

Assignment 2

Develop a media recording app

Total: 5 marks

Due date: 5pm 16th September 2024

Submission requirements:

1. Submit all project files as one zipped file.
2. A one-page document explaining the cloud synchronisation strategies.
3. Record a demo of your project and upload on Canvas. You will demonstrate your app to your tutor during the tutorial time.

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Camera and Location are two of the most commonly used sensors on Android devices. In this assignment, you are required to develop an app that allows users to capture photos and videos, which are then automatically uploaded to Google's Firebase cloud server for backup. Your app should include the following features:

1. Media Capture [1 mark]

Your app must utilize the built-in camera to capture photos and videos. Once captured, the media files should be stored locally on the device.

2. Location Tagging [0.5 mark]

The app must record the device's location at the time each photo or video is taken. This location data should be associated with the corresponding media file.

3. Automated Cloud Backup [2.5 marks]

- Your app should automatically back up photos and videos to Google's Firebase cloud server without requiring user interaction. [1.5 mark]
- Considerations: The design should take into account device bandwidth and energy consumption. A **one-page document** should be submitted that explains (i) the strategies developed for both automated and user-driven synchronization, and (ii) how bandwidth and energy efficiency are achieved. [1 mark]

4. Cloud Organization [0.25 mark]

Photos and videos uploaded to the Firebase server should be organized by city.

5. Demonstration

- Demonstrate that the app can be built and run successfully on an emulator. This version of the should be submitted to Canvas. [0.5 marks]
- Ensure the code complies with the official [Android Java code style guidelines](#). This includes proper indentation, a maximum of 100 characters per line, no trailing whitespaces, and no unused imports. [0.25 mark]

Note

Marks for the successful implementation of each feature will consider how well you demonstrate the feature and answer questions from the assessor about your development process.

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