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CSCI 201 Section 05

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**Homework 2: Test Report**

The purpose of this program is to do the geometric calculation. At first a menu is shown where user select what calculation they want to do. For example, Area of Triangle, Circle, and Rectangle. When the user chooses the calculation, they want to do. They are asked to enter the required values to calculate the Area like: Length, Breadth, Height or Radius.

The program contains following files:

main.cpp

HomeworkScript1.txt

Homework1.rap

a.out

The entry point of the program is: main.cpp

The command to compile it is: g++ main.cpp

After successfully compiling the program, run ./a.out or ./Homework2 to execute the program. To use the program the user should be aware of following data inputs.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Valid Input** | **Operation** | **Input** | **example** | **Error/reason** |
|  | Select the calculation you want to do. | Enter the choice (1-4) | 2 | No error |
|  | User have to enter the radius of circle in meter. | Enter the radius of circle in meter | 2.6 | No error |
|  | User have to enter the length of Rectangle in meter | Enter the Length of rectangle in meter | 13 | No error |
|  | User have to enter the Width of Rectangle in meter | Enter the Width of rectangle in meter | 8.5 | No error |
|  | User have to enter the Base of Triangle in meter | Enter the Base of Triangle in meter | 9 | No error |
|  | User have to enter the Height of Triangle in meter | Enter the Height of Triangle in meter | 18 | No error |
| **Invalid Input** | **Operation** | **Input** | **example** | **Error/reason** |
|  | Select the calculation you want to do. | Enter the choice (1-4) | 5 | Error: The value must be between 1 to 4. |
|  | User have to enter the radius of circle in meter. | Enter the radius of circle in meter | -2 | Error: There should not be negative value. |
|  | User have to enter the length of Rectangle in meter | Enter the Length of rectangle in meter |  | Error: No null value is accepted. |
|  | User have to enter the Width of Rectangle in meter | Enter the Width of rectangle in meter | 0 | Error: Width cannot be zero. |
|  | User have to enter the Base of Triangle in meter | Enter the Base of Triangle in meter | s | Error: Only number is accepted. |
|  | Select the calculation you want to do. | Enter the choice (1-4) | 2.4 | Error: The value cannot be float it should be integer. |

**Test report**

**Pretest vs post test**

**Test 1:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Enter choice** | **Radius** | **Pre. Test: Area of circle** | **Posttest: Area of circle** | **Result** | **Action**  **needed** |
| **Input1** | **1** | **6** | **113.097** | **113.097** | **OK** | **No** |
| **Input2** | **1** | **2** | **12.5664** | **12.5664** | **OK** | **No** |

**Output1:** **Area of Circle is: 113.097-meter square**

**Output2:** **Area of Circle is: 12.5664-meter square.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Enter choice** | **Length** | **Width** | **Pre. Test: Area of Rectangle** | **Posttest: Area of Rectangle** | **Result** | **Action**  **needed** |
| **Input1** | **2** | **5** | **8** | **40** | **40** | **OK** | **No** |
| **Input2** | **2** | **6** | **10** | **60** | **60** | **OK** | **No** |

**Test 2:**

**Output1: Area of Rectangle is: 40-meter square**

**Output1: Area of Rectangle is: 60-meter square**

**Test 3:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Enter choice** | **Base** | **Height** | **Pre. Test: Area of Triangle** | **Posttest: Area of Triangle** | **Result** | **Action**  **needed** |
| **Input1** | **3** | **7** | **8** | **28** | **28** | **OK** | **No** |
| **Input2** | **3** | **14** | **16** | **112** | **112** | **OK** | **No** |

**Output1: Area of Triangle is: 28-meter square**

**Output2: Area of Triangle is: 112-meter square**