UOW MALAYSIA KDU PENANG UNIVERSITY COLLEGE

PART OF THE UNIVERSITY OF WOLLONGONG AUSTRALIA GLOBAL NETWORK

ASSIGNMENT COVER PAGE

Validated by: UNIVERSITY OF LINCOLN UNITED KINGDOM

Programme		**Course Code and Title**
Bachelor of Computer Science (Hons) Bachelor of Software Engineering (Hons)		CET3013/N (Mobile Application Development)
Student's name / student's id		**Lecturer's name**
		Lai Kim Min
Date issued	**Submission Deadline**	**Indicative Weighting**
Week 8 – 30/10/2023	Week 12 – 27/11/2023	30%
Assignment [2]	Trace MyKid Mobile Application	

This assessment assesses the following course learning outcomes

# as in Course Guide	**UOWM KDU Penang University College Learning Outcome**
CLO2	Explain cameras, sensors and locations in mobile devices
CLO3	Use graphics, animations and database in applications
# as in Course Guide	**University of Lincoln Learning Outcome**
CLO1	**N/A**
CLO2	
CLO3	
CLO4	

Student's declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Student's signature: Submission Date:

Dates and Mechanisms for Assessment Submission and Feedback

Mechanism for handout to students	Open Learning LMS
Mechanism for submission of work by student	*Softcopy online submission via Open Learning*
Date by which work, feedback and marks will be returned to students	4th December 2023
Mechanism for return of assignment work, feedback and marks to students	Feedback will be provided by a marking template. This will be available to students via Open Learning. The discussions at the walkthroughs will also provide informal feedback

COURSEWORK SUBMISSION GENERAL INFORMATION

Academic Integrity Statement

You must adhere to the university college regulations on academic conduct. Formal inquiry proceedings will be instigated if there is any suspicion of plagiarism or any other form of misconduct in your work. Students must **NOT** collude with other groups of students or plagiarize their work.

We practice zero tolerance towards plagiarism, and we use Turnitin to evaluate the similarity index. Your similarity index score must not exceed 20%.

Your tasks must be your own work. Unless the use of Artificial Intelligence (AI) is permitted in your assessment task, using AI to complete your assignment is a form of plagiarism.

Nature of the submission required

A softcopy of your assignment in **PDF version** should be submitted to lecturer, no later than the date and time stipulated on the cover sheet. In addition, an electronic copy of your work must be submitted to Turnitin. The first page of your report, immediately after the cover page, must be a page from Turnitin clearly showing your name and your Originality Score (Please refer to submission arrangement).

Diagrams may be used where they are helpful to support your arguments or description. If they are not your own work, the source must be referenced. Please help us to handle and mark your work efficiently.

Please take note for group submission, only **one submission per group**. This will contain both the group and individual elements. The individual element must be clearly labelled to indicate which group member completed the task.

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Assignment [2]
September 2023 semester

Documentation guidelines

Student is required to submit a **SOFTCOPY** of the report and ensure that it use the following formatted styles: 1) Font type: **ARIAL**, 2) Font size: **11 pt**., 3) Line spacing: **Single spacing** and 4) Page layouts: **Justify**. Please make sure you have proper format alignment for all paragraphs, following standard writing style and use **HARVARD CITATION STYLE** for citation. Please include a **HEADER** with the following information: **Student ID, Student name, Course code and Assignment type**. Please also include a proper cover page for your submission which contains information about the students, assignment, course, and department with KDU and University of Lincoln (UoL) logos on top. Also include page number and list of references, which is shown in the last page.

Penalties for Late Submission

For late submission of this Assignment, a penalty of a reduction by 10% of the maximum mark may be applicable for each Calendar Day or part thereof that the submission is late. An Assignment submitted more than **TEN** Calendar Days after the deadline will have a mark of zero recorded for this Assignment.

Submission arrangement

1. Cover page
2. Turnitin similarity report
3. Table of Content
4. Main Report
5. Reference List or Bibliography List (whichever applicable)
6. Marking Rubric (in landscape orientation)

ASSIGNMENT SPECIFICATION (3-4 students per group)

A local software company requires your development team to a mobile app for use by parents and guardians of children. The app will allow the users to capture the children's activity, location, date, time and reporter name. The application has some basic functions like search activities, and adding the new kid's activity integrated on Google map. The name of the application is called **Trace My Kid**.

The app will start with a welcome screen. The welcome screen should display appropriate application information, such as name, version, logo, etc. You should provide appropriate animation in the welcome screen with any tween animation effects (rotating, sizing, and translating). The welcome screen will be closed in ten seconds and transmitted to the main screen. Provide an option to skip the welcome screen in the next invocation of the application (e.g. provide a checkbox to disable the welcome screen).

Use the Room database to create an entity to capture the following children's activity details:

Table 1: Kid Activity Table

Activity Name	e.g. museum visit or fair - required field
Activity Category	e.g. Indoor, Outdoor, Physical, Overnight and etc - required field
Date and time	when the activity has been held - required field
Location	where the activity has been held. Integrate the Google Location Services API in your app. Your app should able to detect the GPS coordinates under Location Controls and display the location where the activity happened using Google Map – optional field.
Photo	This field is optional and will be implemented under the part of the additional features.
Notes	Additional comments of the users - optional field
Name of reporter	The person who writes the report - required field

This application must be able to demonstrate the following requirements:

i) Navigation
- Design your app screen with an appropriate navigation UI. You could apply a toolbar with menu items or bottom bar navigation or navigation drawer to allow users to navigate easily from one page to another page.

ii) Implement forms validation
- Required field means that the user must enter something in this field otherwise they will get an error message. Optional field means that the user can enter something if they wish but they will not get an error message if they do not enter anything.
- The app will check the input and if the user does not enter anything in one of the required fields the app should display an error message to the user.

- Once the details have been accepted by the app (e.g. no required fields were missing) it should display the details back to the user for confirmation and allow them to go back and change any details that they wish.

iii) Database Integration

- All the details entered by the user should be stored in SQLite database with Room database architecture.
- The user should be able to list all the details for all the activities entered into the app using the RecyclerView list. All the activitie's names should be displayed in alphabetical order. You could customize the list with your own custom layout.
- The user could delete all the details from the database.
- The user could edit or change all the details from the database.

iv) Searching Records

- The user should be able to search for a particular activity. At its simplest, this could mean entering or selecting an activity name and displaying the details of all information about that kid's activity. Ideally, the user should be able to enter more details and search for the activity that matches.

v) Displaying Records

- You should provide two layouts for two different devices namely smartphone and tablet.
- On a smartphone, held in portrait mode, the activity name should be displayed in alphabetical order in a list. When one of these is selected, the details should be displayed on another screen (either dialog or another screen). Pressing the **Back** button will then return to the list of the activities.
- On a tablet, held in landscape mode, the list of activities should be displayed appropriately when rotating the screen from portrait view to landscape view. It would be even better if the following can be achieved. For instance, when held in landscape mode, the list of activity is displayed at the left of the screen and, when the user selects the activity name, the full details should be displayed at the right of the screen. This should be achieved using the fragment concept in the Android development environment.

vi) Additional Features (At least two additional features added to the project. Any enhancements should be acceptable and you may do your own research and feel free to show off). Here are some possible examples:

- Allow photos taken by the camera to be added to the data stored.
- Show the location of the activity on a map.
- Share the activity details on social media each time an activity record is newly entered.

SUBMISSION:

1) A softcopy report with the following details:
   - Title page. Include the names and ID's of all students in your group
   - A simple screenshots of the application (portrait and landscape mode).
   - Appropriate test cases.
   - A list of bugs/weaknesses and/or strengths in your system.
   - Turnitin report for plagiarism checks.

2) Individual **Evaluation** Report (this report is to be submitted by every student)
   - Title page containing your name and ID plus the names and ID's of all students in your group.
   - A review (500+ words). This review should include two parts:
     - Part1: Discuss how the course affected you, reflecting on what you have achieved. Please include in your report what went well; any design/implementation problems encountered and how you solved them.
     - Part2: Teamwork is an integral part of the Software Development Project course and Personal Development. ***The teamwork mark is awarded to each team member individually***. In this review, you should write on your personal experience of teamwork and how the group dynamics worked in the group coursework. You are asked to assess yourself and each of the other members of your team in terms of:
       i) Contributing to the planning of the work.
       ii) Contributing to the leadership and management of the work of the team as it progressed.
       iii) Contributing to the final products.
   - A completed copy of the work breakdown form on the last page of this document as agreed by all members of the group.

3) Create a brief screencast recording (including screen and sound) demonstrating the key functionalities of the system. This can be created using any suitable software (e.g. Camtasia or Jing) and hosted securely on the cloud. Submit the relevant URL in the text file for evaluation purpose.

4) Upload the following items through Open Learning:
   - Android project folder. You can use the export zip feature in Android Studio to save all your project files
   - A report in softcopy format (word or PDF).
   - Turnitin report in softcopy format.

Group members work contribution form

In percentage, please indicate the work contribution of each member. This should be agreed by all group members**. The total of all members work must add to 100%**

You must **submit this form in your final report.** Put your initials in the signature columns. This copy must be signed by all members.

Group/Team Name:_____

Team member name	Student ID	Individual overall work contribution (%)	Signature
Student:			
Student:			
Student:			
		Total 100%	

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CET3013/MOBILE APPLICATION DEVELOPMENT

MARKING RUBRIC – ASSIGNMENT 2

Building App with Database and Sensors (30%)

Section 1 (40%)

LEARNING OUTCOME	MARKING CRITERIA	SCALE					MARKS/COMMENTS		
		Fail (0-49)	3rd Class (50-59)	2nd Lower Class (60-69)	2nd Upper Class (70-79)	1st Class (80-100)	100%	Weightage	Actual Marks
CLO 2	**Additional Features (Location, Map & Camera) (20%)**	Little or no attempt to implement the feature correctly	A partial implementation of the feature, but some aspects are incorrect and not particularly well coded. May give rise to run-time errors.	A complete implementation of the features with some flaws and not in exceptional way.	A mostly complete implementation of the feature which works correctly but with minor flaws	An excellent implementation of all the feature and clearly coded		0.2	
	Overall interface (Portrait and landscape mode and UI Navigation) (20%)	Very poor UI produced (either portrait or landscape are missing). No application of UI interface	A partial implementation of the UI but did not apply the UI navigation. The overall UI is not attractive	A complete implementation of the AI but with some flaws and not in an attractive way.	A good UI produced with applying the UI navigation with Jetpack library. Use appropriate bottom navigation, drawer and toolbar with menu items.	An excellent UI implementation with using good UI navigation such as bottom navigation, drawer and toolbar with menu items.		0.2	
						Total (40%)			

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Section 2 (60%)									
LEARNING OUTCOME	**MARKING CRITERIA**	**SCALE**							
		Fail **(0-49)**	**3rd Class** **(50-59)**	**2nd Lower Class** **(60-69)**	**2nd Upper Class** **(70-79)**	**1st Class** **(80-100)**	**MARKS/COMMENTS**		
							100%	**Weightage**	**Actual Marks**
CLO3	**Database Integration (Insertion, Deletion, Editing, Searching) (30%)**	Little or no attempt to implement the feature correctly	A partial implementation of the feature, but some aspects are incorrect and not particularly well coded. May give rise to run-time errors.	A complete implementation of the features with some flaws and not in exceptional way.	A mostly complete implementation of the feature which works correctly but with minor flaws	An excellent implementation of all the feature and clearly coded		**0.3**	
	Fragment Application (Using Fragment to produce the master & details format). (30%)	Little or no attempt to implement the feature correctly. No master and details view. No animation provided.	A partial implementation of the feature, but some aspects are incorrect and not particularly well coded. May give rise to run-time errors.	A complete implementation of the features with some flaws and not in exceptional way.	A mostly complete implementation of the feature which works correctly but with minor flaws.	An excellent implementation of all the feature and clearly coded. The master and details fragment are working perfectly.		**0.3**	
						Total (60%)			
						Overall Score (100%)			