

|1)

```
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)
```

output :- Input a binary number:100

the decimal value of the number is 4

2)

```
nterms = int(input("how many terms?"))

n1, n2 = 0, 1

count = 0

if nterms <= 0:

    print("enter positive integer")
```

```
print("enter positive integer")

elif nterms == 1:

    print("fibonacci sequence upto", nterms)

    print(n1)

else:

    print("Fibonacci sequence:")

    while count < nterms:

        print(n1)

        nth = n1 + n2

        n1 = n2

        n2 = nth

        count += 1
```

output:- how many terms?8

Fibonacci sequence:

0

1

1

1

2

3

5

8

13

3)

num=2

for i in range(1, 11):

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

output:-

$2 \times 1 = 2$

$2 \times 2 = 4$

$2 \times 3 = 6$

$2 \times 4 = 8$

$$2 \times 5 = 10$$

$$2 \times 6 = 12$$

$$2 \times 7 = 14$$

$$2 \times 8 = 16$$

$$2 \times 9 = 18$$

$$2 \times 10 = 20$$

5)

```
def compute_hcf(x, y):  
  
    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
```

```
return hcf
```

```
num1=56
```

```
num2=12
```

```
print("the H.C.F is", compute_hcf(num1, num2))
```

output:-the H.C.F is 4

6)

```
word = input("Input a word to reverse: ")
```

```
for char in range(len(word) - 1, -1, -1):
```

```
    print(word[char], end="")
```

output:-

```
Input a word to reverse: pavan
```

```
navap
```

7)

```
numbers = (1, 2, 3, 4, 5)
```

```
count_odd = 0
```

```
count_even = 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)
```

output:-

number of even numbers: 2

number of odd numbers: 3

8)

```
for x in range(6):
```

```
    if (x == 3 or x==6):
```

```
        continue
```

```
print(x,end=' ')
print("\n")
output:- 0 1 2 4 5
```