Assessment details COIT 11222

Assessment item 3—JAVA Program and Specification Project

Due date:	**Week 14 T120 – Midnight**, **Monday** (15/6/20)	**ASSESSMENT**
	Refer below for complete assessment item 3 requirements (**Project**)	
Weighting:	55%	**3**
Length:	N/A	

Objectives

This assessment item relates to the unit learning outcomes as stated in the Unit Profile.

Details

For this assignment, you are required to develop your own **Java Program** to demonstrate you can use Java constructs including input/output, Java primitive and built-in types, selection and looping statements and various other Java commands. You can also include a GUI interface, methods and a data structure for extra credit.

See details below under project details.

What to submit for this project

The Java source code:
    You will need to submit your source file: **Project.java** (and any others). You can name your source file(s) to match your topic or scenario you have chosen.

- o   **Project.java**

If you submit the source code with an incorrect name you will lose marks.

Your specification for your program.
- o   **Specification.docx**

You will submit your files by the due date using the "**Project**" link on the Moodle unit website under **Assessment … Project Submission**.

Project Details

Program (35 marks)

For this project you are to create your own Java program. Having completed the assignments, you should have the necessary skills to create a simple Java program, it should be at least at the level of question 4 (Week4.java) in assignment one or above. If you just hand in assignment one or two you will receive zero marks.

Think of your own scenario
You will need to think of a small business or other scenario for your program. Think of something which interests you:
It could be a service: gardening, lawn mowing, window cleaning, dog walking, dog grooming, house cleaning, babysitting, car washing, home delivery, tutoring etc.
You could be selling a product: (not pizzas), curries, sandwiches, tools, hamburgers, books, magazines, plants, bicycles etc.
It could be a calculation per person: compound interest projection, fuel consumption etc.
The above are only suggestions try and be creative and create a unique scenario.
Talk with your tutor if you are unsure of what scenario to use.

You cannot use any scenario which has been used in the unit before, these include: Pizzas, Nemo Reef tours, a hotel, a carpark, drycleaners, car hire or sales, fruit shop, weather, student marks and catering. You will receive zero if you submit any of these scenarios.

Program requirements
Your program will need to read in N entries where N is the largest digit of your student ID (see Week4.java), or single entries at a time in a GUI.
For each entry you need to read in at least a String or more if it is required and read in a number or numbers to perform a calculation. The calculation should be dependent on a series of if else statements which depends on a variation of pricing based on number of items. If it is just a calculation per entry then use if else statements to report on the result for example: calculating fuel consumption could report being very efficient, normal or not efficient.
For each entry you will need to report the charges or calculation results similar to the receipt printed for assignment one.
After the entries have been entered you will need to report a couple of cumulative values total money collected and an average of some value (it could be the average of money collected) for example. These could be displayed in a display all option if you are using a GUI interface.

For extra credit you can include a GUI interface and store the records using an advanced data structure such as an array of objects, parallel arrays or an ArrayList.

Your program needs to display the principles of good programming practises: meaningful identifiers using camel notation, correct indentation and layout, constants used for numeric values and correct commenting including a header comment for all files if applicable.

Input and output
Your program can just be a console program using Scanner for input and print statements for output, you can use dialogs for input and output or even create your own Windowed GUI application.

We will not worry about checking data types or numeric ranges in this project.

Program Specification Report (20 marks)

For the second part of the project you will need to produce a specification for your program. Your specification should include the following parts:

Title page
Title of the program, your name and student number, due date and a very short description of the program (not a full abstract).

Scenario description and program specification
Completely describe your program, including a description of the scenario you have chosen, examples of calculations and/or pricing schemes, what needs to be input and what needs to be output including accumulated values at the end of the program or display all in a GUI.

Screen shots and descriptions of the output
Include screen shots of the expected look and feel of your program including all test cases. These screen shots need to be fully annotated.

Create a marking scheme
Imagine you setting your program as an assignment for students, so you need to create a marking scheme out of **twenty marks**. Consider what is important in creating a professional program and weight each aspect accordingly. You **will not** include marks for a report, just provide marks for the program.

Appendix of source code
You will also include your source code copy and pasted into an appendix, do not worry about format loss.

Good luck! Bruce McKenzie Unit Coordinator T120 COIT11222