HIGHER EDUCATION PROGRAMMES

Academic Year 2024:   July - December

Summative Assessment 1:   Systems Development 2 (HSYD201-1)

NQF Level, Credits: 6, 40

Weighting: 25%

Assessment Type: Project

Educator: Odwa Dyantyi

Examiner: Odwa Dyantyi

Due Date: 25 November 2024

Total: 100 marks

Instructions

- Use Java **NetBeans IDE** and **MySQL Workbench** to complete this project

- You should zip your Java NetBeans project folder and submit it as a zip folder

- Use **MySQL Workbench** to create the project's database and a table.

- Export your database and table when completed.

- You should zip your exported dump (database & table) folder and submit it as a zip folder.

The following Learning Outcomes are assessed.

- Become familiar with working with the code editor, controls, and Windows form.
- Become familiar with working with the MySQL DBMS.
- Understand how to use MySQL.
- Become familiar with working with DBMS Instances and connecting the DBMS
- Instance to the NetBeans IDE.
- Determine how to use NetBeans IDE with the DBMS Instance.
- Examine the different ways to connect to the DBMS and retrieve data.
- Become familiar with connecting to the DBMS through a GUI and MySQL. Workbench.
- Determine how to use the CRUD cycle.
- Become familiar with working with the Multiple Document Interface.
- Determine how to use the Application Security.
- Use the Object class and its methods
- Employ information hiding
- Use the Path and Files classes
- Use Java's IO classes to write to and read from a file
- Write records to a random access data file
- Become familiar with working with Errors and common exceptions.
- Use the Collection interface
- Use the List interface
- Use JFrame and JLabel classes and use a layout manager
- Use Swing event listeners

Question **[100 marks]**

Overview:

The Event Management System (EMS) is a Java GUI application created to simplify the organisation and management of events. It offers features for planning events, registering attendees, managing venues, and coordinating vendors. The system is linked to a MySQL database for storing event-related data.

Requirements:

Interface for Event planning:

- The interface must be able to create, edit, and delete events.
- There must be fields for event name, date, time, description, and organiser details.
- There must be validation to ensure the uniqueness of event names and proper date and time formatting.

Interface for attendee registration:

- Registration form for attendees to sign up for events.
- Fields for attendee name, email, contact number, and event selection.
- Validation to prevent duplicate registrations and ensure valid email and phone number formats.

Interface for Venue management:

- Functionality to add, edit, and delete venues.
- Fields for venue name, address, capacity, and availability.

Database:

- There must be integration with MySQL database to store event details, attendee information, and venue bookings.

Functionality-CRUD

- Interface for Event planning: The project must be able to Create, Read, Update, and Delete events.

- Interface for attendee registration: The project must be able to view registered attendees, update attendee information, and remove attendees.

Criteria	Task	Marks
Database Integration	Proper setup and configuration of MySQL database. (20 marks) Effective utilisation of SQL queries for data retrieval, insertion, updating, and deletion. (25 marks)	45 marks
Functionality	Completeness and correctness of event planning, attendee registration, and venue management functionalities. (20 marks) Implementation of CRUD operations for event schedules and attendee lists. (10 marks) Error handling and validation mechanisms to ensure data integrity. (5 marks)	35 marks
User Interface	Intuitive design and layout of GUI interfaces. (3 marks) Consistency in styling and navigation across different screens. (3 marks) Use of appropriate controls and components for data input and presentation. (4 marks)	10 marks
Documentation	Clear and comprehensive documentation covering the project overview explains how the project works. (10 marks) PLEASE DOCUMENT WHAT IS WORKING	10 marks