

**KING SAUD UNIVERSITY**  
**COLLEGE OF COMPUTER AND INFORMATION SCIENCES**  
**INFORMATION TECHNOLOGY DEPARTMENT**

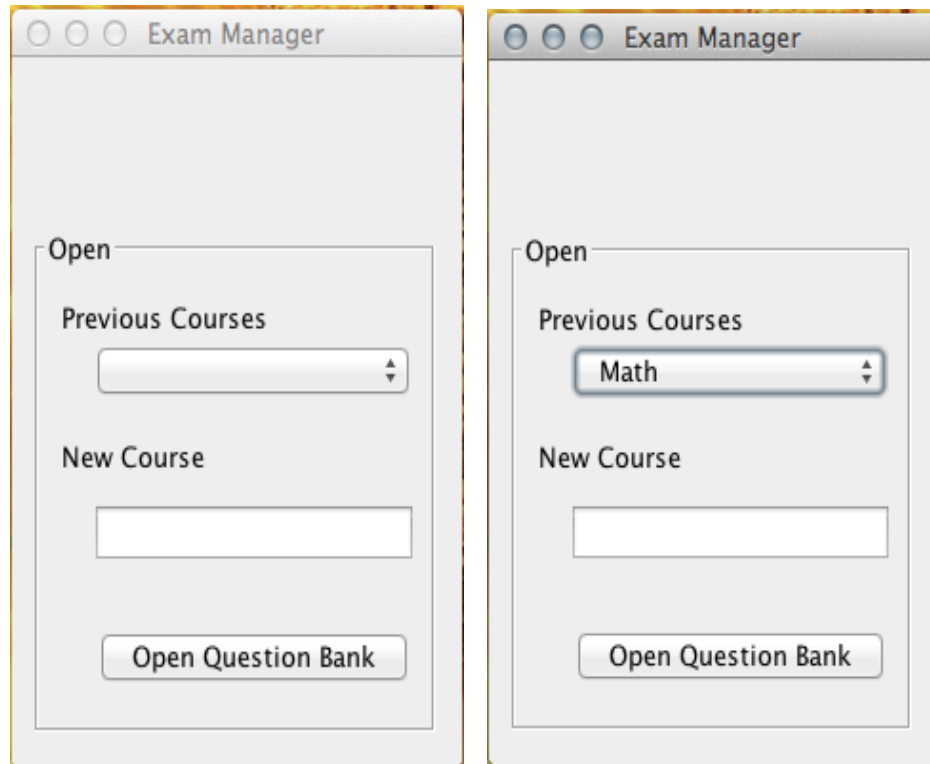
**CSC 113: Java Programming 2**

**Project  
Phase-2**

**Spring 2019**

**In this phase we would like to help the user to manage his/her exam by designing an interface for the previously implemented exam manager system in phase one.**

1. Create two frames, a Home frame and Question Bank Viewer frame for managing a single Question Bank
2. When the program initially starts, only the Home frame appears to the user.
3. The **Home frame** contains two components:
  - The first one allows the user to select from a drop-down menu a single course (stored previously) by its name to open and manage. If there is no files then the drop-down menu should be empty
  - The second allows the user to enter course name to open new question bank.



4. When the button “**Open Question Bank**” is clicked, a new Question Bank Viewer frame (for the selected course from the drop-down menu or for the entered text) is displayed.

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The screenshot shows a window titled "Math Question Bank". It contains two main panels. The left panel, "Add a New Question", has fields for "Question Text", "Question ID", and "Possible Grades". Below these are radio buttons for "Choose the type of the Question:" with options "MCQ", "True/False", and "Fill Blank". There is also a "Correct Answer" field. An "Add Question" button is at the bottom. The right panel, "Generate Exam", has fields for "Exam Header", "Number of Questions", and "Chapter Name". It includes a checkbox for "With Answers" and a "Generet Exam" button. Below this is a large empty text area. At the bottom right is a "Delete Chapter Questions" section with a "Chapter Name" field and a "Remove" button.

5. The new Question Bank Viewer frame contains three panels:

- A panel for adding a new question to the bank.
  - i. This panel contains text fields for all the Question's information.
  - ii. The user should be allowed to select only one radio button for the Question type (MCQ, True/False , Fill Blank).
  - iii. If "MCQ" radio button is selected; "Answers for MCQ" text fields should appear as shown below.

This screenshot shows the "Add a New Question" panel with the "MCQ" radio button selected. The "Question Text" field contains "1+1=", "Question ID" contains "ch01\_1", and "Possible Grades" contains "1.0". The "Correct Answer" field contains "1". Below the "Correct Answer" field is a section titled "Answers for MCQ" with four numbered text input fields (1, 2, 3, 4). An "Add Question" button is located at the bottom right of the panel.

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- A panel for generating an exam.
  - i. This panel contains text fields for all the Exam's information.
  - ii. A check box to determine if the exam should contains answers.
  - iii. An uneditable text area for displaying the generated exam.
- A panel for removing a chapter questions
  - i. This panel contains a text field for the chapter name.

6. When one of “**Add Question**”, “**Generate Exam**”, “**Remove**” buttons is clicked, one operation from the exam manager should be executed, after that
  - The content of the text fields should be erased.
  - Use message boxes to give feedback on the performed operation.
7. Your program should use an object files to permanently store the information of all the user's question banks.
  - As said, when your program initially starts, a list of all file names should be displayed in the drop down menu.

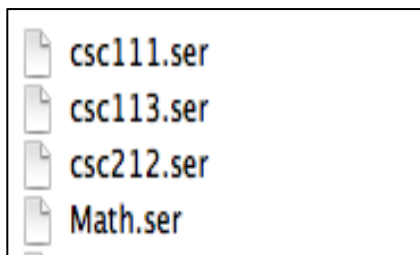
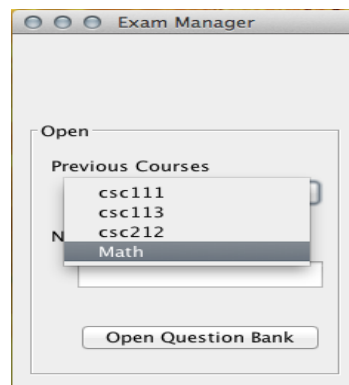


Figure 1:List of file in your directory



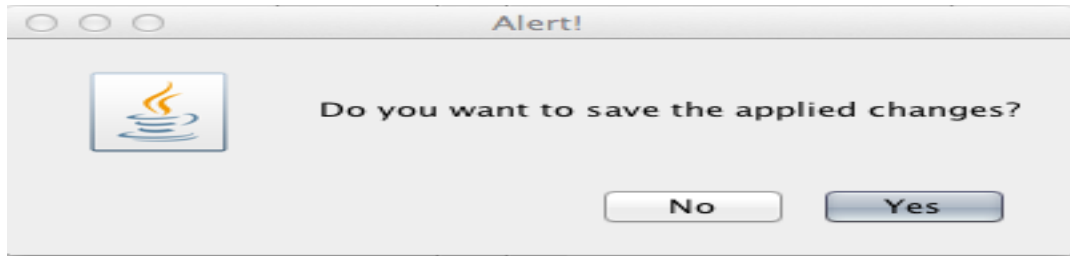
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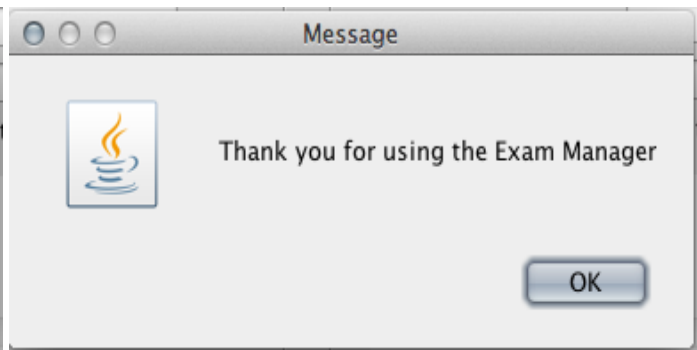
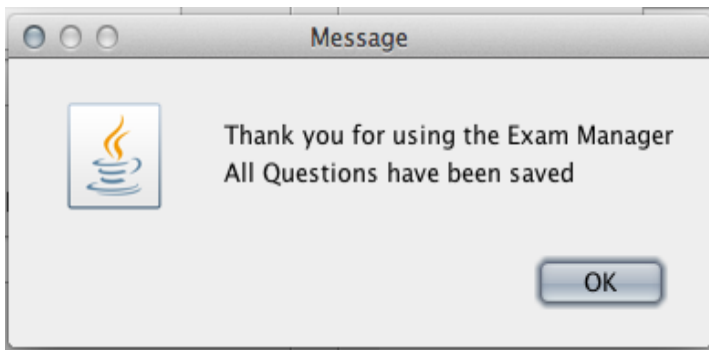
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- Upon user's preference, all performed updates in the current session should be reflected on the file when closing the program as explained in the next point
8. When the "Exam Viewer" is closed, a confirmation message appears to the user asking to save the applied changes to the file or not:



If the user chooses yes, the updates on Question Bank are saved, and a message box containing feedback on the save operation is shown to the user

- If the user chooses no, a thank you message box is displayed, and the system terminates without saving any changes.



9. Your program should validate any user input before performing any operation to avoid unexpected behavior.

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CSC113 Questin Bank

Add a New Question

Question Text

Question ID

Possible Grades

Choose the type of the Question:

☐ MCQ ☐ True/False ☒ Fill Blank

Correct Answer

Add Question

Generate Exam

Exam Header


Generet Exam

Delete Chapter Questions

Chapter Name

Remove

Error

 You must fill all information

OK

CSC113 Questin Bank

Add a New Question

Question Text

Question ID

Possible Grades

Choose the type of the Question:

☐ MCQ ☐ True/False ☒ Fill Blank

Correct Answer

Add Question

Generate Exam

Exam Header


☐ With Answers Generet Exam

Delete Chapter Questions

Chapter Name

Remove

Message

 Addition wasn't succesful !

OK

**Finally:** The GUI should have the same components and functionality as shown above. Use a neat layout. The design is up to you, be creative!