

Supplementary Assessment

IT2010 – Mobile Application Development

Assessment

This assessment is designed to evaluate your skills in mobile application development using Kotlin and Android Studio. It will focus on various aspects of mobile app development, including UI design, Activity and Fragment implementation, and database integration using Room. You will be required to complete specific tasks and provide a report containing screenshots and code snippets to showcase your proficiency.

Tools and Technologies:

- Android Studio
- Kotlin programming language

Assessment Tasks:

Task 1: UI Design (20 points) Create a visually appealing user interface (UI) for a mobile app. The UI should include at least three different UI components (e.g., buttons, text fields, images) and demonstrate your ability to design an intuitive and user-friendly interface.

Task 2: Activity Implementation (20 points) Create a new Android Activity that serves a specific purpose within your app. It could be a login/signup activity, a settings activity, or any other relevant functionality. Ensure that the activity is functional and navigable.

Task 3: Fragment Implementation (20 points) Implement at least one Fragment within your app. The Fragment should be integrated into the Activity from Task 2 and demonstrate your understanding of Fragment lifecycle and interaction with the Activity.

Task 4: Database Integration (using Room) (20 points) Integrate Room Persistence Library into your app to manage a simple database. Create a database schema with at least one table and implement basic CRUD (Create, Read, Update, Delete) operations for the data. Demonstrate your understanding of Room annotations, DAO (Data Access Object), and Live Data.

Task 5: Report (20 points) Prepare a report documenting your work on Tasks 1 to 4. Include the following components:

- **Introduction:** Briefly describe the purpose of your mobile app.
- **Screenshots:** Provide screenshots of your app's UI, Activity, and Fragments
- **Code Snippets:** Include relevant code snippets for UI design, Activity, Fragment, and Room database integration.
- **Discussion:** Reflect on the challenges you faced and the solutions you implemented during the development process.
- **Conclusion:** Summarize your experience and the key takeaways from this assessment.

Assessment Guidelines:

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- You have one week to complete the assessment and submit the report.
- Use version control (e.g., Git) to track your code changes.
- Ensure that your code is well-commented and follows best practices in Kotlin and Android development.
- Use appropriate naming conventions for variables, functions, and classes.
- Test your app thoroughly to ensure it functions as expected.
- Submit your report to the courseweb.

Scoring: Your assessment will be scored based on the quality of your UI design, functionality of your Activity and Fragment, correct implementation of Room database integration, and the completeness of your report.

Please note that this mark will be added to your CA marks to get a maximum mark of 45. For prorata students the mark will be based on the weight of Lab Exam 1 and Lab exam 2

Total Points: 100