Assignment #2

CPSC 121: Computer Science I

Due: Monday September 17th, 2018 [upload to blackboard]

1

1.1

The following C++ program will not compile because the lines have been mixed up.

```
int main()
}
// A crazy mixed up program
return 0;
#include <iostream>
cout << "In 1492 Columbus sailed the ocean blue."; {
using namespace std;
```

When the lines are properly arranged the program should display the following on the screen:

    In 1492 Columbus sailed the ocean blue.

Rearrange the lines in the correct order. Test the program by entering it on the computer, compiling it, and running it.

1.2

Modify the following program so it prints two blank lines between each line of text:

```
#include <iostream>
using namespace std;
int main() {
cout << "Two mandolins like creatures in the";
cout << "dark";
cout << "Creating the agony of ecstasy.";
cout << " - George Barker";
return 0;
}
```

2 What will each of the following programs display?

2.1

```cpp
// The Works of Wolfgang
#include <iostream>
using namespace std;

int main()
{
    cout << "The works of Wolfgang\ninclude the following";
    cout << "\nThe Turkish March" << endl;
    cout << "and Symphony No. 40 ";
    cout << "in G minor." << endl;
    return 0;
}
```

2.2

```cpp
#include <iostream>
using namespace std;
int main()
{
    int freeze = 32, boil = 212;
    freeze = 0;
    boil = 100;
    cout << freeze << endl << boil << endl;
    return 0;
}
```

2.3

```cpp
#include <iostream>
using namespace std;
int main()
{
    cout << "Be careful \n ";
    cout << "This might /n be a trick ";
    cout << "question \n";
    return 0;
}
```

3 The following programs have some errors. Locate as many as you can.

3.1

```
using namespace std;
int main ()
{
    double number1, number2, sum;
    Cout << "Enter a number: ";
    Cin >> number1;
    Cout << "Enter another number: ";
    Cin << number2;
    number1 + number2 = sum;
    Cout "The sum of the two numbers is " << sum
    return 0;
}
```

3.2

```
#include <iostream>;
using namespace std;
int main()
{
    const int number1, number2, product;
    cout << "Enter two numbers and I will multiply\n";
    cout << "them for you.\n";
    cin >> number1 >> number2;
    product = number1 * number2;
    cout << product
    return 0;
}
```

4

A customer in a store is purchasing five items. The prices of the five items are:
Price of item 1 = $15.95
Price of item 2 = $24.95
Price of item 3 = $6.95
Price of item 4 = $12.95
Price of item 5 = $3.95

Write a program that holds the prices of the five items in five variables. Display each items price, the subtotal of the sale, the amount of sales tax, and the total. Assume the sales tax is 7%.

5

A county collects property taxes on the assessment value of property, which is 60 percent of the propertys actual value. If an acre of land is valued at $10,000, its assessment value is $6,000. The property tax is then 75 for each $100 of the assessment value. The tax for the acre assessed at $6,000 will be $45.
Write a program that asks for the actual value of a piece of property and displays the assessment value and property tax.

6

Write a program that asks for five test scores. The program should calculate the average test score and display it. The number displayed should be formatted in fixed-point notation, with one decimal point of precision.

7

Write a program that asks the user to enter two numbers. The program should use the conditional operator to determine which number is the smaller and which is the larger.

8

Create a change-counting game that gets the user to enter the number of coins required to make exactly one dollar. The program should ask the user to enter the number of pennies, nickels, dimes, and quarters. If the total value of the coins entered is equal to one dollar, the program should congratulate the user for winning the game. Otherwise, the program should display a message indicating whether the amount entered was more than or less than one dollar.