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

```
In [6]: n=eval(input("Enter the month : "))
        if (n==1):
                print(" Month 1 is January")

        elif(n==2):
                print(" Month 2 is February")

        elif(n==3):
                print(" Month 3 is March")

        elif(n==4):
                print(" Month 4 is April")

        elif(n==5):
                print(" Month 5 is May")

        elif(n==6):
                print(" Month 6 is June")

        elif(n==7):
                print(" Month 7 is July")

        elif(n==8):
                print(" Month 8 is August")

        elif(n==9):
                print(" Month 9 is September")

        elif(n==10):
                print(" Month 10 is October")

        elif(n==11):
                print(" Month 11 is November")

        elif(n==12):
                print(" Month 12 is December")

        else:
                 print("No such month")
```

```
Enter the month :  10
 Month 10 is October
```

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

```
In [16]: n=eval(input("Enter your age :"))
         if (n<16):
             print("Your ticket costs  £3.00")

         elif(n<60):
             print("Your ticket costs  £6.00")

         else:
             print("Your ticket costs  £2.00")
```

```
Enter your age : 15
Your ticket costs  £3.00
```

```
In [15]: n=eval(input("Enter your age :"))
         if (n<16):
             ticket=6/2
             print("Your ticket costs  £",ticket)

         elif(n>60):
             ticket=6/3
             print("Your ticket costs  £",ticket)

         else:
             print("Your ticket costs  £ 6.00")
```

```
Enter your age : 77
Your ticket costs  £ 2.0
```

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.

```
In [57]: weight_kg=float(input("Enter your weight(kg) :"))
         height_m=float(input("Enter your height(m) :"))
         BMI= weight_kg/(height_m**2)
         if(BMI<18.5):
                 print("Underweight")
         elif 18.5<= BMI <25:
```

```python
        print("Normal")
elif(25<= BMI < 30):
        print("Overweight")
else:
        print("Obese")
```

```
Enter your weight(kg) : 60
Enter your height(m) : 1.66
Normal
```

Exercise 4

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

```python
In [84]:  a=eval(input("Enter a value "))
          b=eval(input("Enter a value "))
          c=eval(input("Enter a value "))
          if(a>b and a>c):
                  print(" The largest number is " , a)
          elif(b>a and b>c):
                  print(" The largest number is " , b)
          else:
                  print("The largest number is " , c)
```

```
Enter a value  7
Enter a value  9
Enter a value  3
 The largest number is  9
```

Exercise 5

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

```python
In [96]:  n=eval(input("Enter a number "))
          fact=1
          for n in range (1,n+1):
              fact*=n
          print(fact)
```

```
Enter a number  5
120
```

Exercise 6

Reverse a number using while loop

```python
In [16]:  i=10
          while i>=1:
              print(i)
              i-=1
```

```
10
9
8
7
6
5
4
3
2
1
```

Exercise 7

Finding the multiples of a number using loop

```python
In [42]: num=eval(input("Enter a number for multiplication table "))
         for i in range(1,11):
             ans=num*i
             print(ans)
```

```
2
4
6
8
10
12
14
16
18
20
```

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

```python
In [69]: while True:

             s=input(":")
             if s=="done":
                 break
             print(s)

         print("Done")
```

```
: hi
hi
: done
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"

In [89]:
```python
for i in range(1,11):
    if i%3==0 and i%5==0:
        print("FizzBuzz")
    elif i%3==0:
        print("Fizz")
    elif i%5==0:
        print("Buzz")

    else:
        print(i)
```

```
1
2
Fizz
4
Buzz
Fizz
7
8
Fizz
Buzz
```

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

In [109…
```python
for i in range (5,0,-1):
    for j in range(i,0,-1):
        print(j,end=" ")
    print( )
```

```
5 4 3 2 1
4 3 2 1
3 2 1
2 1
1
```