SUBJECT: FULLSTACK DEVELOPMENT (21CS62)

LAB COMPONENT SOLUTIONS

Evaluate a simple arithmetic expression using jquery
expr.html inside templates

```
{% load static %}
<html>
    <body>
        Expression
        <input type="text" id="t1"><span id="res"></span><br>
        <input type="button" id="exprbtn" value="Calculate">
    </body>
    <script src="{% static 'jquery.min.js' %}"></script>
    <script>

        $(document).ready(function(){
            $("#exprbtn").click(function(){
                var expr = $("#t1").val();
                res=eval(expr);
                $("#res").html(res);
            });
        });
    </script>

</html>
```

views.py

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

from ap3.models import Course, Meeting, ProjectReg, Student

def expr(request):
    return render(request,"expr.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
```

```python
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,course_search,add_project
from ap3.views import StudentListView,StudentDetailView,construct_csv
from ap3.views import construct_csv_from_model,construct_pdf
from ap3.views import construct_pdf_from_model
from ap3.views import expr,cbox,regaj,course_search_ajax,cookie_demo
admin.site.site_header="My Site Header"
admin.site.site_title="My Site Title"
admin.site.index_title="My Site Index"
urlpatterns = [
    path('secretadmin/', 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),
    path('course_search/', course_search),
    path('add_project/', add_project),
    path('student_list/', StudentListView.as_view()),
    path('student_detail/<int:pk>/', StudentDetailView.as_view()),
    path('construct_csv/', construct_csv),
    path('construct_csv_from_model/', construct_csv_from_model),
    path('construct_pdf/', construct_pdf),
    path('construct_pdf_from_model/', construct_pdf_from_model),
    path('expr/', expr),
    ]
```

Output:

← → C ⓘ 127.0.0.1:8000/expr/

Expression 5 + 6

Calculate

← → C ⓘ 127.0.0.1:8000/expr/

Expression 5 + 6 | 11

Calculate

Create 5 checkboxes for 5 different programming langauges and on clicking a button display how many langauges were selected

cbox.html

```html
{% load static %}
<html>
    <body>
        <input type="checkbox" name="c">Python
        <input type="checkbox" name="c">PHP
        <input type="checkbox" name="c">Ruby
        <input type="checkbox" name="c">Julia
        <input type="checkbox" name="c">C++
        <br>
        <input type="button" id="cntBtn" value="Count">
        <p id="ans"></p>
    </body>
    <script src="{% static 'jquery.min.js' %}"> </script>
    <script>
        $(document).ready(function() {
            $("#cntBtn").click(function() {
                var cnt = 0;
                $("input[type=checkbox]").each(function() {
                    if (this.checked) {
                        cnt++;
                    }
                });
                $("#ans").html(cnt);

            });
        });
    </script>
</html>
```

views.py
```python
from django.http import HttpResponse
from django.shortcuts import render

from ap3.models import Course, Meeting, ProjectReg, Student

def cbox(request):
    return render(request,"cbox.html")
```

urls.py
```python
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,course_search,add_project
from ap3.views import StudentListView,StudentDetailView,construct_csv
from ap3.views import construct_csv_from_model,construct_pdf
from ap3.views import construct_pdf_from_model
from ap3.views import expr,cbox,regaj,course_search_ajax,cookie_demo
admin.site.site_header="My Site Header"
admin.site.site_title="My Site Title"
admin.site.index_title="My Site Index"
urlpatterns = [
    path('secretadmin/', 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),
```

```python
    path('insert_demo/', insert_demo),
    path('update_demo/', update_demo),
    path('delete_demo/', delete_demo),
    path('retreive_demo/', retreive_demo),
    path('reg/', reg),
    path('course_search/', course_search),
    path('add_project/', add_project),
    path('student_list/', StudentListView.as_view()),
    path('student_detail/<int:pk>/', StudentDetailView.as_view()),
    path('construct_csv/', construct_csv),
    path('construct_csv_from_model/', construct_csv_from_model),
    path('construct_pdf/', construct_pdf),
    path('construct_pdf_from_model/', construct_pdf_from_model),
    path('expr/', expr),
    path('cbox/', cbox),
]
```

Output:

```
← → C  ⓘ 127.0.0.1:8000/cbox/
```

☐ Python ☐ PHP ☐ Ruby ☐ Julia ☐ C++

Count

```
← → C  ⓘ 127.0.0.1:8000/cbox/
```

☐ Python ☑ PHP ☐ Ruby ☐ Julia ☑ C++

Count

2

Develop a registration page for student enrolment as done in Module 2 but without page refresh using AJAX.

views.py
```python
from django.http import HttpResponse
from django.shortcuts import render

from ap3.models import Course, Meeting, ProjectReg, Student

def regaj(request):
    if request.method == "POST":
        sid=request.POST.get("sname")
        cid=request.POST.get("cname")
        student=Student.objects.get(id=sid)
```

```python
        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,"regaj.html",{"students":students,
"courses":courses})
```

regaj.html

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

        </select><br>
        <span id="ans"></span>
        <input type="button" value="Enroll" id="ebtn">
    </form>
    <script src="{% static 'jquery.min.js' %}"></script>
    <script>
        $(document).ready(function(){
            $("#ebtn").click(function(){
                var sname = $("#sname").val();
                var cname = $("#cname").val();
                $.ajax({
                    type: "POST",
                    url: "/regaj/",
                    data: {sname: sname, cname: cname,
                    csrfmiddlewaretoken:"{{ csrf_token}}"
                    },
```

```
                success: function(response){
                    $("#ans").html(response)
                }
            });
        });
    });
    </script>
    </body>
</html>
```

urls.py

```python
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,course_search,add_project
from ap3.views import StudentListView,StudentDetailView,construct_csv
from ap3.views import construct_csv_from_model,construct_pdf
from ap3.views import construct_pdf_from_model
from ap3.views import expr,cbox,regaj,course_search_ajax
admin.site.site_header="My Site Header"
admin.site.site_title="My Site Title"
admin.site.index_title="My Site Index"
urlpatterns = [
    path('secretadmin/', 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),
```

```python
    path('update_demo/', update_demo),
    path('delete_demo/', delete_demo),
    path('retreive_demo/', retreive_demo),
    path('reg/', reg),
    path('course_search/', course_search),
    path('add_project/', add_project),
    path('student_list/', StudentListView.as_view()),
    path('student_detail/<int:pk>/', StudentDetailView.as_view()),
    path('construct_csv/', construct_csv),
    path('construct_csv_from_model/', construct_csv_from_model),
    path('construct_pdf/', construct_pdf),
    path('construct_pdf_from_model/', construct_pdf_from_model),
    path('expr/', expr),
    path('cbox/', cbox),
    path('regaj/',regaj),
]
```

Output:

Student Name [Sham ∨]
Course Name [DAA ∨]
[Enroll]

Student Name [Sham ∨]
Course Name [DAA ∨]

Student already enrolled

[Enroll]

Student Name [Sham ∨]
Course Name [Yoga ∨]

Student enrolled successfully

[Enroll]

Develop a search application in Django using AJAX that displays courses enrolled by a student being searched.

views.py
```python
from django.http import HttpResponse
```

```python
from django.shortcuts import render

from ap3.models import Course, Meeting, ProjectReg, Student

def course_search_ajax(request):
    if request.method=="POST":
        cid=request.POST.get("cname")
        s=Student.objects.all()
        student_list=list()
        for student in s:
            if student.enrolment.filter(id=cid):
                student_list.append(student)
        if len(student_list)==0:
            return HttpResponse("<h1>No Students enrolled</h1>")
        return render(request,"selected_students.html",{"student_list":student_list})

    else:
        courses=Course.objects.all()
        return render(request,"course_search_aj.html",{"courses":courses})
```

course_search_aj.html

```html
{% load static %}
<html>
    <body>
        <form method="POST" action="">
        Courses
        {% csrf_token %}
        <select name="cname" id="cname">
            {%for course in courses %}
            <option value="{{course.id}}">{{course.course_name}}</option>
            {% endfor %}
        </select>
        <input type="button" value="Search" id="serbtn">
        <span id="result"></span>
    </form>
    </body>
    <script src="{% static 'jquery.min.js' %}"></script>
    <script>
        $(document).ready(function(){
            $("#serbtn").click(function(){
                var cname = $("#cname").val();
                $.ajax({
                    url: "/course_search_ajax/",
                    type: "POST",
                    data: {cname:cname,csrfmiddlewaretoken:"{{csrf_token }}"},
                    success: function(response){
                        $("#result").html(response);
```

```
                }
            });
        });
    });
    </script>
</html>
```

urls.py

```python
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,course_search,add_project
from ap3.views import StudentListView,StudentDetailView,construct_csv
from ap3.views import construct_csv_from_model,construct_pdf
from ap3.views import construct_pdf_from_model
from ap3.views import expr,cbox,regaj,course_search_ajax,cookie_demo
admin.site.site_header="My Site Header"
admin.site.site_title="My Site Title"
admin.site.index_title="My Site Index"
urlpatterns = [

    path('secretadmin/', 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),
```
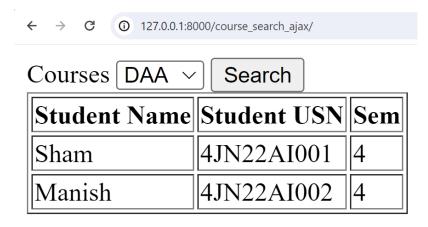
```python
    path('retreive_demo/', retreive_demo),
    path('reg/', reg),
    path('course_search/', course_search),
    path('add_project/', add_project),
    path('student_list/', StudentListView.as_view()),
    path('student_detail/<int:pk>/', StudentDetailView.as_view()),
    path('construct_csv/', construct_csv),
    path('construct_csv_from_model/', construct_csv_from_model),
    path('construct_pdf/', construct_pdf),
    path('construct_pdf_from_model/', construct_pdf_from_model),
    path('expr/', expr),
    path('cbox/', cbox),
    path('course_search_ajax/', course_search_ajax),
]
```

Output:

Develop a Django app that illustrates the use of cookies by tracking no of times URL is visited.

views.py

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

from ap3.models import Course, Meeting, ProjectReg, Student

def cookie_demo(request):
```

```python
    if "visit" in request.COOKIES:
        cnt=int(request.COOKIES["visit"])
        cnt+=1
        response=HttpResponse("<h1>You have visited %d times"%cnt)
        response.set_cookie("visit",cnt,max_age=2*24*60*60)
    else:

        cnt=1
        response=HttpResponse("<h1>You are visiting first time")
        response.set_cookie("visit",cnt,max_age=2*24*60*60)
    return response
```

urls.py

```python
    path('secretadmin/', 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),
    path('course_search/', course_search),
    path('add_project/', add_project),
    path('student_list/', StudentListView.as_view()),
    path('student_detail/<int:pk>/', StudentDetailView.as_view()),
    path('construct_csv/', construct_csv),
    path('construct_csv_from_model/', construct_csv_from_model),
    path('construct_pdf/', construct_pdf),
    path('construct_pdf_from_model/', construct_pdf_from_model),
    path('expr/', expr),
    path('cbox/', cbox),

 path('cookie_demo/', cookie_demo),
```

]

← → C ⓘ 127.0.0.1:8000/cookie_demo/

You are visiting first time

← → C ⓘ 127.0.0.1:8000/cookie_demo/

You have visited 2 times