

Sample Program Flow

This document is just to give you a general idea of the application flow. Please make sure you refer to the description and handle all the requirements/constraints mentioned therein.

Since there is no overlap between instructor, TAs and students the application will provide a single login screen and redirect the user to the appropriate home page. There are two different types of home pages depending on the type of user:

- 1)Instructor
- 2) TA
- 3)Student

Please make sure you verify the login credentials before logging in.

Instructor

The account for Instructors shall be created using SQL Scripts and not from the application. When logged in as an Instructor, the homepage displays the following options:

- **View Profile:** The logged in Instructor will be able to view his profile and all the courses he has created.
- **View/Add Courses:** This will have a submenu giving two options:
 - 1)Search: Instructor can view details of an existing course by entering the Course Id. The instructor should also be able to view all courses he has added and exercises associated with each course.
 - 2)Add: Instructor will be able to add a new course using this option. Details like course id, course name, start and end dates, the instructor name, one or more teaching assistants (TAs), the students enrolled in the course (can be added by TA or instructor), and a list of topics should be provided. The instructor can also add TAs and exercises after creating the course.
- **Enroll/Drop A Student:** Instructor will enter the required information for enrolling a student in a course. The Instructor can also drop a student from a course.
- **View Report:** Instructor can view report (a table of all students) about all the students enrolled in a course and their details(Student Id, First Name, Last name, grades for each exercise created). He should not be able to view the student's password.
- **Setup TA:** Instructor will enter the required information for setting up a TA for a course while or after creating the course.
- **View/Add Exercises:** This will a submenu giving two options:
 - 1)Search: Instructor can search for and view details of an exercise for a particular course by entering the Exercise ID
 - 2)Add: instructor will be able to add a new exercise to a course using this option. The instructor will have to provide details like id, name, total number of questions in the exercise, the number of retries allowed (e.g. 1, 2, 3, unlimited), start date/time, end date/time, number of points per correct answer and penalty points per incorrect answer, and the scoring policy. The rules guiding exercise creation as stated in the project description should be followed e.g. exercise should not available to students before or after the start and end dates respectively etc.

- **Search/Add questions to Question Bank:** This will be a submenu giving two options:
 1)Search:Instructor can search and filter the question bank by question id or topic
 2)Add: Instructors can add questions to a question bank. When adding a question, a question id, the actual question text, a topic, a difficulty level (ranging from 1,2,3,4,5,6) and optionally a hint.
- **Add/Remove Questions from Exercises:** For every exercise created, the instructor can modify the exercise, i.e. add or remove questions (i.e. for standard exercises)

TA

Please read the information provided as part of the description. Following are the details of the application menu for a TA's homepage.

- **View Profile:** The logged in TA will be able to view his profile and the course assigned to him (i.e. the course for which he is TA) and the exercises contained in the course.
- **Enroll/Drop A Student:** A TA will enter the required information for enrolling a student in a course. The TA can also drop a student from a course.
- **View Report:** TA can view report (a table of all students) about all the students enrolled in a course and their details(Student Id, First Name, Last name, grades for each exercise created). He should not be able to view the student's password.

Student

Please read the information provided as part of the description. Following are the details of the application menu for a student's homepage.

1. Profile: Lists their name and student id
2. Courses: list of courses enrolled for. Further, for each course following options should be displayed:
 - a. Current HWs - lists current open homeworks that can be attempted, and the option to attempt them
 - b. Past HWs - lists all the past HWs for this course. For each past course, the student should be able to see all the details like -
 - i. Start date
 - ii. End date
 - iii. Type of HW - standard or adaptive?
 - iv. Total points for the HW
 - v. Scoring methodology for the HW
 - vi. Points scored by the student for the HW according to the scoring methodology
 - vii. #available attempts
 - viii. #attempts by the student
 - ix. Detailed report for each attempt
 1. All the questions in that attempt
 2. Answers selected by the student for each attempt
 3. Solution for each question

4. Whether the selected answer was correct or not
5. Points scored for each question
6. Total points for that attempt

Start Menu

Display	Input	Output
1. Login 2. Exit		

Login Page

Display	Input	Output
1. Username : ##### 2. Password : #####	UID and password	Recognize if user is an Instructor, TA, or Student. Print "Login Incorrect" and go back to previous menu.

Logged in as Instructor

Display	Input	Output
1. View Profile 2. View/Add Courses 3. Enroll/Drop A Student 4. Search/Add questions to Question Bank 5. Logout	Enter choice	Display the options for the entered choice

Instructor/TA: Profile

Display	Input	Output
Press 0 to Go Back 1. First Name : ##### 2. Last Name : ##### 3. Employee Id : #####	User can enter 0 to go back to the previous menu options.	The user will be able to view his profile.

Instructor/TA: View/Add Course : View Course

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Instructor/TA: View Student's Details

Display	Input	Output
Please Enter Student Id: ##### 1. First Name : ##### 2. Last Name : ##### 3. Scores for each exercise : ##### : ##### Press 0 To Go Back To Previous Menu	The user will be prompted for entering student id and if valid show display the student's details.	In case the the id is correct, then the details for that student will be displayed. User now can press 0 to go back to the previous menu. If incorrect id then user will be prompted to reenter student id.

Instructor/TA: View/Add Exercise: View Exercise

Display	Input	Output
Display all exercises for a course Please Enter Exercise Id: ##### 1.Add to/Remove Questions from Exercises Press 0 To Go Back To Previous Menu	The user will be prompted for entering exercise id and if valid show display the exercise details.	In case the the id is correct, then the details for that exercise will be displayed. User now can press 0 to go back to the previous menu. If incorrect id then user will be prompted to reenter exercise id.

Instructor/TA: View/Add Exercise: Add Exercise

Display	Input	Output
Select Appropriate Menu Option: 0. Go Back To Previous Menu 1. Select Exercise Type	Menu Option	Redirects user to appropriate application menu screen.

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Instructor: View/Add Question Bank: View Question Bank

Display	Input	Output
Display all Questions in the bank 1. Search by Question Id : ##### Or Topic 2. Add Questions to Bank 3. Press 0 To Go Back To Previous Menu	Menu Option	Redirects user to appropriate application menu screen.

Instructor: View/Add Question Bank: Add Question

Display	Input	Output
1. Enter Question id 2. Enter Question type (fixed or parameterized) 3. Enter question text 4. Enter a topic the question falls under 5. Enter difficulty level 6. Enter other details of the Question as stated in project description	Menu Option	Redirects user to appropriate application menu screen.

TA: Logged in as TA

Display	Input	Output
1. View Profile 2. View/Add Courses 3. Enroll/Drop A Student 4. Logout	Enter choice	Display the options for the entered choice

Student: Logged in as Student

Display	Input	Output
1. View/Edit Profile 2. View Courses 3. Log Out	Enter choice	Display the options for the entered choice

Student: View/Edit Profile

Display	Input	Output
Press 0 to Go Back 1. First Name : ##### 2. Last Name : ##### 3. Student ID : #####	User can enter 0 to go back to the previous menu options.	The user will be able to view his profile.

Student: View My Courses/Select Course

Display	Input	Output
Displays the list of my current courses 1. Course 1 2. Course 2 3. . 4. . Please Provide CourseID: Press 0 To Go Back To Previous Menu	Takes the option number and displays the details of the selected course Provide course ID to select or view a course	Displays the course details for the selected course

Student: View Selected Course

Display	Input	Output
1. Current Open HWs 2. Past HWs	Enter choice	Displays the list of past or current open HWs

		depending on the choice
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Student: View Current Open HWs

Display	Input	Output
1. HW id# 2. . 3. .	Enter choice	Displays the HW details, and option to attempt them as applicable

Student: View Past HWs

Display	Input	Output
1. HW id# 2. . 3. .	Enter choice	Displays the HW details and reports as described earlier

