School of Computing and Augmented Intelligence (SCAI)
CSE 535 Mobile Computing
Teaching Assistant: Aranyak Maity
Instructor: Ayan Banerjee

ASSIGNMENT 1

Android application to click a picture and upload to a local Server.

Project Group 20

- Purna Venkatesh Peddireddy (1223526954)
- Vijay Maddineni (1222982943)
- Prasidh Aggarwal (1225362125)
- Mohit Suresh Ahuja (1225915823)
- Phanindra Pabba (1226585219)

Date: September 26, 2022

Project Overview

This project consists of 2 major parts. Application and Server.

- Application part is developed using Android Studio and Java. It comprises all the major work being done in the application starting from the application startup, all the way to clicking the images, and to upload them to a specific category from the drop-down list.
- Server is developed using vsCode and nodeJs. It holds the local directories and the individual folders where the clicked pictures are uploaded.

Environment Setup

The environment involved the use of two IDE's:

- Android Studio (for Java)
- VsCode (for nodeJs)
- Installed nodeJs on Bash.
- Gradle was used for easily packaging the dependencies in Android Studio.

Tasks

Major tasks Included:

- Creating a Main activity class that serves as our base application.
- Creating a Capture activity class that controls all the image related operations. For instance, image preview, image capture, and image uploading.
- Creating a method called onCreate which creates the activity for the first time and allows us to set the content view and define an intent for the image capture. It will initialize the buttons on application startup.
- Creating a method onActivityResult that retrieves the clicked image from the android device, creates a file-name for it using system time (to avoid name duplication), and outputs the file stream.
- Creating a method called selectCategory which allows the user to select a category from the drop-down array defined in the strings.xml under values directory.
- Creating a method called uploadToServer which connects the android application to the local nodeJs server using an Async Http Client.

- At the server side, once the resource üploadFileïs called, it adds the captured image under the directory with the same name as that of the category, and sends a success response back to the android application.
- This success/error message is relayed back to the application where, depending upon success/failure, a toast notification is displayed with a success/error message.

Lessons Learnt

- Understood the basic working of activities and contexts in Android studio.
- Learnt how to integrate an application with a local server using NodeJs.
- Worked in a team and built the application from scratch using a SCRUM model to distribute tasks equally.

Application Working