

Python-Worksheet 1

In [1]:

#Q11. Write a python program to find the factorial of a number.

In [2]:

```
num = int(input("Enter a number: "))
factorial = 1
if num < 0:
    print(" Factorial does not exist for negative numbers")
elif num == 0:
    print("The factorial of 0 is 1")
else:
    for i in range(1,num + 1):
        factorial = factorial*i
    print("The factorial of",num,"is",factorial)
```

Enter a number: 6
The factorial of 6 is 720

In [3]:

#12. Write a python program to find whether a number is prime or composite.

In [4]:

```
# A default function for Prime checking conditions
def PrimeChecker(a):
    # Checking that given number is more than 1
    if a > 1:
        # Iterating over the given number with for loop
        for j in range(2, int(a/2) + 1):
            # If the given number is divisible or not
            if (a % j) == 0:
                print(a, "is not a prime number")
                break
        # Else it is a prime number
    else:
        print(a, "is a prime number")
    # If the given number is 1
    else:
        print(a, "is not a prime number")
# Taking an input number from the user
a = int(input("Enter an input number:"))
# Printing result
PrimeChecker(a)
```

Enter an input number:5
5 is a prime number

In [5]:

#13. Write a python program to check whether a given string is palindrome or not

In [6]:

```
def isPalindrome(s):  
    return s == s[::-1]  
  
s = "malayalam"  
ans = isPalindrome(s)  
  
if ans:  
    print("Yes")  
else:  
    print("No")
```

Yes

In [7]:

#14. Write a Python program to get the third side of right-angled triangle from two given s

In [8]:

```
def pythagoras(opposite_side,adjacent_side,hypotenuse):  
    if opposite_side == str("x"):  
        return ("Opposite = " + str(((hypotenuse**2) - (adjacent_side**2))**0.5))  
    elif adjacent_side == str("x"):  
        return ("Adjacent = " + str(((hypotenuse**2) - (opposite_side**2))**0.5))  
    elif hypotenuse == str("x"):  
        return ("Hypotenuse = " + str(((opposite_side**2) + (adjacent_side**2))**0.5))  
    else:  
        return "You know the answer!"  
  
print(pythagoras(3,4,'x'))  
print(pythagoras(3,'x',5))  
print(pythagoras('x',4,5))  
print(pythagoras(3,4,5))
```

Hypotenuse = 5.0
Adjacent = 4.0
Opposite = 3.0
You know the answer!

In [9]:

#15. Write a python program to print the frequency of each of the characters present in a g

In [10]:

```
string=input("Enter the string ")
freq=[None]*len(string)
for i in range(0,len(string)):
    freq[i]=1
    for j in range(i+1,len(string)):
        if(string[i]==string[j]):
            freq[i]=freq[i]+1
            string=string[:j]+'0'+string[j+1:]
print("Character and their frequency");
for i in range(0,len(freq)):
    if(string[i]!=' ' and string[i]!='0'):
        print(string[i]+"="+str(freq[i]))
```

Enter the string Banana
Character and their frequency
B=1
a=3
n=2

In []: