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))**

OUTPUT:

Enter one number3

Enter another number7

The sum of two numbers is 10

**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)**

OUTPUT:

Enter any year1900

1900 is not a leap year

**6.3**

**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())**

OUTPUT:

Enter length: 50

Enter breadth: 20

The area of the rectangle is 1000

**6.4**

**#  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()**

OUTPUT:

Enter a Number34543

The number 34543 is a 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)))**

OUTPUT:

Enter a Number whose factorial needs to be found out 5

Factorial of the number 5 is 120

**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**

**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)))**

OUTPUT:

INPUT THE TERM OF THE FIBONACCI SERIES TO BE DISPLAYED 3

the 3 term of the fibonacci series is 1

**6.7**

**# 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)))**

OUTPUT:

input one number 35

input another number 14

GCD of the two numbers 35 and 14 is 7

**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)**

OUTPUT:

Enter a number13

13 is prime