



SCHOOL OF COMPUTING
COMP2750/COMP6750 – Applications Modelling and Development

2024

ASSIGNMENT THREE (25%)

[https://unitguides.mq.edu.au/unit_offerings/163020/unit_guide#assessment task 522481](https://unitguides.mq.edu.au/unit_offerings/163020/unit_guide#assessment_task_522481)

[https://unitguides.mq.edu.au/unit_offerings/163094/unit_guide#assessment task 522595](https://unitguides.mq.edu.au/unit_offerings/163094/unit_guide#assessment_task_522595)

Application Development
Multiple submission dates

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Overview of Assignment-3

This assignment focuses on the development and testing aspects of a mobile application.

Task Descriptions

Task 1: Application Development Demo and Viva (15 marks) (Group Task)

You will be developing an application for POGS that you have been working on through the other assignments. You will create a basic Online Shopping App.

This list below outlines the requirements that need to be implemented in the application.

1. **A Welcome heading** displaying the name of the system.

2. **An image of your choice** displayed below the heading.

3. **Vegetables dropdown:**

In the first dropdown, provide at least five (5) vegetables. They should contain values like this:

'Potato-\$5'

'Carrot-\$8'

At least two (2) of the items, should have the same price (you can make this up).

For simplicity reasons, we will assume the price to be a single-digit value without any decimal point.

4. **Fruit dropdown:**

In the second dropdown, provide at least five (5) fruits. They should contain values like this:

'Orange-\$11'

'Blueberry -\$12'

At least two (2) of the items, should have the same price (You can make this up).

For simplicity reasons, we will assume the price to be a double-digit value without any decimal point.

5. **Choose Quantity** dropdowns:

For each of the chosen item, there is a corresponding quantity. Quantity will have numbers between 1 and 5.

6. **Calculate** button:

Once the values are selected, when the calculate button is clicked, it should display the total price in a label below with a label:

Total Cost of Order: \$ **Total Price**

7. **'App developed by names of the group members'** as label at the bottom of the app.

An empty layout of the app is provided in the assignment folder. **You are not allowed to add any extra screens.** However, if you want to add extra details on the screen, that is acceptable. You must

change the **look & feel of the app**. The application should work **without crashing and must display the right output**. Please remember you must also **handle non-selections**. E.g., The total price should not have a NaN error when calculating the total price.

This task is due for submission on **Sunday (19/05/2024 at 11.55 pm)**.

The Viva will take place in the Week 12 workshops. All group members must attend the workshop in week 12. During this demonstration, you will be asked questions based on the code to test each group's understanding of the system. If you are not present for the discussion component, you will be awarded zero marks for the entire assignment.

Task 2: Exploring the Mobile Application development (35 marks) (Individual Task)

1. (5 marks) How would you explain to the client the difference between native app development vs cross-platform development with emerging frameworks in use today? Give an example of what that explanation might look like (~400 words). You will be marked on how easy it is for a non-technical person to understand the explanation. Please see the rubric below for details.
2. (5 marks) You have a programmer pair working on code, when you find your peer has used a piece of proprietary code but not provided any credit to your coding. When you ask them to add the credit, they say it is not that important, and asks you not to fuss about it. You take this to your development lead who also chooses to downplay it. You have been waiting for a week to receive a response. Using the ACS code of ethics principles covered in lectures, outline what principles in the code are relevant to your decision about what you intend to do next?
 - a. Identify relevant points in the code of professional ethics (ACS)
 - b. What choices / options for action do you have (if any)?
 - c. What do the relevant ACS codes guide you to do, to prioritise this scenario?
 - d. What would you do based on the above 3 points?
3. (10 marks) A thorough testing document must be created with two possibilities of testing the app you created as a group. Choose any two of the following:
 - (a) Vegetable selected, fruit not selected;
 - (b) Fruit selected, vegetable not selected;
 - (c) Both vegetable/fruit not selected.

Note: We have not included the basic testcase - which covers the ideal testcase of both fruits and vegetables being selected to calculate the total cost, as this would be a standard use case test.

4. (15 marks) What are the tables you would have for the app to store the following data?
 - Vegetable, their details, including the prices.
 - Fruit, their details, including the prices.
 - Customer, their details, and their order history.
 - Supplier, their details, and the produce (fruits and vegetables) they list.

- Produce can be supplied by one farmer only; However, a farmer can supply multiple produce. There will only be only supplier supplying the product at any point in time. However, the history of suppliers for each produce item must be recorded along with the date interval.

You must draw a schema diagram to answer this question. Include table names, column names (no need to specify data types), primary and foreign keys in your answer.

You must use references and citations if using any external references (APA style) as part of this report.

This task is due for submission on **Sunday (02/06/2024 at 11.55 pm)**. Please submit your answers as a pdf document. Rename your file to your full name E.g., Anakin_Skywalker.pdf

Marking Criteria

Task 1 (out of 15)	
Existence of elements (out of 4)	
Welcome heading?	/0.5
Image?	/0.5
4 dropdowns?	/1
Calculate button?	/1
Text to display the total?	/0.5
App developed by message	/0.5
Total	/4
Functionality (out of 11)	
All dropdowns filled with correct elements?	/2
Correct programming logic? (Calculation of total cost)	/5
Total cost of the order displayed correctly	/2
Effort in changing the look and feel of app	/2
Total	/11
Task 2 (out of 35) [Individual]	
Background and Ethics (out of 10)	
Explanation of native vs. cross app development	/5
Ethical Dilemma Consideration – related to ACS ethics, reasoning is sound	/5
Total	/10
Test Cases (out of 10)	
Tests detailed well?	/5
Shows results (pass/fail)	/1
Includes expected results	/1
Clearly documented with set up, steps?	/2
Choice explanation	/1
Total	/10
Tables (out of 15)	
Tables and Columns, Overall Schema provides a good overview of the data	/5
Are primary keys and foreign keys specified?	/5
Total	/15
Assignment submitted after deadline? (5% penalty per day)	