

**20MCA243**

# **Mobile Application Development Lab**

*Lab Report Submitted By*

**JAIMOL JOY**

**AJC22MCA-2076**

*In Partial Fulfilment for the Award of the Degree of*

**MASTER OF COMPUTER APPLICATIONS**

**(MCA TWO YEAR)**

[Accredited by NBA]

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**



**AMAL JYOTHI COLLEGE OF ENGINEERING**

**KANJIRAPPALLY**

[Affiliated to APJ Abdul Kalam Technological University, Kerala. Approved by AICTE,  
Accredited by NAAC. Koovappally, Kanjirappally, Kottayam, Kerala – 686518]

**2022-2024**

**DEPARTMENT OF COMPUTER APPLICATIONS**

**AMAL JYOTHI COLLEGE OF ENGINEERING**

**KANJIRAPPALLY**



**CERTIFICATE**

This is to certify that the lab report, “**20MCA243 – Mobile Application Development Lab**” is the bonafide work of **JAIMOL JOY(AJC22MCA-2051)** in partial fulfilment of the requirements for the award of the Degree of Master of Computer Applications under APJ Abdul Kalam Technological University during the year **2023-24**.

Ms. Lisha Varghese

**Lab In- Charge**

Rev. Fr. Dr. Rubin Thottupurathu Jose

**Head of the Department**

**Internal Examiner**

**External Examiner**

| Course Code | Course Name                        | Syllabus Year | L-T-P-C |
|-------------|------------------------------------|---------------|---------|
| 20MCA243    | Mobile Application Development Lab | 2020          | 0-1-3-2 |

### VISION

To promote an academic and research environment conducive for innovation centric technical education.

### MISSION

- MS1 - Provide foundations and advanced technical education in both theoretical and applied Computer Applications in-line with Industry demands.
- MS2 - Create highly skilled computer professionals capable of designing and innovating real life solutions.
- MS3 - Sustain an academic environment conducive to research and teaching focused to generate up-skilled professionals with ethical values.
- MS4 - Promote entrepreneurial initiatives and innovations capable of bridging and contributing with sustainable, socially relevant technology solutions.

### COURSE OUTCOME

| CO  | Outcome  | Target |
|-----|--|--------|
| CO1 | Design and develop user interfaces for mobile apps using basic building blocks, UI components and application structure using Emulator | 60.1   |
| CO2 | Write simple programs and develop small applications using the concepts of UI design, layouts and preferences                          | 60.1   |
| CO3 | Develop applications with multiple activities using intents, array adapter, exceptions and options menu.                               | 60.1   |
| CO4 | Implement activities with dialogs, spinner, fragments and navigation drawer by applying themes   | 60.1   |
| CO5 | Develop mobile applications using SQLite.  | 60.1   |

### COURSE END SURVEY

| CO  | Survey Question   | Answer Format  |
|-----|---|--|
| CO1 | To what extent you are able to design and develop UI using Emulator | Excellent/Very Good/Good<br>Satisfactory/Needs improvement |
| CO2 | To what extent you understood concepts of layouts                   | Excellent/Very Good/Good<br>Satisfactory/Needs improvement |
| CO3 | To what extent you understood intents, exceptions and menus         | Excellent/Very Good/Good<br>Satisfactory/Needs improvement |
| CO4 | To what extent you are able to implement activities applying themes | Excellent/Very Good/Good<br>Satisfactory/Needs improvement |
| CO5 | To what extent you understood to create applications with SQLite    | Excellent/Very Good/Good<br>Satisfactory/Needs improvement |

## CONTENT

| Sl. No. | Experiment   | Date       | CO  | Page No. |
|---------|--|------------|-----|----------|
| 1       | Design a Login Form with username and password using LinearLayout and toast valid credentials.                               | 24-08-2023 | CO1 | 1        |
| 2       | Write a program that demonstrates Activity Lifecycle.  | 07-09-2023 | CO1 | 4        |
| 3       | Implementing basic arithmetic operations of a simple calculator.   | 14-09-2023 | CO1 | 7        |
| 4       | Implement validations on various UI controls.  | 21-09-2023 | CO1 | 15       |
| 5       | Design a registration activity and store registration details in local memory of phone using Intents and Shared Preferences. | 28-09-2023 | CO2 | 18       |
| 6       | Create a Facebook page using RelativeLayout; set properties using .xml file.   | 05-10-2023 | CO2 | 21       |
| 7       | Develop an application that toggles image using FrameLayout.   | 05-10-2023 | CO2 | 26       |
| 8       | Implement Adapters and perform exception handling.   | 12-10-2023 | CO3 | 29       |
| 9       | Implement Intent to navigate between multiple activities.  | 18-10-2023 | CO3 | 31       |

| <b>Sl. No.</b> | <b>Experiment</b>  | <b>Date</b> | <b>CO</b> | <b>Page No.</b> |
|----------------|--|-------------|-----------|-----------------|
| 10             | Develop application that works with explicit intents.                                    | 18-10-2023  | CO3       | 34              |
| 11             | Implement Options Menu to navigate to activities.  | 25-10-2023  | CO3       | 38              |
| 12             | Develop an application that uses ArrayAdapter with ListView.                             | 25-10-2023  | CO3       | 42              |
| 13             | Develop an application that use GridView with images and display Alert box on selection. | 25-10-2023  | C04       | 44              |
| 14             | Develop an application that implements Spinner component and perform event handling.     | 25-10-2023  | C04       | 49              |
| 15             | Develop application using Fragments.   | 09-11-2023  | C04       | 52              |
| 16             | Implement Navigation drawer.   | 09-11-2023  | C04       | 56              |
| 17             | Create database using SQLite and perform INSERT and SELECT.                              | 16-11-2023  | C05       | 58              |
| 18             | Perform UPDATE and DELETE on SQLite database.  | 16-11-2023  | C05       | 66              |

