Sl. No	Name of Experiment	WEEK
1	Sample programs	Week1
2	Sample programs	Week2
3	Installation of python,Django and VS code, Creation of virtual environment Django Project and App.	Week3
4	Display Current Date and Time in Server.	Week4
5	Display Current Date and Time four hours ahead and four hours before in server.	Week5
6	Django app that displays an unordered list of fruits and ordered list of selected students for an event	Week6
7	Inherit this layout.html and create 3 additional pages: contact us, About Us and Home page of any website.	Week7
8	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.	Week8
9	a. For student and course models created in Lab experiment for Module2, register admin interfaces, perform migrations and illustrate data entry through admin forms b. Develop a Model form for student that contains his topic chosen for project, languages used and duration with a model called project.	Week9
10	For students enrolment developed in Module 2, create a generic class view which displays list of students and detailview that displays student details for any selected student in the list.	Week10
11	Develop example Django app that performs CSV and PDF generation for any models created in previous laboratory component.	Week11

4,5).Django Application to display Display Current Date and Time in Server. Also Display Current Date and Time four hours ahead and four hours before in server.

Views.py

```python
def atime(request,delta):
    resp=datetime.datetime.now()+datetime.timedelta(hours=delta)
    return HttpResponse(resp)
def ctime(request):
    resp=datetime.datetime.now()
    return HttpResponse(resp)
def btime(request,delta):
    resp=datetime.datetime.now()-datetime.timedelta(hours=delta)
    return HttpResponse(resp)
```
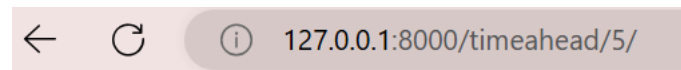
urls.py

```python
path('time/',views.ctime),
path('timeahead/<int:delta>/',views.atime),
path('timebehind/<int:delta>/',views.btime),
```

output:

← C ⓘ 127.0.0.1:8000/time/

2024-06-05 14:35:25.075377

← C ⓘ 127.0.0.1:8000/timeahead/5/

2024-06-05 19:36:40.516242

6.Django app that displays an unordered list of fruits and ordered list of selected students for an event

Template → fruit_student.html

```
<!DOCTYPE html>

<html>
    <head>
        <title>
            unorderd fruit and ordered student list
        </title>
    </head>
</html>
    <body>
        <h1/> unorded list of fruits </h1>
        <ul>
            {% for fruit in fruitList %}
            <li> {{fruit}}</li>
            {% endfor %}
        </ul>
    <h1/> orded list of students</h1>
    <ol>
        {% for student in studentList %}
        <li> {{student}}</li>
        {% endfor %}
    </ol>
    </body>
</html>
```
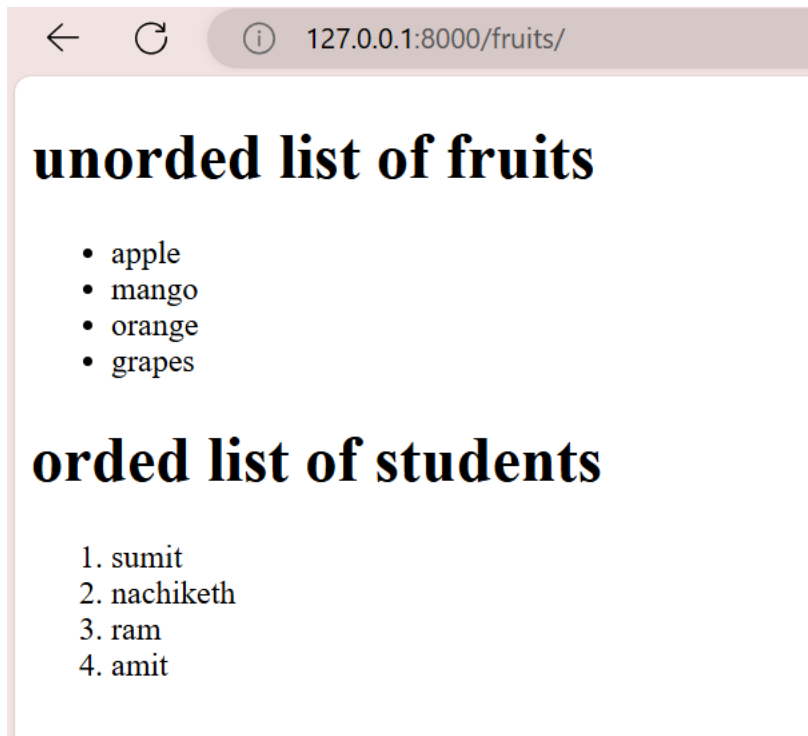
Views.py

```python
def fruit_student(request):
    studentList=['sumit','nachiketh','ram','amit']
    fruitList=['apple','mango','orange','grapes']
    return render(request,'fruit_student.html',
            {'fruitList':fruitList,'studentList':studentList})
```

Urls.py

```python
 path('fruits/',views.fruit_student),
```

Output:

unorded list of fruits

- apple
- mango
- orange
- grapes

orded list of students

1. sumit
2. nachiketh
3. ram
4. amit

7.Inherit this layout.html and create 3 additional pages: contact us, About Us and Home page of any website.

Template→layout.html

```html
<!DOCTYPE html>
<html>
    <head>
        <title>

        </title>
    </head>

    <body>
        <nav>
            <a href="/home/">HOME </a>
            <a href="/contactus/">CONTACT US </a>
            <a href="/aboutus/">ABOUT US</a>
        </nav>
        <section>
            {% block title %} {% endblock %}
        </section>
        <section>
            {% block content %} {% endblock %}
        </section>
```

```html
        <footer>
            <hr>
            &copy;full stack development
            </hr>
        </footer>
    </body>
</html>
```

Home.html

```html
{% extends 'layout.html' %}
{% block title %} HOME PAGE  {% endblock  %}
{% block content %}
<h1> this is my home page </h1>
{% endblock %}
```

Contactus.html

```html
{% extends 'layout.html' %}
{% block title %} CONTACT US  {% endblock  %}
{% block content %}
<h1> CONTACT US </h1>
<P> NAME:FSD </P>
<P> EMAILID:xyz@gmail.com </p>
{% endblock %}
```

Aboutus.html
```html
{% extends 'layout.html' %}
{% block title %} ABOUT US  {% endblock  %}
{% block content %}
<h1> ABOUT US </h1>
<P> BLDEACET,vi sem cse,fsd </P>
{% endblock %}
```

Views.py
```python
def home(request):
    return render(request,'home.html')
def contactus(request):
    return render(request,'contactus.html')
def aboutus(request):
    return render(request,'aboutus.html')
```

urls.py

```python
    path('contactus/',views.contactus),
    path('aboutus/',views.aboutus),
    path('home/',views.home),
```

output:

127.0.0.1:8000/contactus/

HOME CONTACT US ABOUT US
CONTACT US

CONTACT US

NAME:FSD

EMAILID:xyz@gmail.com

©full stack development

3.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.

basic.html

```html
<!DOCTYPE html>
<html>
    <head>
        <style>
            nav{background-color: lightblue;padding: 15px; }
            nav a {
    color: #fff; /* Text color */
    text-decoration: none; /* Remove underline */
    padding: 10px 20px; /* Padding around each link */
    margin: 0px 10px; /* Spacing between links */
    border-radius: 5px; /* Rounded corners */
    background-color: #555;
    flex-wrap: wrap;
}
nav a:hover {
    background-color:aqua;/* Background color on hover */
}
ul {
    list-style: none; margin: 0;
    padding: 0;
    display: flex; /* Use flexbox */
    flex-wrap: wrap; /* Allow items to wrap to the next line */ flex-
direction: row; /* Display items in a column */
    }
    li {
        margin-right: 20px;
        margin-bottom: 25px;
        }
        </style>
        <title>
            {% block title %} {% endblock %}
        </title>
    </head>
    <body>
        <center> <h1 style="background-color: blue;color:yellow"> STUDENT
COURSE REGISTRATION PORTAL</h1></center>
        <nav>
            <ul>
                <li> <a href="/home/">HOME</a></li>
                <li> <a href="/studentlist/">STUDENT LIST</a></li>
                <li> <a href="/courselist/">COURSE LIST</a> </li>
```

```html
            <li> <a href="/register/">REGISTER</a></li>
            <li> <a href="/enrolledlist/">ENROLLED LIST</a></li>

        </ul>
    </nav>
    <section>
        {% block content %} {% endblock %}
    </section>
    <footer>
    <hr/>
    <center>
        &copy; Designed and Developeb by Dept. of CSE, BLDEACET.
    </center>
    </footer>
    </body>
</html>
```

courselist.html

```html
{% extends 'basic.html' %}
{% block title %} Course List {% endblock %}
{% block content%}
<h1> Course List</h1>
<table border="1">
    <tr>
        <th>
            Sub Code
        </th>
        <th>
            Sub Name
        </th>
        <th>
            Credits
        </th>
    </tr>
    {% for c in course_list %}
    <tr>
        <td>{{c.courseCode}}</td>
        <td>{{c.courseName}}</td>
        <td>{{c.courseCredits}}</td>
    </tr>
    {% endfor %}
</table>
{% endblock %}
```

home.html

```
{% extends 'basic.html' %}
{% block title %} Home Page {% endblock %}
{% block content %}
<li>Click on Student List to get the List of students</li>
<li> Click on Course List to get the list of courses</li>
<li>click on register to enroll student to a course</li>
{% endblock %}
```

register.html

```
{% extends 'basic.html' %}
{% block title %} Course Register Page {% endblock %}
{% block content %}
<h1> Student Course Registration</h1>
<form method="POST" action="">
    {% csrf_token %}
    Select USN:
    <select name="student">
        {% for s in student_list %}
        <option value="{{s.id}}">{{s.usn}}</option>
        {% endfor %}
    </select>
    Select Course:
    <select name="course">
        {% for c in course_list %}
        <option value="{{c.id}}">{{c.courseCode}}</option>
        {% endfor %}
    </select>
    <input type="submit" value="ENROLL"/>
</form>
{% endblock %}
```

studentlist.html

```
{% extends 'basic.html' %}
{% block title %} Student List {% endblock %}
{% block content%}
<h1>Student List</h1>
<table border="1">
    <tr>
        <th>
            USN
        </th>
        <th>
            NAME
        </th>
```

```
        <th>
            SEM
        </th>
    </tr>
    {% for s in student_list %}
    <tr>
        <td>{{s.usn}}</td>
        <td>{{s.name}}</td>
        <td>{{s.sem}}</td>
    </tr>
    {% endfor %}
</table>
{% endblock %}
```

Enrolledlist.html

```
{% extends 'basic.html' %}
{% block title %} Course Registration Details {% endblock %}
{% block content %}
<form method="POST" action="">
    {% csrf_token %}
    Select Course:
    <select name="course">
        {% for c in Course_List %}
        <option value="{{c.id}}">{{c.courseCode}}</option>
        {% endfor %}
    </select>
    <input type="submit" value="Search"/>
    {% if student_list %}
    <h1> List of Students registered of the course {{course.courseCode}}</h1>
<table border="1">
    <tr>
        <th>
        USN
        </th>
        <th>
        NAME
        </th>
        <th>
        SEM
        </th>
    </tr>
    {% for s in student_list %}
    <tr>
        <td>{{s.usn}}</td>
```

```html
        <td>{{s.name}}</td>
        <td>{{s.sem}}</td>
    </tr>
    {% endfor %}
</table>
{% endif %}
</form>
{% endblock %}
```

models.py

```python
from django.db import models

# Create your models here.
from django.db import models
from django.forms import ModelForm # Create your models here.

class course(models.Model):
    courseCode=models.CharField(max_length=10)
    courseName=models.CharField(max_length=50)
    courseCredits=models.IntegerField()

    def __str__ (self):
        return self.courseCode+" "+self.courseName+"
"+str(self.courseCredits)

class student(models.Model):
    usn=models.CharField(max_length=10)
    name=models.CharField(max_length=40)
    sem=models.IntegerField()
    courses=models.ManyToManyField(course,related_name='student_set')

    def __str__ (self):
        return self.usn+" "+self.name+" "+str(self.sem)
```

(regenv) PS D:\registration>python manage.py makemigrations
(regenv) PS D:\registration>python manage.py migrate
(regenv) PS D:\registration> python manage.py shell
Python 3.10.0 (tags/v3.10.0:b494f59, Oct 4 2021, 19:00:18) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
(InteractiveConsole)

```
>>> from regapp.models import student,course
>>> s1=student(usn='2BL21CS009',name='Harish', sem='6')
>>> s2=student(usn='2BL21CS001',name='kumar1', sem='6')
>>> s3=student(usn='2BL21CS003',name='Pooja', sem='6')
>>> s4=student(usn='2BL21CS004',name='Chetan', sem='6')
>>> s5=student(usn='2BL21CS005',name='Priya', sem='6')
>>> s6=student(usn='2BL21CS006',name='Ram', sem='6')


>>> studlist=[s1,s2,s3,s4,s5,s6]
>>> for i in studlist:
...     i.save()

>>> c1=course(courseCode='21CS61',courseName='SE',courseCredits=3)
>>> c2=course(courseCode='21CS62',courseName='FSD',courseCredits=3)
>>> c3=course(courseCode='21CS63',courseName='CGV',courseCredits=3)
>>> c4=course(courseCode='21CS64',courseName='DBMS',courseCredits=3)
>>> c5=course(courseCode='21CSL62',courseName='FSD Lab',courseCredits=2)


>>> courseList=[c1,c2,c3,c4,c5]
>>> for course in courseList:
...     course.save()
>>>
```

views.py

```python
from django.http import HttpResponse
from django.shortcuts import render
from regapp.models import student,course
# Create your views here.

def home(request):
    return render(request,'home.html')

def studentlist(request):
    s=student.objects.all()
    return render(request,'studentlist.html',{'student_list':s})

def courselist(request):
    c=course.objects.all()
    return render(request,'courselist.html',{'course_list':c})

def register(request):
    if request.method=="POST":
        sid=request.POST.get("student")
```

```python
            cid=request.POST.get("course")
            studentobj=student.objects.get(id=sid)
            courseobj=course.objects.get(id=cid)
            res=studentobj.courses.filter(id=cid)
            if res:
                resp="<h1>Student with usn %s has already enrolled for the
%s<h1>"%(studentobj.usn,courseobj.courseCode)
                return HttpResponse(resp)
            studentobj.courses.add(courseobj)
            resp="<h1>student with usn %s successfully enrolled for the course
with sub code %s</h1>"%(studentobj.usn,courseobj.courseCode)
            return HttpResponse(resp)
    else:
        studentlist=student.objects.all()
        courselist=course.objects.all()
    return
render(request,'register.html',{'student_list':studentlist,'course_list':cours
elist})


def enrolledStudents(request):
    if request.method=="POST":
        cid=request.POST.get("course")
        courseobj=course.objects.get(id=cid)
        studentlistobj=courseobj.student_set.all()
        return
render(request,'enrolledlist.html',{'course':courseobj,'student_list':studentl
istobj})

    else:
        courselist=course.objects.all()
        return render(request,'enrolledlist.html',{'Course_List':courselist})
```
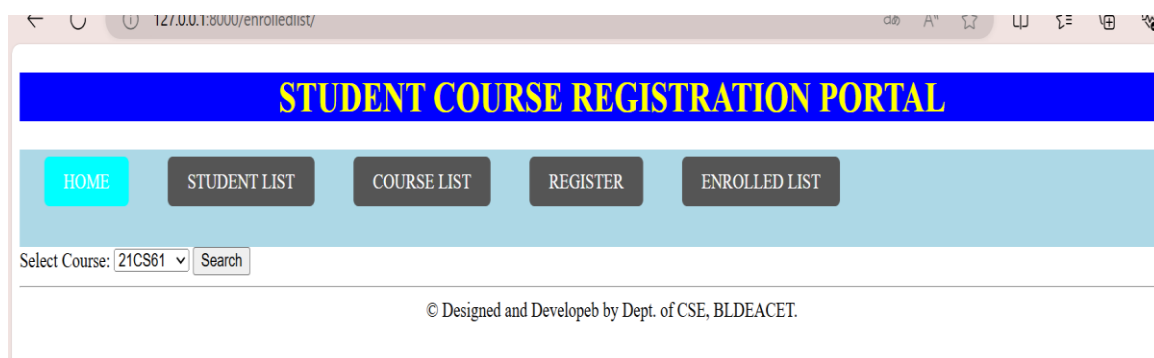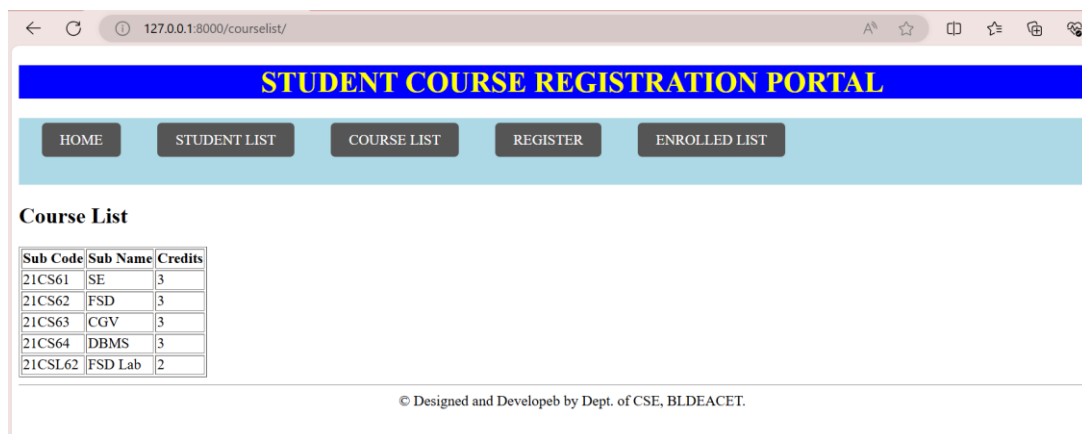
urls.py

```python
from django.contrib import admin
from django.urls import path
from regapp.views import home,
studentlist,courselist,register,enrolledStudents
urlpatterns = [
path('secretadmin/', admin.site.urls),
path('',home),
path('home/',home),
path('studentlist/',studentlist),
path('courselist/',courselist),
path('register/',register),
path('enrolledlist/',enrolledStudents),
]
```

Settings.py

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

ouput

STUDENT COURSE REGISTRATION PORTAL

HOME   STUDENT LIST   COURSE LIST   REGISTER   ENROLLED LIST

Course List

Sub Code	Sub Name	Credits
21CS61	SE	3
21CS62	FSD	3
21CS63	CGV	3
21CS64	DBMS	3
21CSL62	FSD Lab	2

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STUDENT COURSE REGISTRATION PORTAL

HOME   STUDENT LIST   COURSE LIST   REGISTER   ENROLLED LIST

Select Course: 21CS61   Search

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STUDENT COURSE REGISTRATION PORTAL

| HOME | STUDENT LIST | COURSE LIST | REGISTER | ENROLLED LIST |

Student List

USN	NAME	SEM
2BL21CS001	kumar1	6
2BL21CS003	Pooja	6
2BL21CS004	Chetan	6
2BL21CS005	Priya	6
2BL21CS006	Ram	6
2BL21CS001	Harish	6
2BL21CS001	kumar1	6
2BL21CS009	Harish	6
2BL21CS001	kumar1	6

STUDENT COURSE REGISTRATION PORTAL

| HOME | STUDENT LIST | COURSE LIST | REGISTER | ENROLLED LIST |

Student Course Registration

Select USN: [2BL21CS001 v] Select Course: [21CS61 v] [ENROLL]