# Python worksheet 1

MCQ ANSWER:

1. %
2. 0.666
3. 24
4. True
5. 4
6. The finally block will be executed no matter if the try block raises an error or not.
7. It is used raised an exception.
8. In defining a generator.

QUESTION 9 TO QUESTION 10:

1. _abc
2. All of the above

QUESTION 11 TO QUESTION 15:

11 Answer: Factorial is a non negative integer. It is the product of all positive integres less than or equal to that number you ask for factorial. It is denoted by an exclamation sign(!) n! = n*(n-1)* (n-2).....*1 4! = 4*321=24 The factorial value of 4 is 24.

In [ ]:
```
num = int(input("Enter a number: "))
factorial = 1
```

In [ ]:
```
if num < 0:
    print(" Factorial does not exist for negative number")
elif num == 0:
    print("The factorial of 0 is 1")
else:
    for i in range(1,num + 1):
        factorial = factorial*!
    print("The factorial of",num,"is",factorial)
```

In [ ]:
```
def fact(n):
    return 1 if (n==1 or n==0) else n * fact(n-1):

    num = 5
    print("Factorial of",num,"is",)
    fact(num))
```

In [ ]:
```
import math
def fact(n):
    return(math.factorial(n))

num = int(input("Enter the number:"))
f = fact(num)
print("Factorial of", num, "is", f)
```

1. ANSWER:

A number which is greater than 1 is said to prime if it has no other factors other than 1 and itself. The numbers 0 and 1 are neither prime nor composite. And remaining all number are composite numbers.

In [ ]:
```
num = int(input("Enter any number : "))

if num > 1:
    for i in range(2, num):
        if num % i == 0:
            print(num, "is NOT a prime number")
            break
        else:
            print(num, "is a PRIME number")
        elif num == 0 or num == 1:
            print(num, "is NEITHER prime nor composite nymber.")
        else:
            print(num, "is a PRIME number")
```

1. ANSWER:

Write a python program check if it string is palindrome or not.

Examples: Input : malayalam Output : Yes

Input : geeks Output : No

In [ ]:
```
def isPalindrome(s) :
    return s == s[: :-1]

# Driver code
s = "malayalam"
ans = isPalindrome(s)
if ans:
    print("Yes")
else:
    print("No")
```

In [ ]:
```
# function to check string is
# palindrome or not

def isPalindrome(str):
    # Run loop from 0 to len/2
    for i in range(0, int(len(str)/2)):
        if str[i] != str[len(str)-i-1]:
            return False
    return True
# main function
s = "malayalam"
ans = isPalindrome(s)
if (ans):
    print("Yes")
else:
    print("No")
```

1. ANSWER:

In [ ]:
```
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(pythagorus('x',4,5))
print(pythagorus(3,4,5))
```

In [ ]:
```
Sample outpout:
    hypotenuse = 5.0
    Adjacent = 4.0
    Opposite = 3.0
```

1. ANSWER:

In [ ]:
```
string=input("Enter the string  !!")
newstr=list(string)
newlist=[]

for j in newstr:
    if j not in newlist:
        newlist.append(j)
        count=0
        for i in range(len(newstr)):
            if j==newstr[i]:
                count+=1
        print("{},{}".format(j,count))
```

THE END

In [ ]:
```

```