meeting_subject=models.CharField(max_length=100)
    meeting_np=models.IntegerField()
```

views.py

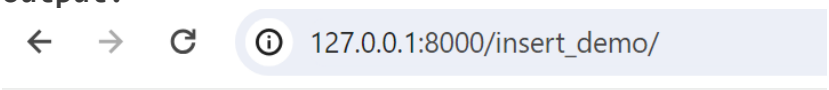
```
from django.http import HttpResponse
from django.shortcuts import render

from ap3.models import Course, Meeting, Student

# Create your views here.

def insert_demo(request):
    m=Meeting(meeting_code="m002",meeting_dt="2024-04-
10",meeting_subject="WTW",meeting_np=50)
    m.save()
    m=Meeting(meeting_code="m003",meeting_dt="2024-04-
10",meeting_subject="Parent Meet",meeting_np=50)
    m.save()
    m=Meeting(meeting_code="m004",meeting_dt="2024-04-
10",meeting_subject="Course Attainment",meeting_np=50)
    m.save()
    m=Meeting(meeting_code="m005",meeting_dt="2024-04-
10",meeting_subject="Infrastructure",meeting_np=50)
    m.save()
    return HttpResponse("<h1>Record inserted successfully</h1>")

def update_demo(request):
    m=Meeting.objects.get(meeting_code="m002")
    m.meeting_dt="2024-04-11"
    m.meeting_np=100
    m.save()
    return HttpResponse("<h1>Record updated successfully</h1>")

def delete_demo(request):
    m=Meeting.objects.get(meeting_code="m005")
    m.delete()
    return HttpResponse("<h1>Record deleted successfully</h1>")

from django.db.models import Q
def retreive_demo(request):
    m=Meeting.objects.filter(Q(meeting_subject__contains = "Meet") &
Q(meeting_np__lte = 50))
    result=""
    for meeting in m:
```

```
        result+="<p>%s,%s,%s,%d</p>"%(meeting.meeting_code,
meeting.meeting_subject, meeting.meeting_dt,meeting.meeting_np)
    return HttpResponse(result)
```

urls.py

```
from django.contrib import admin
from django.urls import path, re_path
from ap1.views import check_number, current_date_time
from ap1.views import four_hours_after, four_hours_before
from ap1.views import n_hours_after,display_string
from ap2.views import create_table_of_squares,vc,find_mode
from ap2.views import template_test,showlist,list_of_subjects
from ap2.views import aboutus,home,contactus,getpos,stable
from ap3.views import insert_demo,update_demo,delete_demo,retreive_demo
urlpatterns = [
    path('admin/', admin.site.urls),
    path('cdt/', current_date_time),
    path('fha/', four_hours_after),
    path('fhb/', four_hours_before),
    path('nha/<int:num>', n_hours_after),
    path('display_string/<slug:sentence>', display_string),
    re_path('check_number/(\d){1,2}/',check_number),
    path('cts/<int:s>/<int:n>', create_table_of_squares),
    path('vc/<str:sentence>', vc),
    path('find_mode/<str:listofnum>', find_mode),
    path('template_test/', template_test),
    path('showlist/', showlist),
    path('list_of_subjects/', list_of_subjects),
    path('aboutus/', aboutus),
    path('home/', home),
    path('contactus/', contactus),
    path('getpos/', getpos),
    path('stable/', stable),
    path('insert_demo/', insert_demo),
    path('update_demo/', update_demo),
    path('delete_demo/', delete_demo),
    path('retreive_demo/', retreive_demo),
]
```

Output:



Record inserted successfully

Backend:

Showing rows 0 - 7 (8 total, Query took 0.0005 seconds.)

```
SELECT * FROM `ap3_meeting`
```

Profiling [Edit inline] [Edit] [Explain

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: No

Extra options

	id	meeting_code	meeting_dt	meeting_subject	meeting_np
Edit Copy Delete	1	m001	2024-04-10	Lab syllabus	50
Edit Copy Delete	2	m002	2024-04-11	Mentor Meet	100
Edit Copy Delete	3	m003	2024-04-10	Parent Meet	50
Edit Copy Delete	4	m004	2024-04-10	Course Attainment	50
Edit Copy Delete	9	m005	2024-04-10	Infrastructure	50

127.0.0.1:8000/update_demo/

Record updated successfully

BackEnd

Showing rows 0 - 4 (5 total, Query took 0.0008 seconds.)

```
SELECT * FROM `ap3_meeting`
```

Profiling [Edit inline] [Edit] [Explain

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: No

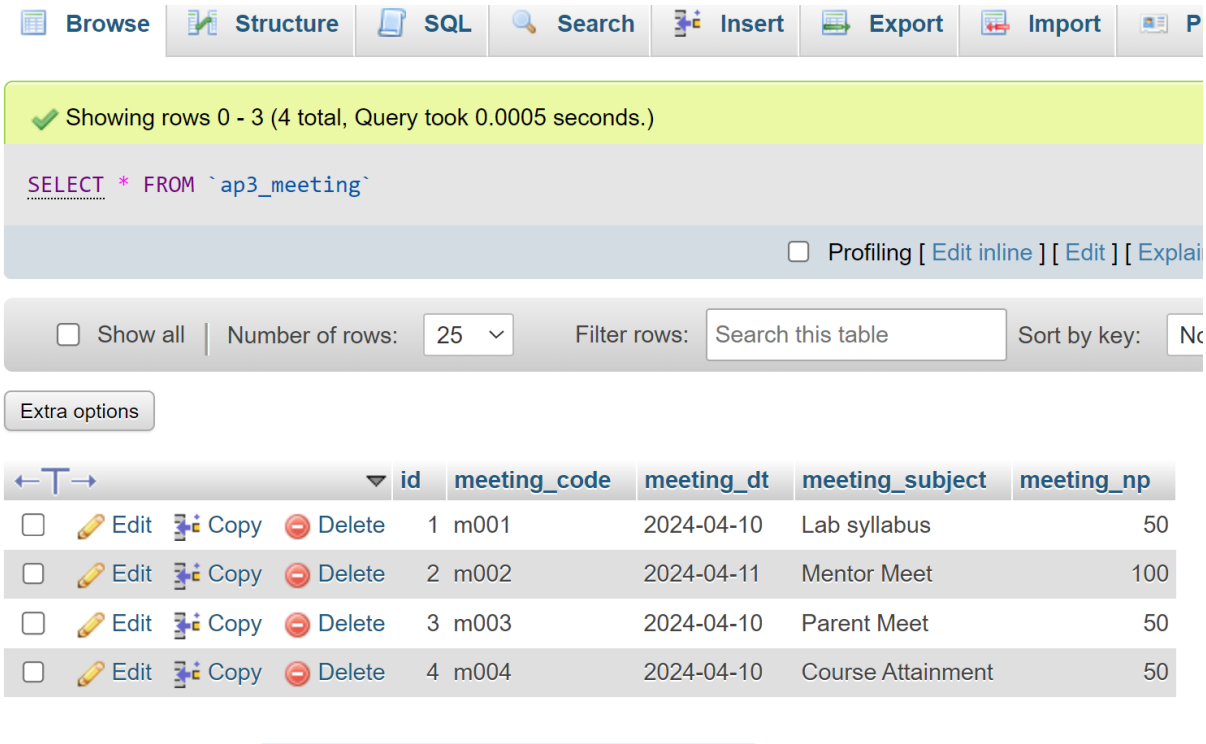
Extra options

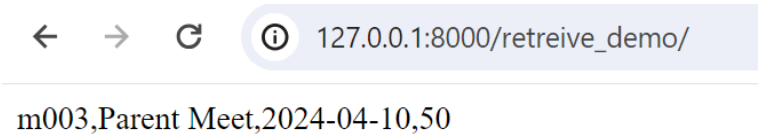
	id	meeting_code	meeting_dt	meeting_subject	meeting_np
Edit Copy Delete	1	m001	2024-04-10	Lab syllabus	50
Edit Copy Delete	2	m002	2024-04-11	Mentor Meet	100
Edit Copy Delete	3	m003	2024-04-10	Parent Meet	50
Edit Copy Delete	4	m004	2024-04-10	Course Attainment	50
Edit Copy Delete	9	m005	2024-04-10	Infrastructure	50

127.0.0.1:8000/delete_demo/

Record deleted successfully

BackEnd





Develop a Django app that performs student registration to a course. It should also display list of students registered for any selected course. Create students and course as models with enrolment as ManyToMany field

models.py

```
from django.db import models

# Create your models here.
class Course(models.Model):
    course_code=models.CharField(max_length=40)
    course_name=models.CharField(max_length=100)
    course_credits=models.IntegerField()

class Student(models.Model):
    student_usn=models.CharField(max_length=20)
    student_name=models.CharField(max_length=100)
    student_sem=models.IntegerField()
    enrolment=models.ManyToManyField(Course)
```

reg.html inside templates folder

```
<html>
    <body>
    <form method="post" action="">
        {% csrf_token %}
        Student Name
        <select name="sname">
        {%for student in students %}
        <option value="{{student.id}}">{{student.student_name}}</option>
        {% endfor %}
        </select><br>
        Course Name
        <select name="cname">
        {%for course in courses %}
        <option value="{{course.id}}">{{course.course_name}}</option>
        {% endfor %}

        </select><br>
        <input type="submit" value="Enroll">
    </form>
    </body>
</html>
```

views.py

```
from django.http import HttpResponse
from django.shortcuts import render

from ap3.models import Course, Meeting, Student

def reg(request):
    if request.method == "POST":
        sid=request.POST.get("sname")
        cid=request.POST.get("cname")
        student=Student.objects.get(id=sid)
        course=Course.objects.get(id=cid)
        res=student.enrolment.filter(id=cid)
        if res:
            return HttpResponse("<h1>Student already enrolled</h1>")
        student.enrolment.add(course)
        return HttpResponse("<h1>Student enrolled successfully</h1>")

    else:
        students=Student.objects.all()
        courses=Course.objects.all()
```

```
        return render(request,"reg.html",{"students":students,
"courses":courses})
```

urls.py

```
from django.contrib import admin
from django.urls import path, re_path
from ap1.views import check_number, current_date_time
from ap1.views import four_hours_after, four_hours_before
from ap1.views import n_hours_after,display_string
from ap2.views import create_table_of_squares,vc,find_mode
from ap2.views import template_test,showlist,list_of_subjects
from ap2.views import aboutus,home,contactus,getpos,stable
from ap3.views import insert_demo,update_demo,delete_demo,retreive_demo
from ap3.views import reg
urlpatterns = [
    path('admin/', admin.site.urls),
    path('cdt/', current_date_time),
    path('fha/', four_hours_after),
    path('fhb/', four_hours_before),
    path('nha/<int:num>', n_hours_after),
    path('display_string/<slug:sentence>', display_string),
    re_path('check_number/(\d){1,2}/',check_number),
    path('cts/<int:s>/<int:n>', create_table_of_squares),
    path('vc/<str:sentence>', vc),
    path('find_mode/<str:listofnum>', find_mode),
    path('template_test/', template_test),
    path('showlist/', showlist),
    path('list_of_subjects/', list_of_subjects),
    path('aboutus/', aboutus),
    path('home/', home),
    path('contactus/', contactus),
    path('getpos/', getpos),
    path('stable/', stable),
    path('insert_demo/', insert_demo),
    path('update_demo/', update_demo),
    path('delete_demo/', delete_demo),
    path('retreive_demo/', retreive_demo),
    path('reg/', reg),

]
```

Database input:
Insert student and courses record in phpMyAdmin

Browse | Structure | SQL | Search | Insert | Export

Showing rows 0 - 2 (3 total, Query took 0.0004 seconds.)

```
SELECT * FROM `ap3_student`
```

Profiling [Edit inlin

Show all | Number of rows: 25 Filter rows: Search this table

Extra options

	id	student_usn	student_name	student_sem
Edit Copy Delete	1	4JN22AI001	Sham	4
Edit Copy Delete	2	4JN22AI002	Manish	4
Edit Copy Delete	3	4JN22AI003	Suma	4

Browse | Structure | SQL | Search | Insert | Export

Showing rows 0 - 2 (3 total, Query took 0.0003 seconds.)

```
SELECT * FROM `ap3_course`
```

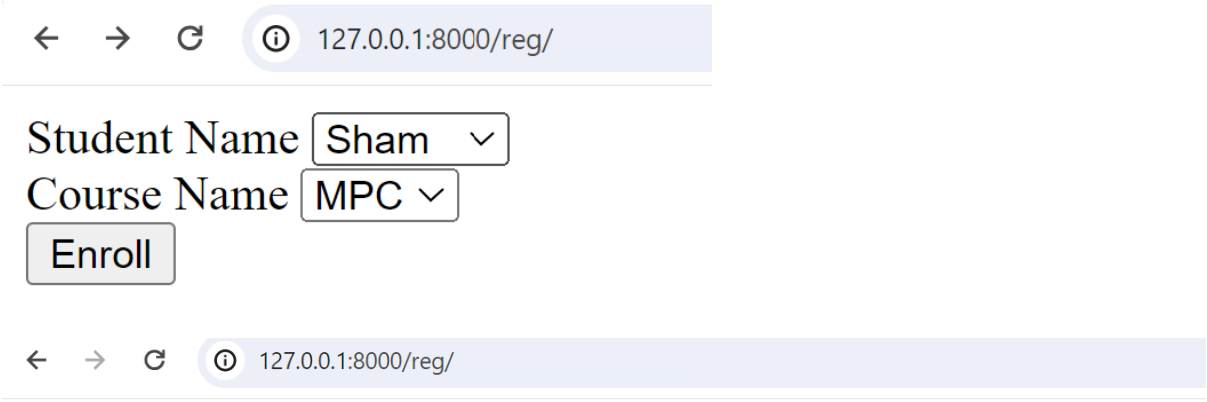
Profiling [Edit inlin

Show all | Number of rows: 25 Filter rows: Search this table

Extra options

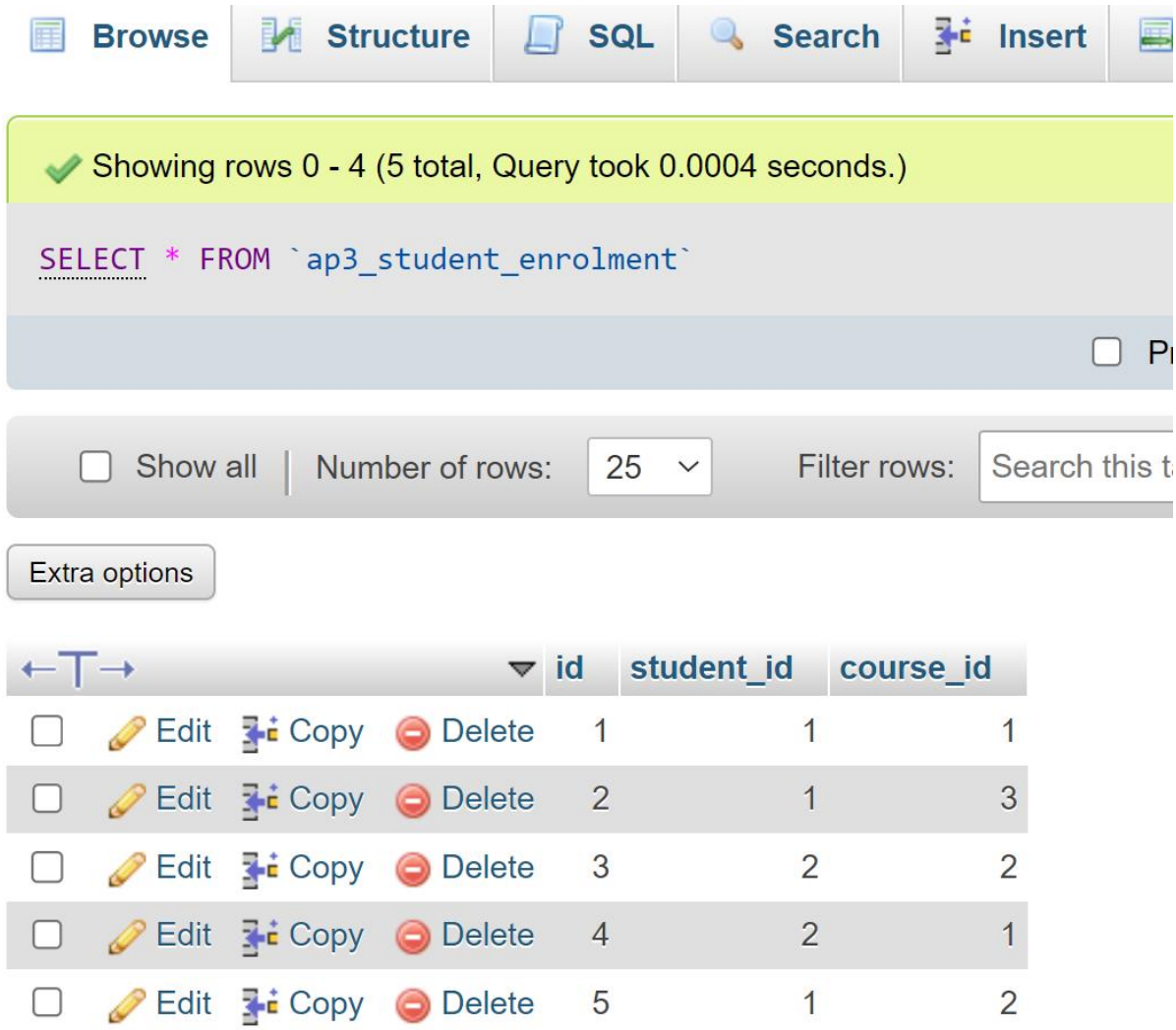
	id	course_code	course_name	course_credits
Edit Copy Delete	1	21AI42	DAA	4
Edit Copy Delete	2	21AI43	MPC	3
Edit Copy Delete	3	21AI44	UHV	1

Output:



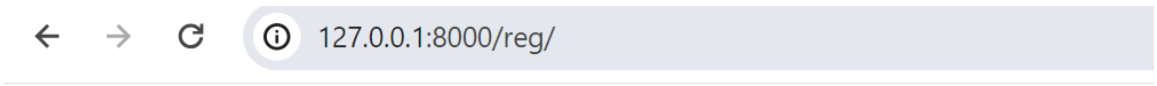
Student enrolled successfully

BackEnd



	id	student_id	course_id
Edit Copy Delete	1	1	1
Edit Copy Delete	2	1	3
Edit Copy Delete	3	2	2
Edit Copy Delete	4	2	1
Edit Copy Delete	5	1	2

If you try again, you will get



Student already enrolled