3 Conditional and Looping Statements

Exercise 1

Name your file: MonthNames.py Write a program that reads an integer value between 1 and 12 from the user and prints output the corresponding month of the year. An example run of the program (numbers in bold are typed in by the user) Enter the month: 3 Month 3 is March

```
Enter the number to  print the corresponding month:6
6th Month is June
```

```
Enter the number to  print the corresponding month: 15
There is no corresponding Month with the number you entered
```

Exercise 2

A certain cinema currently sells tickets for a full price of 6 pounds, but always sells tickets for half price to people who are less than 16 years old, and for a third of the price for people who are 60 years old or more. An example run of the program (numbers in bold are typed in by the user) Enter your age: 63 Your ticket costs £2.00

```
Enter Your Age :0
Invalid age
```

```
Enter Your Age :-1
Invalid age
```

```
Enter Your Age :15
you are eligible for half price,£3.00
```

```
Enter Your Age :16
There is no discount for your age group,price is £6.00
```

```
Enter Your Age :60
There is a discount for your age group , price £2.00
```

Exercise 3

Name your file: BodyMassIndex.py Write a program to calculate your BMI and give weight status. Body Mass Index (BMI) is an internationally used measurement to check if you are a healthy weight for your height.The metric BMI formula accepts weight in kilograms and height in meters: BMI= weight(kg)/height2(m2) BMI Weight Status Categories table BMI range - kg/m2 Category Below 18.5 Underweight 18.5 -24.9 Normal 25 - 29.9 Overweight 30 & Above Obese An example run of the program (numbers in bold are typed in by the user) Enter your weight in (kg): 75 Enter your height in (m): 1.70 Your BMI is: 25.95 You are in the “overweight” range.

```
Enter your weight in Kg: 0
Enter your Height in Meter: .2
Body Mass Index : {0.0}
invalid BMI
```

```
Enter your weight in Kg: 17
Enter your Height in Meter: 1.3
Body Mass Index : {10.059171597633135}
You are under weight, you need more nutritious food to maintain the Normal BMI
```

```
Enter your weight in Kg: 32
Enter your Height in Meter: 1.3
Body Mass Index : {18.934911242603548}
you have an Ideal BMI,Maintain the current lifestyle to keep it Ideal
```

```
Enter your weight in Kg: 55
Enter your Height in Meter: 1.42
Body Mass Index : {27.276334060702244}
you are over weight,Need regulare exercise and good eating habits
```

```
Enter your weight in Kg: 91.7
Enter your Height in Meter: 1.7
Body Mass Index : {31.730103806228378}
You are Obese,you need to have rigorous excercise and well contolled eating habits
```

Exercise 4

Write a Python program to receive 3 numbers from the user and print the greatest among them.

```
Enter 1St number :405
Enter 2nd number :308
Enter 3rd number :902
The highest Number is : 902
```

Exercise 5

Find the factorial of a given number using loops(note the number is received from the user)

```
Enter a number: 10
10! = 10 × 9 × 8 × 7 × 6 × 5 × 4 × 3 × 2 × 1 = 3628800
```

Exercise 6

Reverse a number using while loop

```
Enter the number to be reversed:5263
Reversed Number: 3625
```

Exercise 7

Finding the multiples of a number using loop

```
Enter the number to find the multiplier :10
Enter the count, number to be multiplied:10
1 x 10 = 10
2 x 10 = 20
3 x 10 = 30
4 x 10 = 40
5 x 10 = 50
6 x 10 = 60
7 x 10 = 70
8 x 10 = 80
9 x 10 = 90
10 x 10 = 100
```

Exercise 8

Write a program to print the inputted value as it is and break the loop if the value is 'done'. Example run of the program :hello there hello there :finished finished :done Done

```
Enter what you want to print: hello
The word you want to print is hello
Enter what you want to print: hi
The word you want to print is hi
Enter what you want to print: DONE
The word you want to print is DONE
```

Exercise 9

Write a program that prints the numbers from 1 to 10. But for multiples of three print "Fizz" instead of the number and for the multiple of five print "Buzz". For numbers which are multiples of both three and five print "FizzBuzz"

```
1
2
Buzz
4
FizzBuzz
Buzz
7
8
Buzz
FizzBuzz
```

Exercise 10

Write a program to print the following pattern: 5 4 3 2 1
4 3 2 1
3 2 1
2 1
1

```
enter number of rows: 5
54321
4321
321
21
1
```