COP3014-Foundations of Computer Science
Assignment #1
100 points

No Late Assignments will be Accepted!

In this assignment you will implement a program called **"call_info.cpp"** that uses three functions, **input**, **output**, and **process**. You must use input and output parameters when implementing this program. The function **input** will get the input from the user, the function **process** will perform the necessary calculations required by your algorithm, and the function **output** will print the results and any output that needs to be printed.

The program **"call_info.cpp"** will calculate the net cost of a call **(net_cost)**, the tax on a call **(call_tax)** and the total cost of the call **(total_cost).** The program should accept **a cell phone number (cell_num)**, **the number of relay stations(relays),** and **the length in minutes of the cal (call_length).** Please consider the following

1) The **tax rate (in percent) on a call (call_rate)** is simply based on the number of **relay stations (relays)** used to make the call (1<= **relays** <=5 then **tax_rate** = 1%; 6<= **relays** <=11 then **tax_rate** = 3%; 12<= **relays** <=20 then **tax_rate** = 5%; 21<= **relays** <=50 then **tax_rate** = 8%; **relays** >50 then **tax_rate** =12%) .

2) The **net cost of a call** is calculated by the following formula: **net_cost = (relays / 50.0 * 0.40 * call_length).**

3) The tax on a call is calculated by the following formula: **call_tax = net_cost * tax_rate / 100.**

4). **The total cost of a call (rounded to the nearest hundredth)** is calculated by the following formula: **total_cost = net_cost + call_tax .** **All tax and cost calculations** should be rounded to the nearest hundredths. Use the following format information to print the variables:

Field	Format
Cell Phone	XXXXXXXXX
Number of Relay Stations	�� XXXXXX
Minutes Used	���� XXXXXX
Net Cost	���� XXXXXXX.XX
Call Tax	XXXXX.XX

Total Cost of Call   ◆◆ **XXXXXXX.XX**

Handing in your program

Electronically submit ***"call_info.cpp"*** in the Assignments area of Blackboard before the due date and time. Remember, no late assignments will be accepted.

Input Example: (Your program should prompt the user for input)

Enter your Cell Phone Number: 9548267184
Enter the number of relay stations: **40**
Enter the length of the call in minutes: **56**

Output Example: (Your output should look lit this)

```
**************************************************
Cell Phone Number:  9548267184
**************************************************
```

Number of Relay Stations: 40

Length of Call in Minutes: 56

Net Cost of Call: 17.92

Tax of Call: 1.43

Total Cost of Call: 19.35

Ask the user if more calculations are necessary with the following prompt:

Would you like to do another calculation for another employee (enter y or n)?