

# KOLEJ PROFESIONAL MARA BERANANG DIPLOMA IN COMPUTER SCIENCE

**COURSE NAME** : **MOBILE APPLICATION DEVELOPMENT**

# COURSE CODE : CSC2813

**ACADEMIC SESSION** : **1 2024/2025**

# TYPE OF ASSESSMENT : FINAL PROJECT

**DURATION** : **30/04/2024 – 14/06/2024**

**CLO 2:** Build a mobile application for a specific platform or operating system. (C3,PLO6)

# INSTRUCTION TO CANDIDATES:

1. Late submissions after given due date will not be accepted.
2. Report should be written using: Font type: Arial

Size: 11 pts

Line Spacing: 1.5

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| **Class** | DCS 5B |
| **Lecturer** | PUAN FAZLIANI |

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| --- | --- |
| **Section / Question No.** | **Marks** |
| Task 1 |  |
| Task 2 |  |
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| Task 5 |  |
| **Total** | **/ 60** |

# Scenario

A mobile application, commonly referred to as a mobile app, is a software program or application designed to run on mobile devices such as smartphones and tablets. Unlike traditional desktop applications, mobile apps are specifically developed to take advantage of the unique features and capabilities of mobile devices, including touchscreens, GPS, cameras, accelerometers, and more. Mobile apps serve various purposes that can offer a wide range of functionalities, catering to different needs and interests of users. Generally, mobile apps are designed to provide users with convenient access to information, services, tools, and entertainment on their mobile devices such as smartphones and tablets.

As a Mobile App Developer, you are required to develop an Android mobile application for **ONE** of the following:

* 1. **Event Management App.** The app that helps event organizers in managing various aspects of events, including recording attendee arrivals, handling registration processes, uploading event schedules, gathering feedback about the event and more.

OR

* 1. **Lost and Found App**. The app that helps users to report lost items and found items by providing details of the item. The app allows users to view details of the items including contact information, helps the owner in claiming the item and more.

OR

* 1. **College Disciplinary Reporting App**. The app that helps lecturers or staffs to report the students who violate campus disciplinary regulations, such as dress code violations (e.g., long hair, informal attire, and more) by submitting student's details, incident description and others.

OR

* 1. **Facility Issue Reporting App**. The app that helps lecturers or staffs to report facility- related issues such as air conditioning problems, internet issues, classroom space constraints and more. The app allows users to track the status of their reported issues, completion status and others.

OR

* 1. **Intra Scoreboard App**. The app for college sports programs, where committee members can manage results for each sport during the event, update winners and more. The app allows users to manage participants, provide the timeline during the event and others.

OR

* 1. **CampusGo App**. The app for college students that offers transportation services within the campus and provides a convenient delivery services for sending and receiving items. The app should allow users to register, request transportation services within the campus, manage delivery requests and more.

# Task 1

Prepare a project overview documentation that includes:

* + 1. Project Name
    2. Target Audience
    3. Problem Statement
    4. Description of the Project

# Task 2

Develop and design an Android mobile application that include features/components listed below:

1. User Interface
2. Layout
3. Media
4. Sensor
5. Storage
6. Common Intents
7. Use of Block Editor Content

# Task 3

Provide the honors software design custom for android application that includes:

1. Complexity
2. User friendly
3. Functionality
4. Graphics
5. Creativity
6. Information
7. Programming

# Task 4

Attach runtime screen capture throughout the application in a project documentation.

# Task 5

Present and demo your Android mobile application project.

# Your project should fulfill the following criteria:

1. The project should be saved as .apk file and .aab file.
2. Upload and submit the project via MS Teams.
3. The project needs to be published to Gallery with clear description of the application.
4. Provide the link of the completed Android application in your project documentation.

# Assessment Rubrics:

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| **Task** | | **1** | **2** | **3** | **4** | **Marks** |
| 1. | Prepare a project overview documentation that includes: |  |  |  |  |  |
|  | 1. Project Name 2. Target Audience 3. Problem Statement 4. Description of the Project | Provide **TWO (2)** from the list below:   * Project Name * Target Audience * Problem Statement * Description of the Project | Provide **THREE (3)** from the list below:   * Project Name * Target Audience * Problem Statement * Description of the Project | Provide **ALL** from the list below:   * Project Name * Target Audience * Problem Statement * Description of the Project | Provide **ALL** from the list below:   * Project Name * Target Audience * Problem Statement * Description of the project * Content of problem statement and project description are complete and clearly define. |
|  |  | * Contents are less organized and explained. | * Contents are less organized and well explained. |  |  |  |

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| 2. | Develop and design an Android application that include features/components listed below: |  |  |  |  |  |
|  | a. User interface | Include **any ONE (1)** the user interface components below by using button, checkbox, image, label, textbox, etc.   * Input control / Content Area * Navigational components * Informational components | Include **any TWO (2)** the user interface components below by using button, checkbox, image, label, textbox, etc.   * Input control / Content Area * Navigational components * Informational components | Include **ALL** the user interface components below by using button, checkbox, image, label, textbox, etc.   * Input control / Content Area * Navigational components * Informational components | Include **ALL** the user interface components below by using button, checkbox, image, label, textbox, etc.   * Input control / Content Area * Navigational components * Informational components * All the user interface components are well identified its name. |
|  |  | * Interface looks neat but not organized | * Interface look reasonably neat and organized. | * Interface is neat, well organized with good arrangement and alignment. |  |  |

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|  | b. Layout | * Minimal use of layout tools. * The layout arrangement is poorly designed | * Layout features are used with good arrangement of buttons, image, label, and other components. | * Layout features are used with attractive arrangement of buttons, image, label, and other components. |  |  |
| c. Media | * At least **ONE (1)** media such as sound, player, etc. is used in Application. | * Multiple media are used in application but not relevant for the specific audience. | * Multiple media are used in application for a reasonable and practical purposes for the specific audience. |  |  |
|  | d. Sensor | * Attempted to use sensor in application. However, the sensor does not work as designed or does not add functionality to the application. | * Sensors are used during application well coded. | * Sensors are used during application well coded. * Sensors are used during application and data from sensors is modeled and used to control functionality of application. |  |  |

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|  | e. Storage | * Attempted to use storage in application. | * Storage is used during application * All the data are well stored. | * All the date are well stored * Data can be retrieved by displaying the desired output. | * All the date are well stored * Data can be retrieved by displaying the desired output. * Able to modify data by updating and deleting from storage. |  |
|  | f. Intents (common: alarm, map, camera, drawing, web browser) | * Attempted to use **ONE (1)** other explicit intents in application. | * Use **ONE (1)** explicit intent in application * The selected explicit intent well performs the action | * Use **TWO (2)** explicit intents in application * The selected explicit intents well perform the action. * The intents created serve a reasonable and practical purpose for the application. |  |  |
|  | g. Use of block editor content | Include **ONE (1)** of the required components such as:   * Behaviors for the component * Event Handlers that use arguments * Variable(s) | Include **TWO (2)** of the required components such as:   * Behaviors for the component * Event Handlers that use arguments * Variable(s) | Include **ALL** of the required components such as:   * Behaviors for the component * Event Handlers that use arguments * Variable(s) |  |  |

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| **Task** | | **1** | **2** | **3** | **4** | **Marks** |
| 3. | Provide the honors software design custom for android application that includes:  a. Complexity | * The application looks trivial and not relevant for specific audience. | * The application looks trivial, but relevant for specific audience. | * The application must be non-trivial and serve a reasonable, practical purpose for a specific audience. |  |  |
| b. User friendly | * The application is not user friendly at all. | * The application user- friendly. * Directions or explanatory messages is provided. | * The application user- friendly. * Directions or explanatory messages is provided. * User can launch and navigate within the application independently. |  |  |
| c. Functionality | * Less than 60% of the app is working. | * 60-70% of the app is working. | * 80-90% of the app is working. | * 100% of the app is working. |  |

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|  | d. Graphics | * Photos are blurry or fuzzy; icons and clip art do not “fit” with the topic. | * Photos, icons, and clip art are appropriate, of high quality. | * Photos, icons, and clip art are used creatively and follow a theme. |  |  |
| e. Creativity | * Minimal effort. * Poor layout/design. * Did not incorporate required attributes, graphics, did not resize pictures, inappropriate graphics. | * Well done and interesting to the audience. * Added a few original touches to enhance the project; used a good variety of appropriate graphics. | * Presented with originality. * Excellent layout/design work incorporating all required attributes, great variety of appropriate graphics that enhanced the pages. |  |  |
| f. Information | * Information is poorly written, inaccurate, or incomplete. | * Information could be better written and too much information is given in each section. | * Information is well written and interesting to read and is presented in short sections. |  |  |
| g. Programming | * The application has a very basic programming that does not show the knowledge of control structure. | * The application has some minor error but works well for the most part. * The application shows some understanding of   programming control | * Coding standards should be followed consistently and easy to read. * The application works perfectly and very well designed. * All instructions and |  |  |

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|  |  |  | structure but can be better   * All the variables used are well initialized. | commands have been optimized wisely. |  |  |
| 4. | Attach runtime screen capture throughout the application in a project documentation. | * Provide partly screen capture from the application. | * Provide all the screen capture throughout the application. |  |  |  |
| 5. | Present and demo your Android application project. | Provide at least **ONE**  **(1)** from the list below:   * Able to fully understand and respond to questions very well * The visual aids (slides, props, etc.) were cleverly chosen and presented which improve understanding of the topic. * The content was extremely   organized in the | Provide at least **TWO**  **(2)** from the list below:   * Able to fully understand and respond to questions very well * The visual aids (slides, props, etc.) were cleverly chosen and presented which improve understanding of the topic. * The content was extremely organized in the delivery of this presentation. Information was presented in a logical,   interesting sequence | Provide at least **THREE (3)** from the list below:   * Able to fully understand and respond to questions very well * The visual aids (slides, props, etc.) were cleverly chosen and presented which improve understanding of the topic. * The content was extremely organized in the delivery of this   presentation. | Provide **ALL** from the list below:   * Able to fully understand and respond to questions very well * The visual aids (slides, props, etc.) were cleverly chosen * Presented which improve understanding of the topic. * The content was extremely organized in the delivery of this presentation.   Information was |  |

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|  |  | delivery of this presentation. Information was presented in a logical, interesting sequence that was easy to follow.   * Presenter is very fluent, and voice is easy to be heard clearly. | that was easy to follow.   * Presenter is very fluent, and voice is easy to be heard clearly. | Information was presented in a logical, interesting sequence that was easy to follow.   * Presenter is very fluent, and voice is easy to be heard clearly. | presented in a logical, interesting sequence that was easy to follow.   * Presenter is very fluent, and voice is easy to be heard clearly. |  |
| **Total Marks Earned** | | | | | | **/60** |

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TASK 1: PROJECT OVERVIEW

* 1. ***Project Name***:

Lost And Found App

* 1. ***Target Audience***:

Student Of Kolej Professional Mara

* 1. ***Problem Statement:***

Students commonly misplace personal items including books, electronics, and ID cards at Kolej Professional MARA. There are a lot of lost objects that go unclaimed since the present manual procedure for reporting and recovering lost items is ineffective and causes delays and irritation. There isn't a single, simply navigable platform for tracking lost and found goods, which causes a breakdown in communication and lower recovery rates. To expedite the lost and found procedure, speed up item recovery, and improve the overall campus experience, a practical solution is required.

* 1. ***Description of the Project:***

The Kolej Professional Lost and Found Application The goal of MARA Students is to provide a consolidated, easily navigable digital platform that will expedite the reporting, tracking, and recovery of misplaced items on campus. By acting as a conduit between those who have misplaced and those who have discovered objects, this smartphone application will improve communication and raise the possibility that misplaced items will be returned to their original owners. Students will be able to securely log in to the app with their registered credentials. By completing a brief form with contact data, a description, and the opportunity to submit images for easier identification, users will be able to report lost things. Likewise, the procedure of reporting such things will be user-friendly, enabling them to provide images, locations, and descriptions. Based on keywords, descriptions, and photos, a search feature will compare lost and found objects and notify users when a possible match is discovered.An administrative interface will be available to campus officials for the purpose of monitoring and controlling lost and found reports.By expediting the reporting and retrieval of misplaced things, the app will boost efficiency by lowering the necessary time and effort. Matching and communication provements will increase the likelihood that misplaced objects are found and returned to their owners. The platform will increase customer happiness by offering a practical, easily accessible way to report lost objects and look for them. Authorities on campus will also be able to recognize common problems and take preventative action with the use of data insights gathered on lost and found trends. In addition to streamlining the lost and found procedure, this project will improve campus life at Kolej Professional MARA by creating a more welcoming and connected community.

TASK 2: RUNTIME SCREEN CAPTURE OF THE APPLICATION

2.1: Screenshot of The App at Device

2..1.1: Login Page Register Page

A screen shot of a sign up

Description automatically generated

A login screen with a red circle and white text

Description automatically generated

This Is User Sign Up or Register Page Where User Need to Key in Their Detail That They Want to Register at The App. When User Have Key in Their Desired Detail, They Will Click on Register Button and It Will Create Their Account Thus Redirect Them to The Login Page Back to Log In Again

This Is User Login Page Where User Need to Key in Their Registered Detail. If User Is New to The App, They Need to Click on Register Button at The Bottom of The Where It Will Redirect to The Registered Page.

2.1.2: Admin Page Admin Update Page

A close-up of a red box

Description automatically generated

A screenshot of a phone

Description automatically generated

If an administrator wants to change data that was published incorrectly or mismatched, they just need to click the update button, choose the data they want to change, change the text to reflect the verified data, and then click the save button to return to the page with the updated information.

This administrative page is only accessible to those who are legitimate and authorized. There was a verified username and special ID for accessing the admin page, with the ID being ID:Admin and the password being Admin123.This admin page allows you to see what has been uploaded to the app. If there are any errors or scams, you can also erase the app's data and update the post with the missing item. With One Simple Button Which Are Delete Admin Could Delete the Data

2.1.3: Main Screen Upload Screen

A close-up of a phone screen

Description automatically generated

A screenshot of a phone

Description automatically generated

The user can upload files or submit a report on missing items on the upload screen that appears after clicking the upload button. When users click the photo button and select the desired photo from the image library, they can either upload or take a picture. When they want to remove or cancel incorrect data entry, they only need to click the clear button. When they're ready to submit the data, they just need to click confirm. If they don't want to report something, they can just click the back button to return to the main screen.

The homepage or main screen will appear after the user logs in successfully. Users could view a list and image of other users' uploaded photos of the lost item on the main screen. The search tool is user-friendly, allowing users to quickly narrow down their search results from the numerous and varied items that were displayed. When the user clicks the "current location" button, they may also view the current time and location. This allows them to check with others the best time to pick up the item, upload it beforehand, or report a misplaced item.

2.2 Screenshot Design and Block

2.2.1: Login And Register Design and Block

A screenshot of a phone

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a phone

Description automatically generated

A screenshot of a computer program

Description automatically generated

2.2.2: Main Page And Upload Page

A screenshot of a cell phone

Description automatically generated

A screenshot of a computer screen

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer screen

Description automatically generated

2.2.3: Admin Page And Update admin Page

A screenshot of a cell phone

Description automatically generated

A screenshot of a computer screen

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer screen

Description automatically generated

Complete Project Link: https://gallery.appinventor.mit.edu/?galleryid=e64e3642-e48c-4362-aca8-9e9c6e810d05