FUNCTIONS

PROGRAMS

#Python Program to add two number through function

```
def add2numbers(x, y):
# add 2 numbers x,y and store result in r
    r=x+y
    return r
# take input from the user
num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))
print("The sum. of", num1,"and", num2,"is", add2numbers(num1, num2))
```

#Python Program to Find HCF or GCD through function

```
def findHCF(x, y):
# choose the smaller number
    if x > y:
        smaller = y
    else:
        smaller = x
    for i in range(1, smaller+1):
        if((x % i == 0) and (y % i == 0)):
            hcf = i
    return hcf

num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))
print("The H.C.F. of", num1,"and", num2,"is", findHCF(num1, num2))
```

```
#find the Max of two numbers through function
def max_of_two( x, y ):
    if x > y:
        return x
    return y
num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))
print("The maximum of", num1,"and", num2,"is", max_of_two( num1, num2 ))

#Print the even numbers from a given list
def isevennum(l):
    enum = []
    for n in l:
        if n % 2 == 0:
            enum.append(n)
    return enum
print(isevennum([1, 2, 3, 4, 5, 6, 7, 8, 9]))

#check the number is prime or not
def isprime(n):
    if (n==1):
        return False
    elif (n==2):
        return True;
    else:
        for x in range(2,n):
            if(n % x==0):
                return False
        return True
num = int(input("Enter a number: "))
print(isprime(num))
```

```
#sum all the numbers in a list
def sum(numbers):
    total = 0
    for x in numbers:
        total += x
    return total
n=[3,4,6,5,6,6]
print(sum(n))
#to reverse a string
def stringreverse(str1):
    rstr1 = ''
    index = len(str1)
    while index > 0:
        rstr1 += str1[ index - 1 ]
        index = index - 1
    return rstr1
nm=input("enter your name")
print(stringreverse(nm))

#checks whether a passed string is palindrome or not
def isPalindrome(str):
        leftpos = 0
        rightpos = len(str) - 1
        while rightpos >= leftpos:
            if not str[leftpos] == str[rightpos]:
                    return False
            leftpos += 1
            rightpos -= 1
        return True
print(isPalindrome('jahaj'))
```

```
#function that takes a list and returns a new list with unique elements of the first list
def uniquelist(l):
  x = []
  for a in l:
    if a not in x:
      x.append(a)
  return x

print(uniquelist([3,2,1,2,3,3,4,5]))

#to find the factorial of a given number
def factorial(n):
    fact = 1
    for i in range(1,n+1):
        fact = fact * i
    return fact
 print ("The factorial of 5 is : ",end="")
print (factorial(5))

#to check whether a number is perfect or not
def perfectnumber(n):
    sum = 0
    for x in range(1, n):
        if n % x == 0:
            sum += x
    return sum == n
no=int(input("enter a number"))
print(perfectnumber(no))
```