6.1

creating a function for adding two numbers with arguments & return generated

```
def sum(x,y):
  c=x+y
  return(c)


a=int(input('Enter one number'))
b=int(input('Enter another number'))
print(" The sum of two numbers is", sum(a,b))
```

6.2

function to check whether year is leap or not

with argument & without return type

```
def leap(year):
  if (year%400==0) or ((year%4==0) and (year%100!=0)) :
    print(year, " is a leap year")
  else:
    print(year, " is not a leap year")


x=int(input('Enter any year'))
leap(x)
```

6.3

```python
def area():
 l=int(input("Enter length: "))
 b=int(input("Enter breadth: "))
 a=l*b
 return(a)


print(" The area of the rectangle is", area())
```

6.4

```python
#   Given Number is a palindrome
def palindrome():
 n=int(input('Enter a Number'))
 a=0
 t=n
 while n!=0 :
  a = a*10 + n % 10
  n= n // 10
 if a == t :
  print('The number {0} is a Palindrome'.format(t))
 else:
  print('The number {0} is not a Palindrome'.format(t))


palindrome()
```

6.5

 # Factorial of a function using user defined function

```
def fact(n):
  x=1
  for c in range (1,n+1):
    x=x*c
  return x
N=int(input('Enter a Number whose factorial needs to be found out '))
print("Factorial of the number %s is %s" % (N, fact(N)))
```

6.6

 # to display nth fibonacci series

```
def fib(n):
  a=0
  b=1
  if n==1 :
    c=0
  elif n==2 :
    c=1
  else:
    for i in range(3,n+1):
      c=a+b
      a=b
      b=c
```

```python
        return c

nfib=int(input('INPUT THE TERM OF THE FIBONACCI SERIES TO BE DISPLAYED '))
print('the %s term of the fibonacci series is %s' %(nfib,fib(nfib)))
```

INPUT THE TERM OF THE FIBONACCI SERIES TO BE DISPLAYED 3

the 3 term of the fibonacci series is 1

6.7

```python
# To display the GCD of two numbers
def big_small(x,y):
  if x>y:
    return x,y
  else:
    return y,x


def gcd(x,y):
  a,b=big_small(x,y)
  # a, b =
  while a%b!=0:
    t=a%b
    a=b
    b=t
  return b


n1=int(input('input one number '))
n2=int(input('input another number '))
print('GCD of the two numbers %d and %d is %d'%(n1,n2,gcd(n1,n2)))
```

6.8

 # to find whether a number is prime or not

```
def prime(n):
  for i in range (2, n//2):
    if n%i==0:
      print('%d is not prime'%n)
      break
  else:
    print('%d is prime'%n)
x= int(input('Enter a number'))
prime(x)
```