

BARBADOS COMMUNITY COLLEGE

DIVISION OF COMPUTER STUDIES

COMP 151 Program Implementation (Java)

Programming Assignment 1

Create a Java program which will be used by an Architectural Drafting Company to calculate the payments due for services requested by clients.

This is a prototype of a requested software solution- for now it will be able to calculate for one(1) project only.

THE JAVA PROGRAM

Write an algorithm first, test it and then create the java program

The company offers three types of services. The tasks to be completed and the details of those services are listed below:

Menu:

First display the name of the Company and then a menu for the user to choose from (Service 1,2 or 3). Ask the user what service they will be having and accept their choice. *(Use the switch structure to direct the calculations based on the user's choice)*

Service 1- House Design

- ✓ The user has to enter the approximate size of the house in square feet
- ✓ There are three rates-
 - Rate A (\$1.00 per sq ft) for a house less than 1000 sq ft
 - Rate B (\$1.25 per sq ft) for a house less than 2500 sq ft
 - Rate C (\$1.50 per sq ft) for houses 2500 sq ft or above*(Use if statements here)*
- ✓ Calculate and display the cost to complete the project. The formula used is: size x rate.

Service 2- 3D Model

- ✓ There are 3 types of models. The user can choose only one (1).
 - front view image (\$500.00)
 - external view video (\$1400.00)
 - walk through video (\$4300.00)
- ✓ The user has to enter their choice and the type of model chosen along with the cost is displayed.

Service 3- Construction Drawings

- ✓ The user can choose any of the following options- 1 of them, 2 or all 3:
 - Electrical Drawing (\$2650.00)
 - Foundation Plan (\$900.00)
 - Roof Plan (\$1400.00)
- ✓ Calculate and display the total cost of the requested drawings.

TESTING

Create some test data to test the algorithm created, before you start to write the program code. This is to ensure that the logic is correct and it is performing all required functions. The same test data can be used to test the completed java program for correctness.

Perform a desk check for each of the following:

- 1- Service 1- a house of any floor area
- 2- Service 2- one of the available model choices
- 3- Service 3- any 2 or 3 of the available drawings

NOTE- UNIQUE PROGRAMMING SOLUTIONS ARE EXPECTED FROM EACH STUDENT. ANY PROJECTS THAT APPEAR TO BE TOO SIMILAR WILL HAVE MARKS DEDUCTED.

Submission Instructions

- You are required to submit:
 - a document containing the algorithm and the testing
 - the zipped java project folder
- Upload your assignment to your Trident Learning account