1)# converting from binary to decimal

b\_num = list(input("Input a binary number: "))

value = 0

for i in range(len(b\_num)):

digit = b\_num.pop()

if digit == '1':

value = value + pow(2, i)

print("The decimal value of the number is", value)

O/p:Input a binary number: 1000001

The decimal value of the number is 65

2)# fibbonaci sereies using while loop

n = int(input("Enter the value of 'n': "))

a = 0

b = 1

sum = 0

count = 1

print("Fibonacci Series: ", end = " ")

while(count <= n):

print(sum, end = " ")

count += 1

a = b

b = sum

sum = a + b

O/p:Enter the value of 'n': 6

Fibonacci Series: 0 1 1 2 3 5

3)# To display the multiplication table

num = int(input("Display multiplication table of? "))

for i in range(1, 11):

print(num, 'x', i, '=', num\*i)

O/p:Display multiplication table of? 7

7 x 1 = 7

7 x 2 = 14

7 x 3 = 21

7 x 4 = 28

7 x 5 = 35

7 x 6 = 42

7 x 7 = 49

7 x 8 = 56

7 x 9 = 63

7 x 10 = 70

4)# finding gcd of two numbers

def gcd(a,b):

if (a == 0):

return b

if (b == 0):

return a

if (a == b):

return b

if (a > b):

return gcd(a-b, b)

return gcd(a, b-a)

a = 98

b = 56

if(gcd(a, b)):

print('GCD of', a, 'and', b, 'is', gcd(a, b))

else:

print('not found')

o/p:GCD of 98 and 56 is 14

5)# def reverse(s):

if len(s) == 0:

return s

else:

return reverse(s[1:]) + s[0]

s = "hello"

print ("The original string is : ",end="")

print (s)

print ("The reversed string(using recursion) is : ",end="")

print (reverse(s))

O/p:The original string is : hello

The reversed string(using recursion) is : olleh

6)numbers = (1, 2, 3, 4, 5, 6, 7) # Declaring the tuple

count\_odd = 0

count\_even = 0

for x in numbers:

if not x % 2:

count\_even+=1

else:

count\_odd+=1

print("Number of even numbers :",count\_even)

print("Number of odd numbers :",count\_odd)

O/p:Number of even numbers : 3

Number of odd numbers : 4