

## Python Worksheet 1

1. c
2. b
3. c
4. a
5. d
6. c
7. a
8. c
9. a,c
10. a,b

In [6]: *#Python program to find the factorial of a number*

```
def factorial(n):
    if (n==1 or n==0):
        return 1;
    else:
        return n*factorial(n-1);
num=int(input())
print("Factorial of ",num," is",factorial(num))

5
Factorial of 5 is 120
```

In [21]: *#Python program to find whether a number is prime or composite*

```
num = int(input())
if num > 1:
    for i in range(2, int(num/2)+1):
        if (num % i) == 0:
            print(num, "is not a prime number")
            break
    else:
        print(num, "is a prime number")
else:
    print(num, "is not a prime number")

2
2 is a prime number
```

In [1]: *#Python program to find whether a given string is palindrome or not*

```
def isP(s):
    return s==s[::-1]
s=input()
ans=isP(s)
if ans:
    print(s, " is a palindrome")
else:
    print(s, " is not a palindrome")

malayalam
malayalam is a palindrome
```

In [5]: *#Python program to get the third side of the right-angled triangle from two given sides.*

```
def tri(opp_side,adj_side,hypo):
    if opp_side == str("x"):
        return ("Opposite = "+str(((hypo**2)-(adj_side**2))**0.5))
    elif adj_side== str("x"):
        return ("Adjacent = "+str(((hypo**2)-(opp_side**2))**0.5))
    elif hypo==str("x"):
        return ("Hypotenuse = "+str(((opp_side**2)+(adj_side**2))**0.5))
one=int(input())
two=int(input())
print(tri(one,two,'x'))

3
4
Hypotenuse = 5.0
```

In [9]: *#Python program to print the frequency of each of the character present in a given string.*

```
s=input()
freq={}
for i in s:
    if i in freq:
        freq[i]+=1
    else:
        freq[i]=1
print("Count of all characters in ",s," is :\n"+str(freq))

vsdguhjvasdlhcbasdll
Count of all characters in vsdguhjvasdlhcbasdll is :
{'v': 2, 's': 3, 'd': 3, 'g': 1, 'u': 1, 'h': 2, 'j': 1, 'a': 2, 'l': 3, 'c': 1, 'b': 1}
```

In [ ]: