Project Based Learning-II

(Guidelines and Workbook)

Course Code: 210258
(2019 Course)

Second Year Engineering

Year 2023 - 2024

Group ID:

Team Members: 1. Tushar Chavhan (A30)

2. Pulak Deshmukh (A35)

3. Aanchal Chug (A30)

4. Vrushali Dhage (A39)

Project Title : Government Scheme Navigator

Name of Mentor: Prof. Sonali Sawardekar



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2019 - 2020

Preamble

For better learning experience, along with traditional classroom teaching and laboratory learning; project based learning has been introduced with an objective to motivate students to learn by working in group cooperatively to solve a problem, Project-based Learning (PBL) is a student centric pedagogy that involves a dynamic classroom approach in which it is believed that students acquire a deeper knowledge through active exploration of real world challenges and problems. Students learn about a subject by working for an extended period of time to investigate and respond to a complex question, challenge or a problem. It is a style of active learning and inquiry-based learning. (Reference: Wikipedia). Problem based learning will also redefine the role of teacher as mentor in learning process. Along with communicating knowledge to students, often in a lecture setting, the teacher will also act as an initiator and facilitator in the collaborative process of knowledge transfer and development.

This is a recommended workbook for PBL that will serve the purpose and facilitate the job of students, mentor and coordinator. This workbook will reflect accountability, punctuality, technical writing ability and workflow of the work undertaken.



DR. D. Y. PATIL INSTITUTE OF TECHNOLOGY, PIMPRI, PUNE
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2023 - 2024

This is to certify that Mr. Tushar Ch	avhan Group No	Division A Branch Artificial
Intelligence and Data Science has suc	cessfully completed the work	associated with Project Based
Learning II (217533) titled as GOVERNI	MENT SCHEME NAVIGATOR and	has submitted the workbook
associated under my supervision, in the	ne partial fulfillment of Second	Year Bachelor of Engineering
(Choice Based Credit System) (2019 co	urse) of Savitribai Phule Pune U	niversity.
Date:		
Place: D Y Patil Institute of Technology,	Pimpri	
Guide	Head	Dringing
Prof. Sonali Sawardekar	Dr. Mithra Venkatesan	Principal Dr. Lalit Kumar
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DR. D. Y. PATIL INSTITUTE OF TECHNOLOGY, PIMPRI, PUNE
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This is to certify that Miss Pulak Desh	nmukh Group No	_Division A Branch Artificial
Intelligence and Data Science has succ	cessfully completed the work as	sociated with Project Based
Learning II (217533) titled as GOVERNN	MENT SCHEME NAVIGATOR and I	nas submitted the workbook
associated under my supervision, in th	ne partial fulfillment of Second Y	'ear Bachelor of Engineering
(Choice Based Credit System) (2019 cou	urse) of Savitribai Phule Pune Uni	versity.
Date:		
Place: D Y Patil Institute of Technology,	Pimpri	
Guide	Head	Principal
Prof. Sonali Sawardekar	Dr. Mithra Venkatesan	Dr. Lalit Kumar



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2023 - 2024

This is to certify that Miss Aanchal Intelligence and Data Science has succeeding II (217533) titled as GOVERNN associated under my supervision, in the (Choice Based Credit System) (2019 cools)	cessfully completed the work a MENT SCHEME NAVIGATOR and be partial fulfillment of Second	ssociated with Project Based has submitted the workbook Year Bachelor of Engineering
Date: Place: D Y Patil Institute of Technology,	Pimpri	
Guide Prof. Sonali Sawardekar	Head Dr. Mithra Venkatesan	Principal Dr. Lalit Kumar



DR. D. Y. PATIL INSTITUTE OF TECHNOLOGY, PIMPRI, PUNE
SAVITRIBAI PHULE PUNE UNIVERSITY
2023 - 2024

This is to certify that Miss Vrushali [Dhage Group No	Division A Branch Artificial
Intelligence and Data Science has suc	cessfully completed the work a	ssociated with Project Based
Learning II (217533) titled as GOVERNI	MENT SCHEME NAVIGATOR and	has submitted the workbook
associated under my supervision, in the	ne partial fulfillment of Second	Year Bachelor of Engineering
(Choice Based Credit System) (2019 co	urse) of Savitribai Phule Pune Ur	niversity.
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Date:		
Place: D Y Patil Institute of Technology,	Pimpri	
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Guide	Head	Principal
Prof. Sonali Sawardekar	Dr. Mithra Venkatesan	Dr. Lalit Kumar

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1. Project Based Learning Syllabus:

Course Objectives:

- To develop critical thinking and problem-solving ability by exploring and proposing solutions to realistic/social problem.
- To Evaluate alternative approaches and justify the use of selected tools and methods.
- To emphasizes learning activities that are long-term, inter-disciplinary and student centric.
- To engages students in rich and authentic learning experiences.
- To provide every student the opportunity to get involved either individually or as a group so as to develop team skills and learn professionalism.
- To develop an ecosystem that promotes entrepreneurship and research culture among the students.

Course Outcomes:

CO1: Identify the real-life problem from societal need point of view

CO2: Choose and compare alternative approaches to select most feasible one

CO3: Analyze and synthesize the identified problem from technological perspective

CO4: Design the reliable and scalable solution to meet challenges

CO5: Evaluate the solution based on the criteria specified

CO6: Inculcate long life learning attitude towards the societal problems

Group Structure:

Working in supervisor/mentor – monitored groups. The students plan, manage and complete a task/project/activity which addresses the stated problem.

- There should be team/group of 5 -6students
- A supervisor/mentor teacher assigned to individual groups

Selection of Project/Problem:

The problem-based project oriented model for learning is recommended. The model begins with the identifying of a problem, often growing out of a question or "wondering". This formulated problem then stands as the starting point for learning. Students design and analyze the problem within an articulated interdisciplinary or subject frame. A problem can be theoretical, practical, social, technical, symbolic, cultural and/or scientific and grows out of students' wondering within different disciplines and professional environments. A chosen problem has to be exemplary. The problem may involve an interdisciplinary approach in both the analysis and solving phases .By exemplarity, a problem needs to refer back to a particular practical, scientific, social and/or technical domain. The problem should stand as one specific example or manifestation of more general learning outcomes related to knowledge and/or modes of inquiry. There are no commonly shared criteria for what constitutes an acceptable project. Projects vary greatly in the depth of the questions explored, the clarity of the learning goals, the content and structure of the activity.

- A few hands-on activities that may or may not be multidisciplinary
- Use of technology in meaningful ways to help them investigate, collaborate, analyze, synthesize and present their learning.
- Activities may include-Solving real life problem, investigation /study and Writing reports of in depth study, field work.

Assessment:

The institution/head/mentor is committed to assessing and evaluating both student performance and program effectiveness. Progress of PBL is monitored regularly on weekly basis. Weekly review of the work is necessary. During process of monitoring and continuous assessment AND evaluation the individual and team performance is to be measured. PBL is monitored and continuous assessment is done by supervisor/mentor and authorities. Students must maintain an institutional culture of authentic collaboration, self-motivation, peer-learning and personal responsibility. The institution/department should support students in this regard through guidance/orientation programs and the provision of appropriate resources and services. Supervisor/mentor and Students must actively participate in assessment and evaluation processes.

Group may demonstrate their knowledge and skills by developing a public product and/or report and/or presentation.

- Individual assessment for each student (Understanding individual capacity, role and involvement in the project)
- Group assessment (roles defined, distribution of work, intra-team communication and togetherness)
- Documentation and presentation

Evaluation and Continuous Assessment:

It is recommended that the all activities are to be record and regularly, regular assessment of work to be done and proper documents are to be maintained at college end by both students as well as mentor (you may call it PBL work book).

Continuous Assessment Sheet (CAS) is to be maintained by all mentors/department and institutes. Recommended parameters for assessment, evaluation and weightage:

- Idea Inception (5%)
- Outcomes of PBL/ Problem Solving Skills/ Solution provided/ Final product (50%)(Individual assessment and team assessment)
- Documentation (Gathering requirements, design & modeling, implementation/execution, use of technology and final report, other documents) (25%)
- Demonstration (Presentation, User Interface, Usability etc) (10%)
- Contest Participation/ publication (5%)
- Awareness / Consideration of -Environment/ Social /Ethics/ Safety measures/Legal aspects (5%)

PBL workbook will serve the purpose and facilitate the job of students, mentor and project coordinator. This workbook will reflect accountability, punctuality, technical writing ability and work flow of the work undertaken.

References:

- Project-Based Learning, Edutopia, March 14, 2016.
- What is PBL? Buck Institutes for Education
- www.schoology.com
- www.wikipedia.org
- www.howstuffworks.com

2. Recommended Guidelines and Phases:

PBL is learning through activity. One of the teachers can be appointed as coordinator for PBL. Following are the recommended guidelines that will work as an initiator and facilitator in process of completion of PBL.

- 1. In first week of commencement of 2nd semester or preferably at the end of first semester let the coordinator create awareness about PBL(what, why, and how) among the students. Convey students expected outcomes, assessment process and evaluation criteria.
- **2.** Get groups of students registered preferably 4-6 students per group.
- **3.** Assign mentor to each group.
- **4.** Provide guidelines for title identification (Problem can be some real life situation that needs technology solutions. This situation can be identified by meeting people around, visiting various industries, society, and institutes. The solution can be prototype, model, convertible solutions, survey and analysis, simulation, and similar).
- 5. Let students submit the problem identified in prescribed format(Title, Problem statement, details of a problem undertaken, and what is need of solution to the problem)
- **6.** Coordinator and mentor can approve the problem statements based on feasibility and learning outcomes expected for first year engineering students
- 7. Mentor is to monitor progress of the task during phases of project work. Broadly phases may include-requirements gathering, preparing a solution, technology design for the solution. (optional phases-implementation and testing)
- **8.** Weekly monitoring and continuous assessment record is to be maintained by mentor.
- **9.** Get the report submitted at the end of semester.

3. **Evaluation and Assessment Sheet** (To be filled in my mentor)

Sr. No.	Details	Maximum Marks	Marks Obtained
1.	Problem Identification (Idea Inception)	10	
2.	Problem Analysis (Requirement Gathering)	15	
3.	Proposed Solution Model/Design/ Process / prototype	20	
4.	Technology Solution Model	15	
5.	Expected Outcomes	05	
6.	Implementation and Testing	10	
7.	Regularity (Attendance + Weekly Progress Reporting)	10	
8.	Awareness /Consideration of - Environment/ Social /Ethics/ Safety measures/Legal aspects	05	
9.	Contest Participation/ publication	05	
10.	Report	05	
	Total Marks	100	

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Name & Sign of Mentor

4. Project Information Sheet

Project ID						
Title	Governm	ent Scheme	e Navigator			
Problem Statement	schemes informati	The project introduces an website which navigates farmers and womens to select the proper schemes through various government schemes available to them, providing detailed information, eligibility criteria, application procedures, and updates on schemes availability and changes.				
Name of Mentor	Prof. Son	Prof. Sonali Sawardekar				
Group Members	Division	Roll No.	Name	Mobile Number	Email ID	
	А	30	Tushar Chavhan	77381842130	chavhantushar223@gmail.com	
	Α	35	Pulak Deshmukh	9284715424	pulakdeshmukh07@gmail.com	
	А	32	Aanchal Chug	8767164620	chugaanchal0@gmail.com	
	А	39	Vrushali Dhage	8010332788	vrushalidhage19@gmail.com	

5. Continuous Assessment and Remarks Sheet

Problem Identification (Idea Inception) -

The idea for the Government Scheme Navigator project originated from the recognition of the widespread challenges faced by citizens in accessing and benefiting from government schemes. Through research and stakeholder consultations, it became evident that there was a critical need for a centralized platform that could streamline the process of discovering, understanding, and applying for various government schemes.

Problem Analysis (Requirement Gathering) -

- Document all gathered requirements in a structured format, such as a requirement specification document or user stories.
- Identify legal and regulatory requirements governing the collection, storage, and processing of user data.
- Identify the types of data needed to populate the platform, including scheme details, eligibility criteria, application forms, contact information, and feedback data
- Define the core functionalities and features of the Government Scheme Navigator platform based on user needs and stakeholder inputs.
- Identify all stakeholders involved in the project, including government agencies, policymakers, citizens, NGOs, and potential users of the platform.

Proposed Solution Model/Design/ Process / prototype -

- User interface design-Develop a user-friendly web and mobile interface with intuitive navigation and clear layout.
- Prototype-Develop a prototype focusing on core features such as search, scheme details, and basic recommendation functionality.
- User Authentication and Profiles-Create user accounts for personalized experiences, allowing users to save favorite schemes, track application progress, and receive notifications.
- Search and Recommendation Engine-Implement an advanced search algorithm to enable users to search for schemes based on keywords, eligibility criteria, location, and sector.
- Notification System-Set up a notification system to alert users about new scheme launches, updates, deadlines, and changes in eligibility criteria.

Technology Solution Model-

- Frontend Development-Implement intuitive navigation, search functionality, and filters to enhance user experience.
- Backend Development-Choose a backend technology stack such as Node.js, Python Django, or Java Spring Boot to handle server-side logic and database interactions.

- Database Management-Select a suitable database system like PostgreSQL, MySQL, or MongoDB to store scheme information and user data.
- Search and Recommendation Engine-Integrate a powerful search engine such as Elasticsearch or Apache Solr to enable fast and accurate searching of scheme information.
- Authentication and Security-Implement authentication mechanisms using JWT (JSON Web Tokens) or OAuth to secure user accounts and access to sensitive data.

Expected Outcomes-

- Increased Awareness and Accessibility-Citizens will have enhanced access to comprehensive and up-to-date information about government schemes, leading to increased awareness of available benefits and opportunities.
- Simplified Application Processes-The platform will streamline the process of discovering, understanding, and applying for government schemes, reducing complexity and confusion for users.
- Improved Utilization of Government Resources-By facilitating easier access to schemes
 and assistance in the application process, the project will contribute to higher utilization
 rates of government resources, leading to more effective allocation and delivery of
 services.
- Enhanced Citizen Empowerment-Citizens will feel empowered to make informed decisions about their participation in government schemes, leading to increased engagement and utilization of available benefits.
- Efficiency Gains for Government Agencies-Government agencies will benefit from improved efficiency in scheme administration, reduced administrative burdens, and better targeting of resources to eligible beneficiaries.

Implementation and Testing-

Define Project Scope and Objectives:

• Clearly outline what your project aims to achieve. Are you developing a website, a mobile app, or a service? What features will it include? What problem does it solve for users in the tours, travels, and tourism industry?

Planning and Design:

- Develop a detailed plan for implementing your project. This includes creating wireframes, user stories, and defining technical requirements.
- Design the user interface (UI) and user experience (UX) of your project. Ensure that it is
 intuitive and easy to use for your target audience.

Development:

- Start building your project based on the planned design and requirements.
- Utilize appropriate technologies and frameworks for the development phase.
- Implement features such as booking systems, search functionalities, user profiles, payment gateways, etc., depending on the nature of your project.

Regularity (Attend	dance + Weekly Progress Reporting) –(To be filled by Teacher)
wareness /Consi y teacher)	ideration of -Environment/ Social /Ethics/ Safety measures/Legal aspects-(To be filled
Contest Participat	tion/ publication-(To be filled by teacher)
(- , 5)	
Report –(To be fil	led by Teacher)

Week 1 - One final problem statement along with synopsis submission
in first week, write about giving domain name, Submission of three problem statements and
then one final statement

Date- 02/02/2024

Current Work phase of project-

Project Idea Discussion

Discussions Held:

Members were Tushar, Vrushali, Aanchal, Pulak.

During the project discussions, the initial step involved the selection of a finalized domain.
 Following this determination, the team engaged in the systematic review of abstracts from various research papers within the chosen domain. This process facilitated the identification of pertinent topics for further exploration and ultimately led to the decision-making regarding the project's focus.

Progress till Date

1. Idea Generation:

Domain Selection

- 2. Identified two project topics:
 - a) Scheme Navigator
 - b) Auto watertank switch
- 3. Research Paper Analysis:
 - Conducted a thorough search to identify existing research paper or patents related to the chosen project topic.
 - Choose the project topic for which no existing research papers or patents were found.

Remark		
Sign of Mentor		

Week 2- Presentation on topic Block diagram with module wise explanation

Date- 09/02/2024

Current Work phase of project-

Presentation preparation and Literature Survey.

Discussions Held

During the subsequent discussion, the team deliberated on the creation of the PowerPoint presentation (PPT) to encapsulate the project's scope, objectives, methodology, and findings. Key points emphasized for inclusion in the PPT encompassed:

Progress till Date

- 1. Literature Survey:
- Conducted comprehensive literature survey to identify relevant research papers and academic articles.
- Explored various academic databases and online repositories to gather relevant literature.
- 2. Identified 6 research papers related to the project topic.
- 3. Presentation Preparation:
- Developed PowerPoint presentation slides outlining the project topic, objectives, and related literature

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Week 3 – Submission of SRS document

Date- 23/02/2024

Current Work phase of project-

Typically involves the requirements gathering and analysis stage.

Discussions Held

During the submission of the SRS document, discussions often revolve around clarifying and finalizing the following key aspects:

- Project Scope: Defining the boundaries and objectives of the project to ensure all stakeholders have a clear understanding of what will be delivered.
- Functional Requirements: Identifying the specific features and functionalities that the software/system must provide to meet the needs of users. This includes defining use cases, user stories, and workflows.
- Non-Functional Requirements: Outlining the quality attributes and constraints that the software/system must adhere to, such as performance, security, scalability, usability, and regulatory compliance.
- Use Case Diagrams: Visual representations of how users interact with the system to achieve specific goals or tasks. Use case diagrams help illustrate the relationships between actors (users) and system functionalities.
- Data Requirements: Specifying the types of data the system will handle, how it will be stored, accessed, and manipulated, as well as any data privacy or security considerations.
- System Architecture: Describing the high-level structure of the software/system, including components, modules, interfaces, and interactions between them.

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Progress till Date

Completed the documention work of SRS document.

Remark

Sign of Mentor

6. Project Monitoring/ Progress Information Sheets Week 4 - Completion of Implementation **Date-** 22/03/2024 Current Work phase of project-Code Completion, API integration and Documentation Finalization as well as Testing **Discussions Held Discussion Points:** Reviewing and finalizing the project codebase. Integrating the file into the one platform. Improved the user interface and the some tab changes. • Several testing of code and the connectivity of the chatbot to the website. Progress till Date Code Completion Chatbot integration Documentation Finalization Improved user interface Remark Sign of Mentor

Week 5 - Final submission of Report and workbook

Date- 29/03/2024

Current Work phase of project- Reviewing and revising the project report to ensure it accurately reflects the project's objectives, methodology, findings, and conclusions.

Discussions Held

During the final submission of the report and workbook, the following discussions and actions are typically required:

- Review and Finalization: Review the entire report and workbook to ensure completeness, accuracy, and adherence to project requirements and guidelines.
- Formatting and Styling: Ensure consistent formatting and styling throughout the report and workbook, including fonts, spacing, headings, and numbering.
- Language and Clarity: Review the language and clarity of the writing to ensure that the
 content is understandable to the intended audience and free of grammatical or
 typographical errors.

Progress till Date

Final project review and Completion of all documents.

Remark

Sign of Mentor

Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Government Scheme Navigator - Home</title>
  <link rel="stylesheet" type="text/css" href="static\styles1.css">
  <script src="https://kit.fontawesome.com/f30fac2c61.js" crossorigin="anonymous"></script>
href="https://fonts.googleapis.com/css2?family=Abril+Fatface&family=Catamaran:wght@200&famil
y=Courgette&family=Edu+TAS+Beginner:wght@700&family=Lato:wght@300;900&family=Mukta:wght@700&
family=Mulish:wght@300&family=Open+Sans&family=PT+Sans:ital,wght@1,700&family=Poppins:wght@3
00&family=Raleway:wght@100&family=Roboto&family=Roboto+Condensed:wght@700&family=Roboto+Slab
&display=swap"
     rel="stylesheet">
href="https://fonts.googleapis.com/css2?family=Bree+Serif&family=DM+Serif+Display&family=Mar
tel:wght@900&family=Platypi:ital,wght@0,300..800;1,300..800&family=Poppins:wght@400;600&fami
ly=Protest+Strike&family=Roboto+Slab:wght@100..900&family=Roboto:ital,wght@0,100;0,300;0,400
;0,500;0,700;0,900;1,100;1,300;1,400;1,500;1,700;1,900&family=Ubuntu:ital,wght@0,500;1,700&d
isplay=swap" rel="stylesheet">
</head>
<body>
  <header>
    <div id="sj">
     <img src="/static/sj.svg">
    </div>
    <div class="logo">
      <img src="/static/myscheme-logo-black.svg">
    </div>
    <div class="nav-container">
      <nav>
        <u1>
         <a href="/">Home</a>
         <a href="/schemes">Schemes</a>
         <a href="/ask" id = "Ask">Ask</a>
         <a href="">Contact Us</a>
       </nav>
    </div>
  </header>
  <div class="images">
    <img src="/static/home.jpeg">
  </div>
  <div class="view">
    <button id="view-schemes-btn">Find your Schemes</button>
```

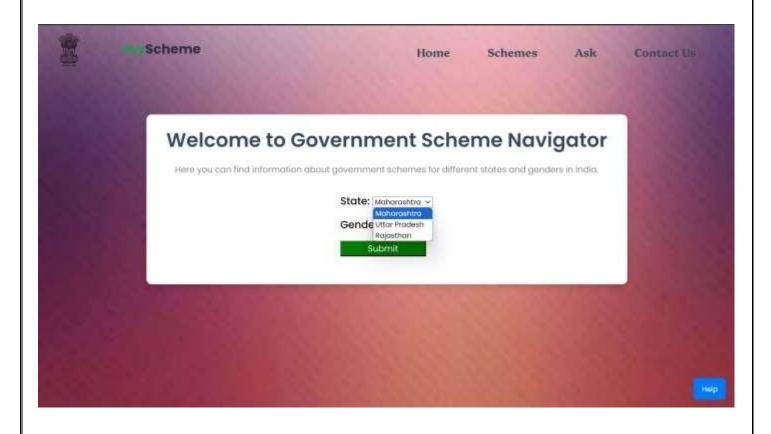
```
<!-- <footer>
    Copyright © 2024 Government Scheme Navigator
  </footer> -->
  <script>
   document.getElementById("view-schemes-btn").addEventListener("click", function() {
     window.location.href = "/schemes";
   });
   document.getElementById("Ask").addEventListener("click", function() {
     window.location.href = "/ask";
   });
  </script>
</body>
</html>
from flask import Flask, render_template, request, redirect, url_for, jsonify
import csv
import pandas as pd
import openai
app = Flask(__name__)
openai.api_key = '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'
# Initialize an empty dictionary to hold schemes data
schemes data = {}
def load_schemes_from_csv(filename):
    """Load schemes data from a CSV file and populate the schemes_data dictionary."""
   global schemes_data # Reference the global schemes_data dictionary
   # Clear existing data
    schemes_data.clear()
   # Open the CSV file
   with open(filename, mode='r', encoding='utf-8') as csvfile:
        reader = csv.DictReader(csvfile)
        # Process each row in the CSV file
        for row in reader:
            state = row['state']
            gender = row['gender']
            scheme_name = row['name']
            scheme_link = row['link']
            scheme_information = row['information']
```

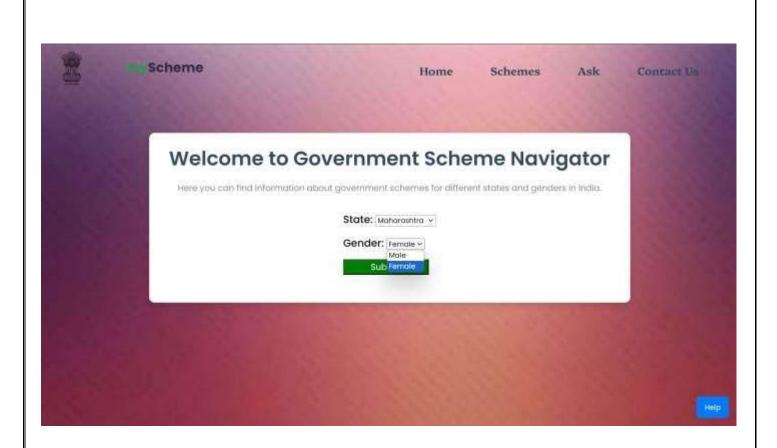
```
if state not in schemes_data:
                schemes data[state] = {}
            if gender not in schemes_data[state]:
                schemes_data[state][gender] = []
            # Append the scheme data to the list
            schemes_data[state][gender].append({
                'name': scheme_name,
                'link': scheme_link,
                'information': scheme_information
            })
# Load the schemes data from the CSV file on startup
load_schemes_from_csv('demo_schemes.csv')
@app.route('/')
def index():
    return render_template('index1.html')
@app.route('/ask')
def render_ask():
    return render_template('index.html')
@app.route('/schemes')
def render_schemes():
    return render_template('index2.html')
@app.route('/get_schemes', methods=['POST'])
def get_schemes():
    state = request.form.get('state')
   gender = request.form.get('gender')
    if state and gender:
        schemes = schemes_data.get(state, {}).get(gender, [])
        return jsonify({'schemes': schemes, 'state': state, 'gender': gender})
   else:
        return jsonify({'error': 'Invalid state or gender'})
@app.route('/index3.html')
def render_index3():
    state = request.args.get('state')
    gender = request.args.get('gender')
    if not state or not gender:
        return redirect(url_for('index'))
    schemes = schemes_data.get(state, {}).get(gender, [])
    return render_template('index3.html', state=state, schemes=schemes)
```

```
df = pd.read_csv('schemes.csv')
def gpt3_query(query, data):
    try:
        # Summarize data
        data_summary = data.head(100).to_string(index=False)
        # Prepare the prompt
        prompt = f"""
        User query: {query}
        Data context:
        {data summary}
        Provide a response to the user's query based on the data context.
        # Get response from OpenAI API
        response = openai.ChatCompletion.create(
            model='gpt-3.5-turbo',
            messages=[
                {"role": "system", "content": "You are a helpful assistant who can answer
questions based on provided data."},
                {"role": "user", "content": prompt}
            ],
            max_tokens=150
        )
        # Return the response content
        return response.choices[0].message.content.strip()
   except Exception as e:
        print(f"OpenAI API error: {e}")
        return "Sorry, I'm unable to process your request right now."
@app.route('/query', methods=['POST'])
def query():
   query = request.form['query']
    response = gpt3_query(query, df)
   return response
if __name__ == '__main__':
    app.run(debug=True)
```

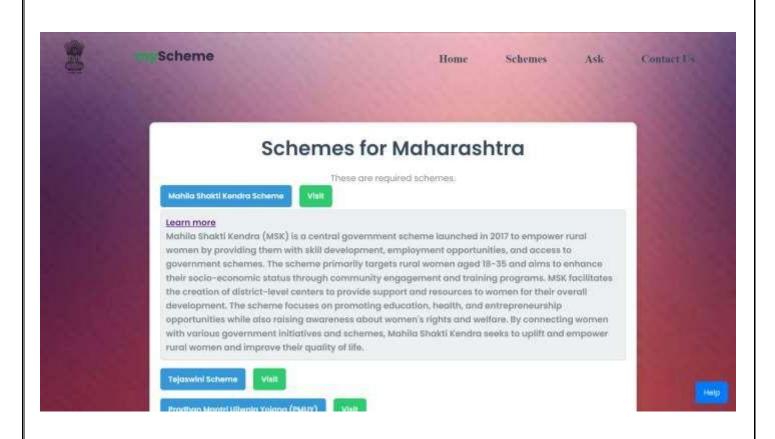
Output:

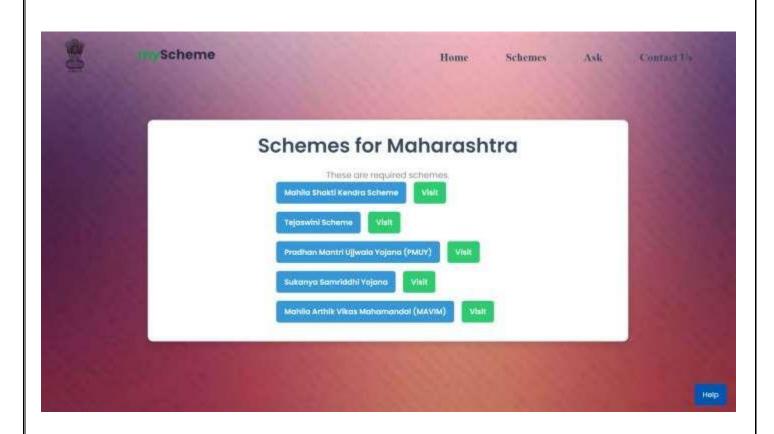




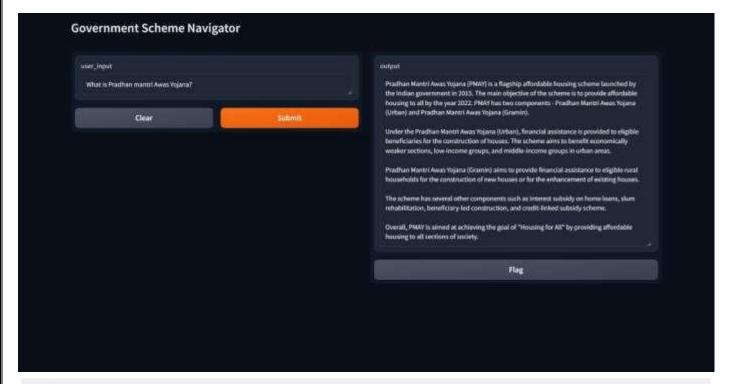


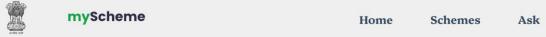


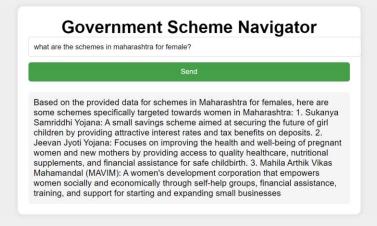




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