INFORMATICS INSTITUTE OF TECHNOLOGY

PROFESSIONAL DEVELOPMENT UNIT

JAVA WITH OBJECT-ORIENTED PROGRAMING

BATCH 07

FINAL ASSESSMENT

Submission Date: 2nd of February 2024

Instructions

The student has the option of selecting one of the following technologies to complete the assignment,

- Web-based application using spring API & Thymeleaf or any other server side pages / Javafx standalone application
- Use MySQL as the database
- Students are free to come up with their own UI design and database architecture appropriately
- The completed Assignment should be compressed as a .zip file and uploaded to the link provided on or before the deadline
- A working application will be presented in class, followed by a Q&A session. Each student is allocated 15 minutes for their presentation.

Disaster Coordination System for Sri Lanka

The Disaster Coordination System is designed to enhance disaster relief efforts in Sri Lanka by creating a centralized platform that connects affected individuals with disaster relief administrators. This system will ensure efficient and timely allocation of resources during emergencies such as floods, landslides, and cyclones.

As part of the final assignment, you are tasked with completing the Phase One of the system, which focuses on the following core functionalities:

1. Reporting Disasters: Citizens should be able to report a disaster by providing mandatory information.
2. Viewing Requests: Admin users should be able to view all submitted disaster reports.
3. Dashboard Summaries: The platform should provide a summary of disaster reports by province, district, or disaster category.

1. Reporting a Disaster (Citizen)

Citizens can submit disaster reports through a user-friendly interface. The form will collect the following mandatory fields:

Personal Information:

- Full Name: To identify the individual reporting the disaster.
- Contact Number: For follow-up communication.
- Email Address (optional): An additional contact method.
- National ID Number: To verify identity and prevent duplicate reports.
- Location Details:
- Street Address: Specific address of the disaster location.
- Grama Niladhari Division: For precise administrative localization.

- District: The larger administrative region.
- Province: The province of Sri Lanka where the disaster occurred.

Disaster Information:

- Type of Disaster: Select from predefined categories such as flood, landslide, cyclone, etc.
- Date and Time of Incident: When the disaster began.
- Impact Description: Provide details about the situation (e.g., "Our house is flooded, and we are stranded.").
- Number of Affected Individuals: Total number of people impacted (e.g., 5 family members).
- Urgency Level: Select from low, medium, or critical to indicate the need for immediate attention.

2. Viewing Disaster Requests (Admin)

Admin users will have access to a list of all disaster reports submitted by citizens. The following information will be displayed in a tabular format for easy review:

- Request ID: A unique identifier for each disaster report.
- Reporter Name: The name of the individual who submitted the report.
- Contact Information: Phone number and/or email of the reporter.
- Location Details:
    - Street address, Grama Niladhari Division, district, and province.
- Disaster Information:
    - Type of disaster, date and time of the incident, and urgency level.
- Impact Summary: A brief description of the disaster’s impact.
- Number of Affected Individuals: The total number of people impacted.
- Status: Current status of the report (e.g., pending, reviewed, in progress, resolved).

3. Admin users can:

- Filter requests by province, district, disaster type, or urgency level.
- Update the status of a report as it progresses through the relief process.

4. Dashboard Summaries

The dashboard will provide an at-a-glance overview of disaster reports. Admin users can view summary statistics and visualizations, such as:

Disaster Overview:

- Total number of reported disasters.
- Number of reports by status (e.g., pending, in progress, resolved).
- Breakdown by disaster type (e.g., floods: 40%, landslides: 30%, cyclones: 20%).

Additional Feathers

Geographical Summaries:

- Reports grouped by province or district, shown on a heat map for better visualization.
- Number of incidents reported in each region.