Guidelines for Mid Term Project

Document contains three project ideas. Each student is required to select one of the three project as the mid term project. Project contains series of deliverables. Task of students is to analyze the given case study in the perspective of Object Oriented thinking. Following are the major milestones to be completed.

Milestone	Deadline
Selection of Project	March 30, 2021 Use the following link to select your project https://forms.gle/CJyz2WMQeyFsPPsu7
Detailed requirement document	April 2, 2021
GUI Prototype	April 4, 20201
Object Oriented Analysis and Design	April 9, 2021
Implementation of Design	April 16, 2021
Project Documentation	April 18, 2021

- Basic requirement are being shared, you are required to add more features on your own and write detailed requirements to remove any ambiguity. Detailed requirement should mention the UI design using pencil tool.
- In all of these projects, basic requirement to save data in txt/csv files. For bonus credit, students can save data in word, excel or pdf format
- Tools to be used for project
  - Github
  - StarUML
  - MS Word
  - NetBeans
  - Pencil Tool

Project # 1: Procurement Management System

An enterprise of professionals has the department of procurement which serves company employees with different accessories including laptop, pen, note book, sticky notes and everything which an employee needs to fulfill his job. All the record of accessories to be provided to the employees is managed by a single person (we can refer him as accessories manager) whose responsibilities are as follow:

- Maintain the record of employees who come to him for issuance of different things. He does not need any extra biodata of employees except their name, email and cell number.
- When accessories manager receives accessories, he has to update the count of each accessory under different categories for which he has dedicated different manual registers against each category.
- When an employee comes for issuance of accessories to accessories manager, he again updates for all the things for which employees has demanded. For example, an employee took one pen, one notebook and a staple, Accessories manager will keep record of each thing issued against that employee.
- When accessories manager issues any thing to an employee, he writes a receipt and take signatures of employee on that receipt.

In the modern era of computers where every thing is digitized, We need to reduce the manual efforts of accessories manager by providing an application which will provide user interface to perform all the above tasks.

You are required to develop an application which should include UI for above mentioned application. Good UI and better software design is a plus and will ultimately help you to get bonus credit.

Project # 2: Rubrics Based Evaluation

Each student is being evaluated against rubrics in each assessment. For example, Lab1 has three components/Questions with 10 total marks and these questions are mapped with the rubrics as follow:

Component	Rubric	Component Marks
Question 1	Design	3
Question 2	Execution	4
Question 3	Testing	3

Now the student X is evaluated against assessment and student will be assigned with the rubric level. Based on the rubric level, obtained marks will be automatically calculated according to following formula.

$$ObtainedMarks = \frac{ObtainedRubricLevel}{MaxRubricLevel} \times Component\ Marks$$

Component	Rubric	Component Marks	Student Rubric Level	Obtained Marks (Automatically calculated)
Question 1	Design	3	2	1.5
Question 2	Execution	4	3	3
Question 3	Testing	2	3	1.5

Currently, the above process is being managed manually.

You are supposed to streamline the above process and develop desktop application that will be operated by the teacher to manage data at one place. Following features will be implemented in the application.

- Manage Students
- Manage CLOs
- Manage Rubrics
- Manage Assessments
- Manage Rubric Levels
- Mark the evaluations against a student

And any other feature that can be helpful for the management of evaluations.

Instructor also requires multiple reports that may include.

- CLO wise class result
- Assessment wise class result

And any other reports that you can help the committee to streamline the process.

Project # 3: Project Management System

Department of Computer Science UET Lahore holds committee for management of final year project. Each year, list of project titles is opened for the students by the committee after the compilation of ideas from the faculty members. Students are privileged to form the group and select any of the ideas from the list after approval from the faculty advisor. Once the project is selected by a group of students, an advisory board is assigned to the project which consists of main advisor, co-advisor, and industry advisor. Throughout the year, multiple evaluations are taken against the project. Currently, this process is managed through spread sheets.

Project Features

You are supposed to streamline the above process and develop desktop application that will be operated by the member of project committee to manage data at one place. Following features will be implemented in the application

- FYP management committee can add/delete advisor. Advisor domain and details can be updated as per requirement.
- Every year new project to be added for students. Committee Member can add/delete/update project title, project type (research/hybrid/entrepreneurship) and its description.
- FYP management committee can add/delete and manage students
- Registered students can add group member's details (Student ID, Session) for group creation. After group formation, list of project display to students for project selection with description and advisor name. Student can select the respective project as their final year project.
- After selection of project from students, Committee will assign project to the group and remove it from list of projects that will next appear for project selection
- After project selection from list of projects, committee will assign an advisory board for each project that consist of advisor name, co-advisor and industrial advisor.
- Throughout the year, the committee can add multiple evaluations (Evaluation Title, Marks, Rubrics and Deadline) to evaluate the progress of all Projects for final year project and keep record of these evaluation.
- For each evaluation of multiple groups added by committee, advisory board will evaluate the project and mark it.
- And any other feature that can be helpful for the management of final year projects after discussion with the committee.

Reporting

Final year project committee also requires multiple reports in pdf form that may include.

 List of Project

  List of Project include Group ID, Project Title, Advisor Name

 List of Students

  List of Students include Group ID, Student ID, Student Email

 Group Evaluation

  Marks sheet that shows marks for each evaluation

  Marks sheet that shows total evaluation marks

And any other reports that you can help the committee to streamline the process