

Program-5

5. 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.

Create application:

```
>python manage.py startapp lab5
```

In lab5 subfolder, write code in views.py

```
from django.shortcuts import render
from django.http import HttpResponseRedirect
from lab5.models import Course, 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 HttpResponseRedirect("<h1>Student already enrolled</h1>")
        student.enrolment.add(course)
        return HttpResponseRedirect("<h1>Student enrolled successfully</h1>")
    else: students=Student.objects.all()
    courses=Course.objects.all()
    return render(request,"reg.html",{"students":students, "courses":courses})
```

In lab5 subfolder, write code in models.py

```
from django.db import models

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)
```

In the lab5 folder, create a subfolder 'templates' and within the templates subfolder create a file 'reg.html'.

```
<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>
```

In lab5 subfolder, write code in urls.py

```
from django.urls import path
from lab5.views import reg

urlpatterns = [
    path('reg/', reg),
]
```

Output:

- Activate app by adding app name 'lab5' in the settings.py in the project folder p.
- Install DB browser for Sqlite and sqlite tools(refer sqlite installation page)
- Run command for propagating changes into database schema.

```
>python manage.py makemigrations
>python manage.py migrate
```

- Save and Run server by executing command:

```
>python manage.py runserver
```

In the database, insert records into the student table:

DB Browser for SQLite - C:\Users\91974\OneDrive\Desktop\django_lab\db.sqlite3

File Edit View Tools Help

New Database Open Database Write Changes Revert Changes

Database Structure Browse Data Edit Pragmas Execute SQL

Table: lab5_student

	id	student_usn	student_name	student_sem
	Filter	Filter	Filter	Filter
1	1	1SG21IS001	Agasthya	6
2	2	1SG21IS002	Aarav	6

In the database, insert records into the course table:

DB Browser for SQLite - C:\Users\91974\OneDrive\Desktop\django_lab\db.sqlite3

File Edit View Tools Help

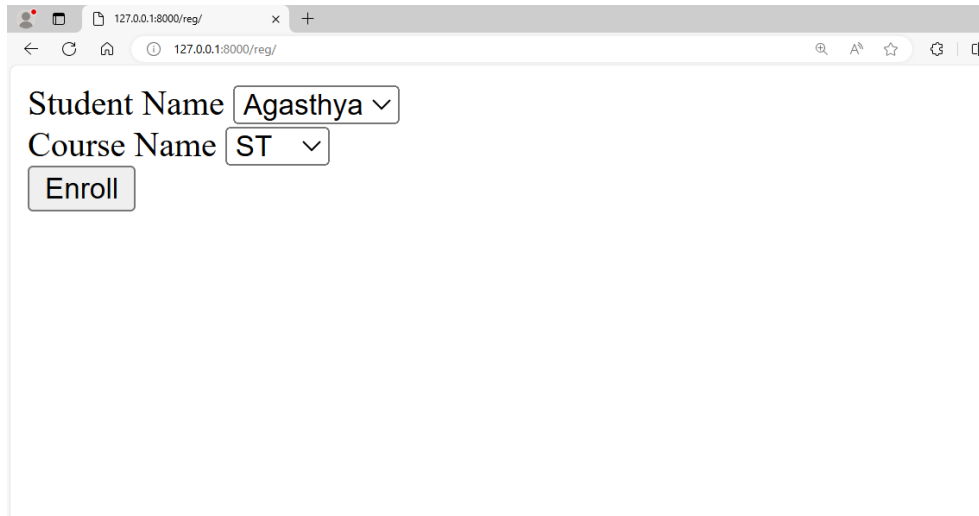
New Database Open Database Write Changes Revert Changes

Database Structure Browse Data Edit Pragmas Execute SQL

Table: lab5_course

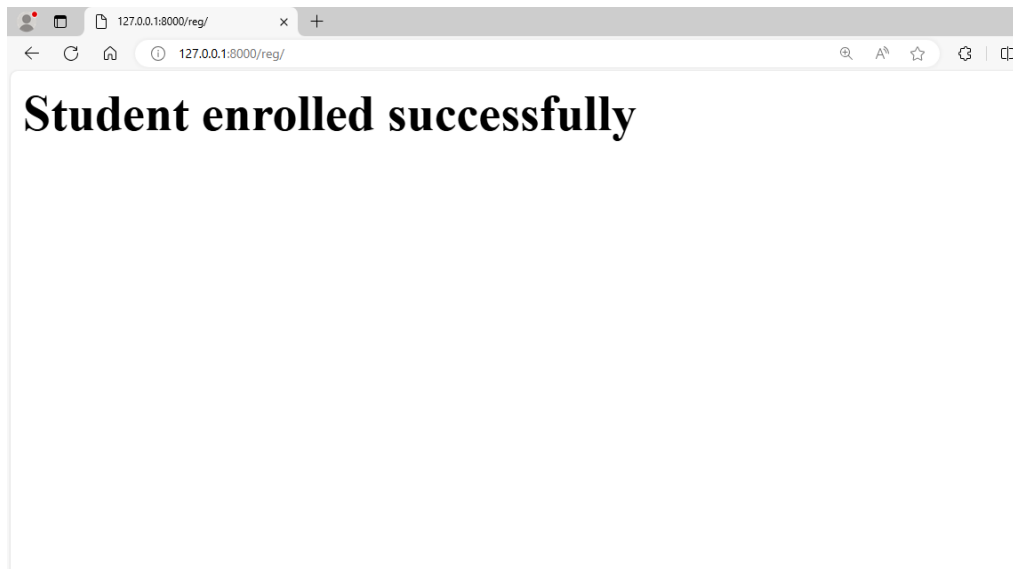
	id	course_code	course_name	course_credits
	Filter	Filter	Filter	Filter
1	1	21IS61	SE	3
2	2	21IS62	FSD	4
3	3	21IS63	ST	3

In the browser, enter the url :127.0.0.1:8000/reg/

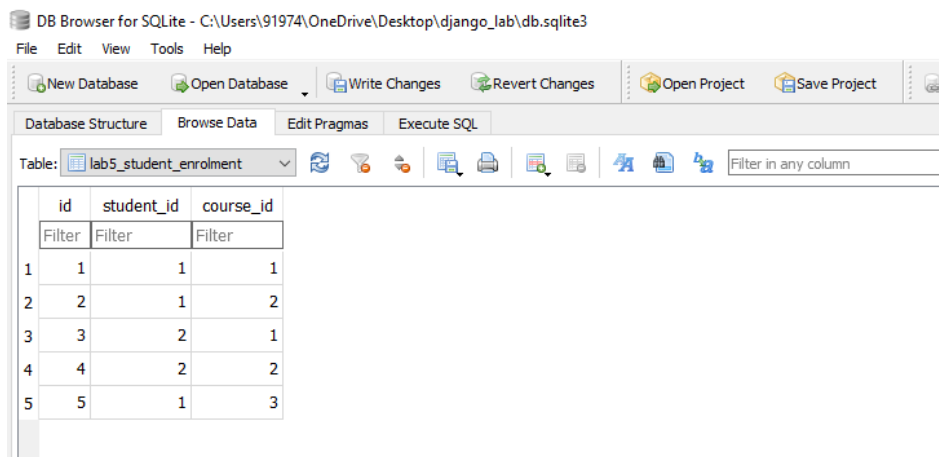


A screenshot of a web browser window. The address bar shows the URL 127.0.0.1:8000/reg/. The page content includes a form with two dropdown menus: 'Student Name' with 'Agasthya' selected, and 'Course Name' with 'ST' selected. Below these is an 'Enroll' button.

Enroll one student to a course, it display:



In the database, it will reflect in the student enrolment table:



A screenshot of a database browser window titled 'DB Browser for SQLite - C:\Users\91974\OneDrive\Desktop\django_lab\db.sqlite3'. The 'Table:' dropdown is set to 'lab5_student_enrolment'. The table data is as follows:

	id	student_id	course_id
	Filter	Filter	Filter
1	1	1	1
2	2	1	2
3	3	2	1
4	4	2	2
5	5	1	3