



<b>Qualification national code and title</b>	ICT50120 Diploma Information Technology (Advanced Programming)
<b>Cluster</b>	Advanced Mobile Applications
<b>Unit/s national code/s and title/s</b>	ICTPRG549 Apply Intermediate Object Orientated Language Skills ICTPRG603 Develop Advanced Mobile Multitouch Applications

### Assessment type (☑):

- ☐ Questioning (Oral/Written)
- ☒ Practical Demonstration
- ☐ 3<sup>rd</sup> Party Report
- ☒ Other – Project/App

### Assessment Resources:

Visual Studio Community Edition 2019  
Android SDK / Emulator / Physical Device  
Design Software of choice (Photoshop/InDesign/XD) **OR** physical materials  
Flutter SDK

### Assessment Instructions:

This assessment requires you to take the understanding of mobile development that you have developed through the delivery and apply them towards a group project. You are being assessed on all elements of ICTPRG549 and ICTPRG603 across three parts.

#### Due Date:

Part A - End of week 12  
Part B - End of week 18

1. Complete all the assessment tasks below.
2. Observation by your lecturer of you doing the assessment is considered part of the assessment process.
3. Submit your documentation into the Blackboard assessments area.
4. All skills must be demonstrated to achieve a satisfactory result.
5. All work submitted must be your own individual effort.

### Assessment Instrument:



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## GROUP ASSESSMENT

### Assessment 2 (A) – Documentation

For this assessment you will need to create the documentation required to prepare and plan for your group project.

This documentation must cover at minimum the following areas:

1. Business requirements and use cases
2. Software requirements and features
3. Database requirements (To 3<sup>rd</sup> form normalization)
4. UI and UX Designs
5. Project plan and performance objectives (including timelines and software methodology)
6. Formal Testing
7. Client Sign-off

#### *1) Business Requirements and use cases*

This section must identify the requirements that the business has. It requires communication with the client to establish needs and any data that they require to be displayed or input by the user. Establish the application use cases.

#### *2) Software requirements and features*

Identify the software requirements from the business requirements what functional and non-functional requirements (Including security) are necessary for the project to be completed. Establish importance of these requirements in the project and for the business.

#### *3) Database/Entity design*

Establish the data within the application and how it will be stored within your database. And propagated to objects within the application Ensure database design is normalized to the 3<sup>rd</sup> Form.

#### *4) UI/UX design*

Document and iterate on the designs for the UI planning any inputs outputs and functionality that might be required for the application. Designs must consider multiple screen sizes and orientations.

#### *5) Project/Action Plan*

Establish the performance objectives and timelines using the importance of requirements and allocate resources for the project.

#### *6) Formal Testing Document*



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Formulate testing documentation that demonstrates and includes the following:

- I. Examination of variables at runtime.
- II. Detection of a logical programming error within code.
- III. At least one formal testing methodology documented.
- IV. Validation of application against its original requirements.
- V. Evidence of testing application on emulator and physical device.

### 7) *Client Sign-off*

This document is required to ensure that the client has approved and understands the scope of the project and what is being developed.

## Assessment 2 (B) – Project

Your Project must include the following elements demonstrated within your code:

1. Use the Flutter framework and library to build an application GUI using its built-in and your own custom widgets that respond to the user interaction.
2. Include one advanced user interaction technique for mobile devices: Tap, Swipe, Long Press etc.
3. Application uses auto-resizing and layout features of flutter to adapt the orientation for UI as per Part A, 4. UI/UX design specifications.
4. Application must use an API to connect to a back-end service. (Custom or pre-existing service)
5. Application manages zombie processes by eliminating additional processes upon application exit.
6. Application must have its own source control repository.
7. Application must be submitted with final application installer (APK/IPA)

### *Completed Application (Zip + Link)*

*Using your chosen framework(s), develop the application using collaborative tools (Git/GitHub) to your client specifications. Submit this zipped, with a link to your repository showing collaboration and commits.*

***All team members must have at least one pull request to the repository main branch showing participation to receive a grade.***



## Assessment Tool

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