Time allowed: 3 hours and 15 minutes

Instructions

- You may use the first 15 minutes to read the instructions and questions carefully.

- You can keep any printed/written materials during the examination. However, you cannot exchange them during the examination. This paper has three parts.

- You must use only the Learning Management System (LMS). You must not access any other website or communication platform.

- You can find all the required resources in the LMS.

- You can use pure PHP or Frameworks: CodeIgniter or Laravel to develop the given web-based system. You can download the required packages from the LMS. You are not permitted to use the Internet to download any other frameworks or plug-ins.

- You must ensure that all required application software, services and libraries, including Apache web server and MySQL/MariaDB, are installed in your computer and working before you start any development work.

- You must create a README file with the .txt extension and the following information about the web application you developed:

    - Technologies you used.

    - URL to access your system.

    - Instructions to run your project.

    - Any other information we need to know to access your system, such as username/password.

- All required information regarding the web application are given in detail in this paper. You can make reasonable assumptions if you think the instructions are insufficient. However, Any assumptions you made in developing the system must be clearly stated in the README file you created.

A Web-based application
for the UoJ Startup Incubation Centre

The "UoJ Startup Incubation Centre" (UoJ-SIC) is a workspace created to offer resources and services required for University startups founded by the University staff and students. You are consulted to develop a web-based system to manage the activities of the UoJ Startup Incubation Centre.

The following three types of user accesses are provided in the web application and the respective functionalities are shown in Table 1:

- **User**: A person who registers in the system to obtain UoJ-SIC services.

- **Operator**: A person who manages the UoJ-SIC services. The system will have only one operator, and the profile information (such as fullname, email, gender, address, mobile, password & etc.) are stored directly in the database. Therefore, no interface is given to register an operator.

- **Guest**: A person who views the website without logging in to the system.

❖ You can find the information collected during each step in the given figures, and you need to decide on suitable data types to store these information in the database.

❖ The user can fill-in a call for support to improve their startup through the interface shown in Figure 6. The UoJ-SIC provides four types of support: Technical, financial, material and marketing.

❖ Users can submit their startup idea via the interface shown in Figure 7. They must upload their business model as an image file, as shown in Figure 13.

❖ Users and the operator need to log in to the system using their email and password, as shown in Figure 2.

❖ You must implement the user interfaces shown in figures 1 to 14 and the whole system using HTML, CSS, and JavaScript. *(Template for the home page is provided in the LMS. You can modify the template as shown in figures according to the information given)*. The skeleton of the interface should be the same as in the given figures. However, you are free to choose colours.

❖ You must do proper database design to store these information. Recall all the database principles you learnt earlier.

❖ You must make sure that your web-based application is connected properly with the database you designed.

❖ You must test your system to make sure that you can input and retrieve data through the interfaces you designed.

❖ You must make the system secure by incorporating proper validation, session management, and authentication. The password should be of a minimum length of eight alpha-numeric characters.

Table 1: User types and their functions

User Type	Functions / use cases	Model
User	View the website	Figure 1
	Log in to the system	Figure 2
	Send messages to the operator (without logging in)	Figure 3
	Register into the system	Figure 4
	View the Dashboard	Figure 5
	Call for support	Figure 6
	Add project details	Figure 7
	Update his/her profile	Figure 8
Operator	View the website	Figure 1
	Log in to the system	Figure 2
	View the Dashboard	Figure 9
	View the list of support calls	Figure 10
	View the details of each support call	Figure 11
	View the list of projects	Figure 12
	View the details of each project	Figure 13
	View guest messages	Figure 14
Guest	View the website	Figure 1
	Send messages to the operator	Figure 3

❖ **User Interfaces for "UoJ-SIC" System**
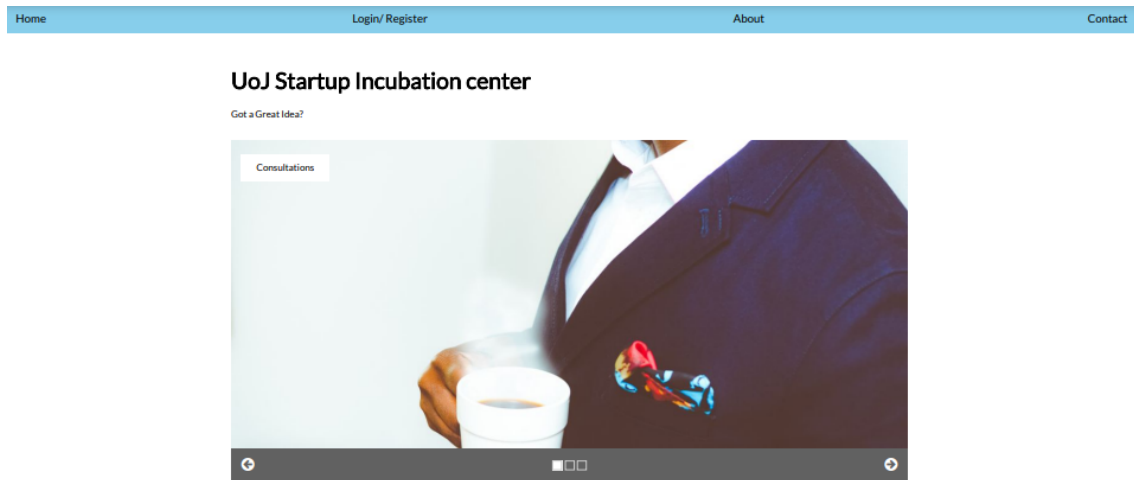
Figure 1: Home page of UoJ-SIC system
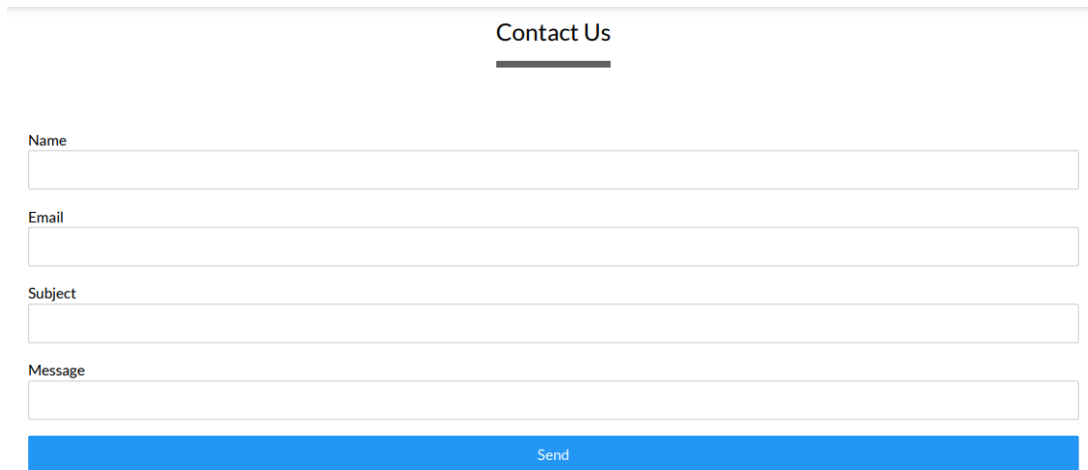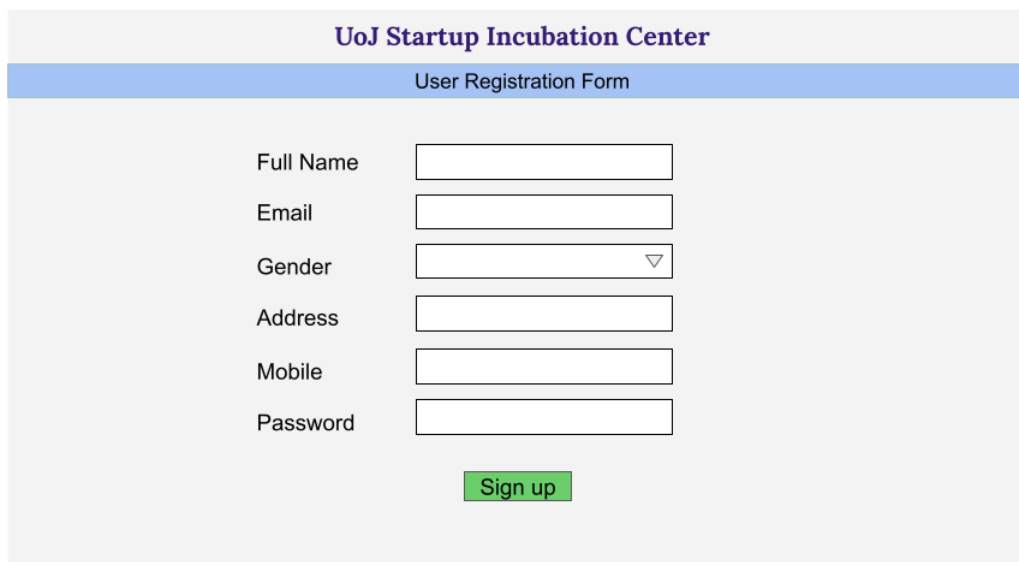
Figure 2: Login form for the user
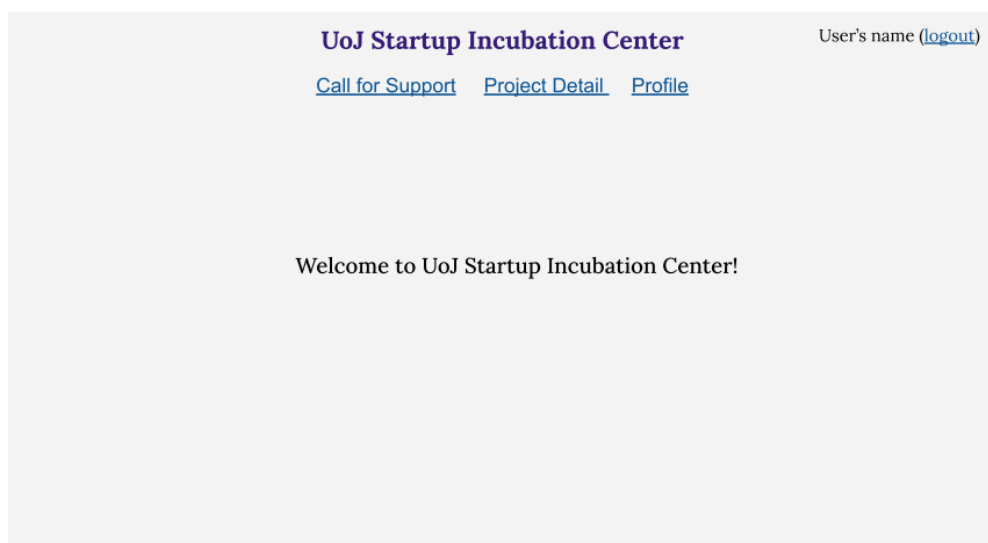
Contact Us

Name

Email

Subject

Message

Send

Figure 3: Contact Us form for the guest inquiries

UoJ Startup Incubation Center

User Registration Form

Full Name

Email

Gender

Address

Mobile

Password

Sign up

Figure 4: User registration form

UoJ Startup Incubation Center

User's name (logout)

Call for Support   Project Detail   Profile

Welcome to UoJ Startup Incubation Center!

Figure 5: Dashboard for the user

Figure 6: Call for support page of user account

Figure 7: Project details page for user

Figure 8: Profile management page of the user
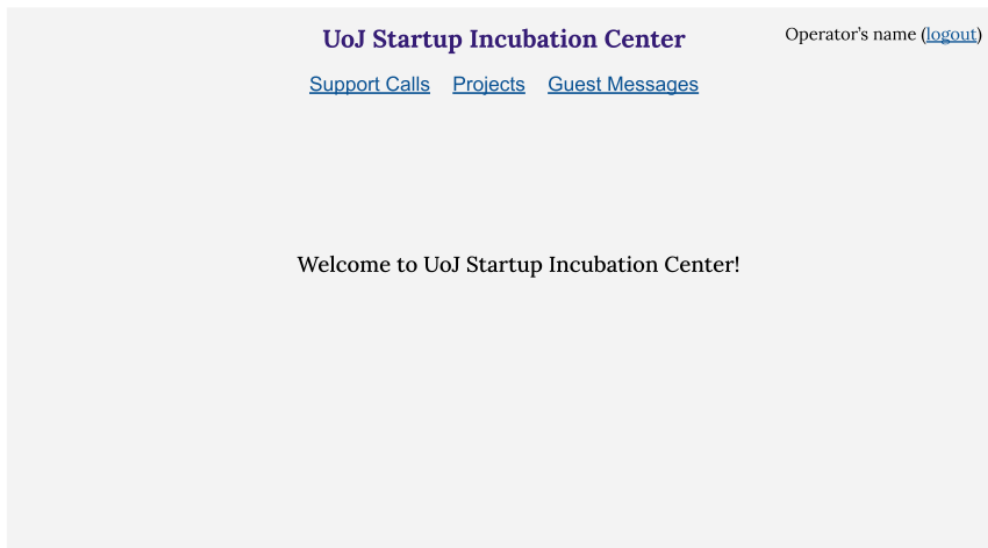
Figure 9: Dashboard for the operator
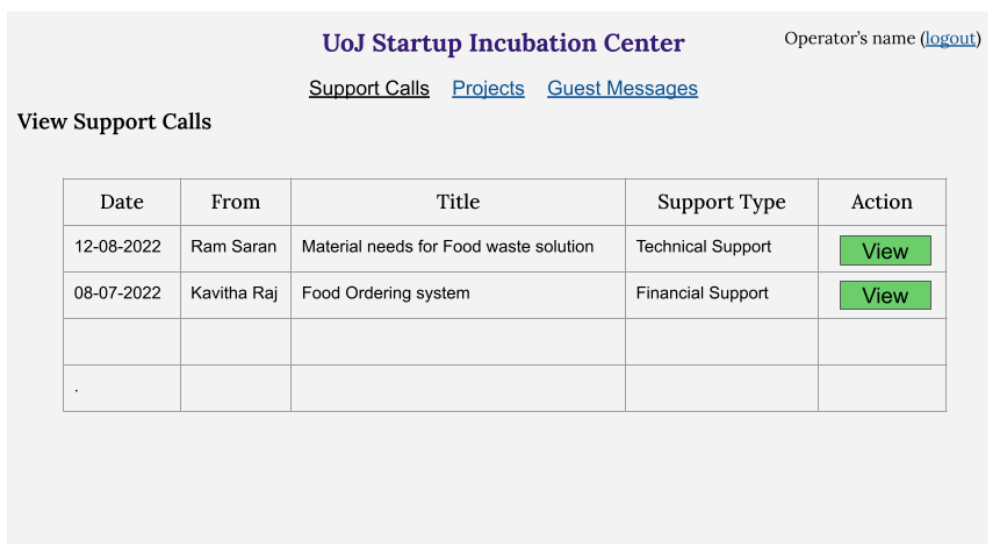
Figure 10: Support call log of the operator

Figure 11: Particular support call details page

Figure 12: Project details of users

Figure 13: Particular project details page

Figure 14: Guest Messages page