

CSIT242 Autumn Session 2020
Assignment #2
Due: 11:55 pm Friday 5 June 2020
Marks: 20 marks (20%)

The purpose of this assignment is to create an interactive application using different views, multiple activities (scenes), menus/tabs, animations, and databases.

For the purpose of this assignment, one application should be developed – by the student’s choice – for the Android or iOS platform.

Aims

In this assignment, you will create an application “**Quiz for Fun**”. The application should offer the user to test the knowledge in three areas: “Math”, “Geography”, and “Literature”.

In the beginning, the user should be offered the option to register (with e-mail, username, and password) or, if already registered, to login using the username and password.

The user can choose a quiz from 3 areas: “Math”, “Geography”, and “Literature”; see earned points from previous attempts; Change/Modify password; or Log-off. The application should provide simple instructions/quiz rules for the user in the form of a separate layout/scene and display it as an option in the app main menu.

After user select and finish the chosen area quiz attempt, the quiz result with the number of correct and incorrect questions, gathered points from the current attempt ($[\text{number of correct questions}] * 5 - [\text{number of incorrect questions}] * 2$), as well as user’s overall points (from all attempts), should be displayed. For example:

*Well done username, you have finished the “Math” quiz with 3 correct and 2 incorrect answers or 11 points for this attempt.
Overall you have 60 points.*

At this point, the user can choose to attempt a new quiz from the same area, to attempt a quiz from another area, or to choose any other option from the menu.

When the user chooses Log-off option, on the screen should be presented message with overall points, for example:

“Username, you have overall 120 points.”

and the log in/register screen of the app should be displayed.

For the option of displaying all previous user’s attempts and earned points, for example, the information can be presented in the following format:

Hi username, you have earned 56 points in the following attempts

“Math” area - attempt started on 01-12-2019 09:15 – points earned 20

“Literature” area - attempt started on 10-01-2020 20:00 – points earned 10

“Math” area - attempt started on 15-02-2020 14:10 – points earned 15

Additionally, the user should be presented an option to order the previous attempts and earned points by date or by quiz area.

Note:

For every quiz area should be at least 15 questions (stored in the database), of which 5, by random choice, should be displayed to a user in every quiz attempt.

For the “Math” area, the questions should be addition, subtraction, multiplication, or division of 2 numbers, and the user should insert/enter the answer in a text field. If the user’s input is invalid (includes letters or special symbols), the notification should be displayed and the user should be directed to re-enter the answer. If the field is left empty it should be assumed that the user does not know the answer, so that question should be counted as incorrect.

For the “Geography”, and “Literature”, the questions should be in multiple-choice format with 1 correct answer out of 4 options.

*Since the app will use a local database, you need to take into account that when the app is installed on a device you will need to load the questions into the database (when the app is used for the first time). The questions can be defined in an array, or another option is to use the file with questions and load the questions from the file. You need to state in your report the storing/loading option you use for the questions.

The user can navigate thru quizzes from different areas and can have unlimited attempts.

Your application must support all popular Android or iOS devices and screen sizes. You should record which one you have tested on in your report.

Requirements

1. Design Requirements

- The application should have an icon and logo.
- The application should offer Menu/Options for: quizzes from different areas, earned points from previous attempts, password change, simple instructions/quiz rules, and Log-off option.
- The user should easily navigate through the application’s layouts (scenes). Every layout (scene) should have a caption.
- Animations should be embedded in the app’s layouts/screens.
- If there is a need, the application may display additional Toasts, Snackbars, or Alerts.
- Every Quiz attempt should have 5 questions.

2. Functionalities

- The user should be able to Register (with e-mail, username, and password) or to Login (if previously registered) with username and password.
- The user should be able to choose quizzes from different areas.

- The user can have unlimited quiz attempts.
- The user should see the result of the current attempt and its overall points after finishing the attempt.
- The user should have the option to see overall points and all its previous attempts and earned points. The list of previous attempts should include the option to be sorted by date (from the most recent one) or by area.
- The user should have an option to preview the app instructions/quiz rules.
- The user should have an option to Log-off the application.

3. Testing and Deployment

- The application should be tested using the emulators within the Android studio, Xcode, or by physical devices.

4. Other Expectations

- Use appropriate view controls/objects to design the application.
- Apply ‘delightful’ UI for the public to use.

Submission

1. Prepare a report that has a header

 My name:
 My student number:
 My email address:
 Assignment number:

 any requirements, remarks, or readme for your applications. You need to state in your report the storing/loading option you use for the quiz questions. The report also should include test results with screen captures of (virtual) devices of the application (during run-time).

2. Submit a ZIP file containing the project folder (Android or iOS) and your report (in .pdf) over the Moodle submission link.
3. You are not required to submit a hardcopy of the report, nor copy out all the source code. Make sure your project folders are complete and ready to be open by any other Android Studio IDE and Xcode for code assessment.

NOTES:

1. Submit your assignment before the due date. Penalties apply to all late work, except if student academic consideration has been granted. Late submissions will attract a penalty of 20% of the assessment mark. This amount is per day including weekends. Work more than 5 days late will be awarded a mark of zero.
2. Submission via email is not acceptable.

3. Assignments without reports will not be marked.
4. Enquiries about the marks can only be made within a maximum of 1 week after the assignment results are published.
5. By submitting this assignment you declare that this assignment is **Your own work and you did not collaborate with or copy from others.**

Assessment Criteria		Total Marks	Given Marks	
1.	Project structure (folders, layouts/scenes, class files)	1		
2.	UI interface	7		
3.	Functionality	12		
Total per application		20		
Total				