# Introduction to Computer Science and Programming 1

# CSCI120

### Chapter3: Conditional Statements (if/else)

Chapter**3**-Lab

**Note:** This document has been designed and developed as part of an initiative for creating an OER (Open Education Resource) package for the course CSCI 120 at Columbia College.

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# Requirements

* For each of the problem below write a Python program.
* When defining variable names, use proper and meaningful names for the variables.
* Follow Python’s convention for naming your variables (camel case)
* Remember Python is sensitive about indentation. Use proper indentation.
* Add comments to your code.
* Refer to lecture notes and lessons if you need any help.
* Write all the python programs in one single file. Separate your answers for each questions as following: Example:

##Problem 1

print(“Problem1--------------------------------------------”)

Python code for problem 1

##Problem 2

print(“Problem2--------------------------------------------”)

Python code for problem 2

**Problem1**

* Write a Python program that accepts both positive numbers and negative numbers. This program will prompt the user to enter a number and then checks it whether it is valid or not. A valid number:
  + Only contains digits
  + Does not start with digit 0
  + If it is negative the first character is –
  + If it is positive there is no + sign before the first digit

# Problem2

* Write a python program which receives three positive numbers from the user and checks whether there is a perpendicular triangle whose side’s lengths are the numbers the user has entered.

# Problem3

* Write a python program which receives a word from the user and checks whether the input word is an acceptable name for a variable in Python. (No need to check the Camel Case format).
* An acceptable variable name 1- only contains digits and alphabet and underscore 2-It does not start with a number 3- It has at least one character

# Problem4

* Write a python program which receives a word from the user and checks whether the input word is an acceptable name for a constant in Python.
* An acceptable constant name in Python is all upper case and could contain an underscore.

# Problem5

* The table below shows the provincial tax bracket in British Columbia, Canada in 2022. Prompt the user to enter a number that represents the total salary of a person and calculates how much tax s/he will pay in his highest tax bracket.

**Table

Description automatically generated**

Reference:: https://www.wealthsimple.com/en-ca/learn/bc-tax-brackets#british\_columbia\_2021\_tax\_rates

**Good Luck ☺**