# 03603111: Programming Fundamentals I

| | Conditionals | Lab 4 |
|---|---|---|

**Objective:**

- Understand and use *if* structures to execute code based on a condition.
- Understand how to use logical operators in the test condition of *if* structure.
- Understand and use if-else and nested if.

**Exercise 1:** Write a program that takes three integer numbers and show the maximum number.

```
Enter three integer numbers: 5 16 11

The maximum number is 16.
```

**Exercise 2:** Write a program that authenticates a user by checking his/her password. If the password is correct, the program displays some greeting message.

```
Enter your password: Bourne

Access Denied!
Program terminated.
```

```
Enter your password: Bourne007

Access Granted!
Welcome to MI6.
```

**Exercise 3:** Write a program that checks whether an input integer is negative or positive.

```
Enter an integer number: -1

The number you enter is negative.
```

```
Enter an integer number: 100

The number you enter is positive.
```

**Exercise 4.** Write a program which reads two integer values. If the first is less than the second, print the message "Up!". If the second is less than the first, print the message "Down!". If the numbers are equal, print the message "Equal!".

```
Enter two integer numbers: 10 5

Down!
```

**Exercise 5.** Write a program that translates the meaning of traffic light colors. Red light is represented by character 'R' and green by 'G'. If the user inputs 'R', the program will print out "Stop". If the user inputs 'G', the program will display "Go!".

```
Input traffic light color (R=Red,G=Green): R

Stop!
```

**Exercise 6.** Write a program that gets five integer values and shows the maximum and minimum values among them.

```
Input1#:0
Input2#:-7
Input3#:3
Input4#:11
Input5#:4

Maximum: 11
Minimum: -7
```

**Extra.** Write a program that takes 3 characters and then counts the number of consonants and vowels as shown in the following example.

```
Input three characters:> z H a

The number of constants is 2.
The number of vowels is 1.
```