FACULTY OF ENGINEERING AND INFORMATION SCIENCES

SUBJECT'S INFORMATION:			
Subject:	CSIT121 Object Oriented Design and Programming		
Session:	Autumn 2019 (February)		
Programme / Section:	Computer Science and IT		
Lecturer:	Ms. Siti Hawa		
Coursework Type *(tick appropriate box)*	❑ Individual Assignment ❑ Group Assignment ❑ Project ✓ Lab Task ❑ Seminar / Tutorial Paper ❑ Others		
Coursework Title:	**Lab Task 5**	Coursework Percentage:	3%
ASSESSMENT CRITERIA:			
Correctness	All programs should produce the correct result as stated in the specification.		
Coding and GUI design	Creative use of GUI components and correct event handling performed.		
Readability	Appropriate comments are included. Meaningful identifiers used. Proper indentation and line spacing used.		
Well formatted output	Output should be well formatted with appropriate messages displayed. Numbers are shown with appropriate precision.		
SUBMISSION:			
All completed work should be submitted online through Moodle before or on the due date provided. **SUBMIT AS EARLY AS POSSIBLE. ONLY ONE SUBMISSION IS ALLOWED. IF RE-SUBMISSION IS NECESSARY, YOU ARE REQUIRED TO REMOVE THE EARLIER SUBMISSION AND THIS MUST BE DONE BEFORE THE DUE DATE. OTHERWISE YOU WILL BE PENALIZED FOR LATE SUBMISSON.**			
DUE DATE:	**WEEK 13**		
PENALTIES FOR LATE SUBMISSION:			
Penalties apply to all late work, except if student academic consideration has been granted. Late submissions will attract a penalty of 25% of the assessment mark per day including the weekend. Work more than (3) days late will be awarded a mark of zero.			
PLAGIARISM:			
When you submit an assessment task, you are declaring the following 1. It is your own work and you did not collaborate with or copy from others. 2. You have read and understand your responsibilities under the University of Wollongong's policy on plagiarism. 3. You have not plagiarised from published work (including the internet). Where you have used the work from others, you have referenced it in the text and provided a reference list at the end ot the assignment. Plagiarism will not be tolerated. Students are responsible for submitting original work for assessment, without plagiarising or cheating, abiding by the University's policies on Plagiarism as set out in the University Handbook under University Policy Directory and in Faculty handbooks and subject guides.			

COURSEWORK SPECIFICATION

OBJECTIVES:

Following completion of this task, students should be able to:

- Write Java applications using GUI and Event Handling.

Question 1

Write a Java application using GUI for a construction company to handle a customer's order to build a new house based on their choices.

Your application should declare a class called `House` that keeps the information of the model of the house, number of bedrooms, size of garage, and number of bathroom. Include suitable constructor, mutator, and accessor methods. Include also a method to calculate the total price of building the house. The price of the house depends on the model chosen, number of bedroom, number of bathroom, and number of garage chosen. The price of each individual part is mentioned below. Your application should maintain an `ArrayList<House>` to keep several orders of building different models of this house.

Create a `JFrame` containing the following components:

- A `JLabel` to display the title of the frame
- `JComboBox` to let the user select one of four models (the Aspen, RM100,000; the Brittany, RM120,000; the Colonial, RM180,000; or the Dartmoor, RM250,000).
- A label to display an image of a house and should change according to the house selected from the `JComboBox` above. You need to provide your own image of the houses.
- A `JTextField` to let the user enter the number of bedrooms (each bedroom adds RM10,500)
- Four `JRadioButton`s to let the user select the size of garage (zero, one, two, or three cars; each car adds RM5,000)
- A `JTextField` to let the user enter the number of bathroom (each bathroom adds RM3,500).
- A non-editable `JTextField` to display the total price.
- A `JButton` to calculate the total price of constructing the house chosen. Add an event handling method to this button. The method should retrieve the information typed by the user, create a `House` object using this information and add it to the `ArrayList<House>`, calculate the total price and display it on the `JTextField` for total price.
- A `JButton` to display all `House`s ordered. Add an event handling method to this button. When the user click on this button, display the details of all the `House` ordered (all `House` object in the `ArrayList<House>`) together with the price of each one. You may display the details in a dialog box.

- A JButton to quit from the application. When the user click on this button, the application should terminated. Add suitable event handling method for this.

Use suitable layout managers and event handling for your application. Be creative in positioning your GUI components on the frame and it must be attractive and easy to use. You are not allowed to use the NetBeans GUI builder for this task. All components need to be created and added to the frame using codes.
