

MarkHuntly1809693

by Mark Huntly

FILE	11495_MARK_HUNTLY_MARKHUNTLY1809693_182843_531788873.TXT (3.44K)		
TIME SUBMITTED	15-MAY-2019 03:53PM (UTC+0100)	WORD COUNT	466
SUBMISSION ID	107310173	CHARACTER COUNT	2683

```
//Your name here
```

```
//Exercise 2B - paste code below
```

```
#include<string>
```

```
#include<iostream>
```

```
#include<sstream>
```

```
using namespace std;
```

```
void DisplayMenu();
```

```
double EnterNum(string message);
```

```
int MenuChoice();
```

```
double CalculateRectangle();
```

```
double CalculateCircle();
```

```
void OutputResult(double area);
```

```
int main(int argc, char *argv[])
```

```
{
```

```
    string input;
```

```
    double area = 0;
```

```
int option;

option = MenuChoice();

while (option != 3)
{
    switch (option)
    {
        case 1:
            area = CalculateRectangle();
            break;

        case 2:
            area = CalculateCircle();
            break;

        case 3:
            cout << "Program is exiting" << endl;
            break;

        default:
            cout << "Please choose option 1, 3 or 3." << endl;
            option = MenuChoice();
    }

    OutputResult(area);
}
```

```
        cout << "Please choose another option";

        option = MenuChoice();

    }

    return 0;

}

void DisplayMenu()
{
    cout << "Please choose one of the three options below:" << endl;

    cout << "To calculate the area of a rectangle enter 1." << endl << "To coaclulate
area of a circle enter 2." << endl << "To exit the program enter 3." << endl;
}

double EnterNum(string message)
{
    string input;
    stringstream stream;
    double num;

    cout << message << endl;

    getline(cin, input);
```

```
        stream.str(input);  
        stream >> num;  
        stream.clear();  
  
        return num;  
    }
```

```
int MenuChoice()  
{  
    string input;  
    stringstream stream;  
    int choice;  
  
    DisplayMenu();  
    getline(cin, input);  
    stream.str(input);  
    stream >> choice;  
    stream.clear();  
  
    return choice;  
}
```

```
double CalculateRectangle()
```

```
{  
  
    double height;  
  
    double width;  
  
    double area;  
  
  
    cout << "You have chosen the area of a rectangle" << endl;  
    height = EnterNum("Please enter the height of the rectangle");  
    width = EnterNum("Please enter the width of the rectangle");  
  
  
    area = height * width;  
  
  
    return area;  
}
```

```
double CalculateCircle()  
  
{  
  
    double radius;  
  
    double area;  
  
    cout << "You have chosen the area of a circle" << endl;  
    radius = EnterNum("Please enter the radius of the circle.");  
  
  
    area = 3.142*(radius*radius);  
}
```

```
        return area;
    }

    void OutputResult(double area)
    {
        cout << "The area is: " << area << endl;
    }
}
```

//Exercise 3B - paste code below

```
#include<string>
#include<iostream>
#include<sstream>

using namespace std;

double EnterNum(string message);

int main(int argc, char *argv[])
{
```

```
string input;
```

```
stringstream stream;
```

```
int startCoordsX;
```

```
int startCoordsY;
```

```
int width;
```

```
int endCoordsX;
```

```
int endCoordsY;
```

```
int pointCoordsx;
```

```
int pointCoordsY;
```

```
startCoordsX = EnterNum("Enter X coordinates for the start of the square");
```

```
startCoordsY = EnterNum("Enter Y coordinates for the start of the square");
```

```
width = EnterNum("Enter the width of the square");
```

```
endCoordsX = startCoordsX + width;
```

```
endCoordsY = startCoordsY + width;
```

```
pointCoordsx = EnterNum("Enter X coordinates for the point");
```

```
pointCoordsY = EnterNum("Enter Y coordinates for the point");
```

```
if(pointCoordsx >= startCoordsX && pointCoordsY <= endCoordsX)
```

```
{
```

```
    if (pointCoordsY >= startCoordsY && pointCoordsY <= endCoordsY)
```

```
        {  
            cout << "Point is contained within the square" << endl;  
        }  
    }  
    else  
    {  
        cout << "Point is outside of the square" << endl;  
    }  
    return 0;  
}
```

```
double EnterNum(string message)
```

```
{  
    string input;  
    stringstream stream;  
    double num;  
    cout << message << endl;  
    getline(cin, input);  
    stream.str(input);  
    stream >> num;  
    stream.clear();  
}
```

```
        return num;  
    }
```

Upload to Moodle when complete.

FINAL GRADE

/100

GENERAL COMMENTS

Instructor

Exercise 1a (4): 4

Exercise 1b (8): 4

Exercise 1c (8): 4

Exercise 2a (20): 14

Exercise 2b (30): 28

Exercise 3a (20): 16

Exercise 3b (10): 10

See comments in code.

You should provide more comments in your code.

One slight minor fix required in exercise 2.

80/100

Assignment 1 (Gareth's): 77%

Overall mark for module: 78.5%

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Comment 1

Actually you do not need to do this because you do again below. Move OutputResult() into case 1 and case 2.

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