Module 3

1) Convert Binary number to decimal

#110010

```
num = int(input("Enter your number:"))
i=0
Value = 0
# Convert
while (num>0):
    i= i+1
    rem=num %10
    Value += rem *2**i
    num = num//10
Print ("decimal number is:", Value)
```

→ Enter your number: 110010
the decimal number is : 36.

2) Fibonacci series

```
def fibonacci(n):
    a=0
    b=1
    if n<2:
        Print("Incorrect input")
    Else:
        Print("0")
        Print("1")
        for i in range(2,n):
            c=a+b
            a=b
            b=c
Print("{3}", format())
```

- fibonacci(7)

0
1
1
2
3
5
8

3) Multiplication Table.

```
a = int(input("Enter the number for table you want:"))
i = 0
while (i<10):
    i = i+1
    print("{2} * {0} = {1}".format(i, i*a, a))
```

Enter the number for table you want : 2

2 * 1 = 2
2 * 2 = 4
2 * 3 = 6
2 * 4 = 8
2 * 5 = 10
2 * 6 = 12
2 * 7 = 14
2 * 8 = 16
2 * 9 = 18
2 * 10 = 20.

4) GCD and HCF of two numbers:

```
x = int(input("Enter the number:"))
y = int(input("Enter the numbers:"))
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
```

```
Print("The H.C.F. of", x, "and", x, "is", hcf)

x = int(input("Enter a number: "))
y = int(input("Enter a number: "))
if x > y:
   greater = x
else:
   greater = y
while(True):
   if((greater % x == 0) and (greater % y == 0)):
      lcm = greater
      break
   greater += 1
print("The LCM is :", lcm)
```

→ Enter a number : 10
Enter a number : 5
The HCF of 10 and 10 is 5
Enta a number : 54
Enter a number : 24
The LCM is : 216