01. Sonargaon University Grading System (0-100 marks)

```
marks = float(input("Enter marks (0-100): "))
if 0 <= marks <= 100:
    if marks >= 80:
        grade = "A+"
    elif marks >= 75:
        grade = "A"
    elif marks >= 70:
        grade = "A-"
    elif marks >= 65:
        grade = "B+"
    elif marks >= 60:
        grade = "B"
    elif marks >= 55:
        grade = "B-"
    elif marks >= 50:
        grade = "C+"
    elif marks >= 45:
        grade = "C"
    elif marks >= 40:
        grade = "D"
    else:
        grade = "F"

    print(f"Marks: {marks}, Grade: {grade}")
else:
    print("Invalid input! Please enter marks between 0 and 100.")
```

02. Fibonacci series using while loop

```
i = 1
a = 0
b = 1
sum = 1


n = int(input("Enter the range "))

while  i<=n:
    print(sum, end=" ")

    sum = a + b
    a = b
    b = sum
    i = i+1
```

03. Python program to check if a number is prime or composite

```
num = int(input("Enter a number: "))


if num > 1:
   for i in range(2, num):
      if num % i == 0:
         print("composite number")


         break
   else:
      print("prime number")
else:
   (print("neither composite number or prime"))
```

04.To find if a year is leap year or not

```
Y = int(input("Enter the year: "))


if Y % 4 == 0 and Y % 100 != 0:
    print(f"Year {Y} is a leap year")
else:
    if Y % 400 == 0:
        print(f"Year {Y} is a leap year")
    else:
        print(f"Year {Y} is not a leap year")
```

5.To find number of odd and even number list

#Odd number identify

```
n = int(input("Enter the range: "))
for i in range(1,n+1,2):
    print(i, end=",")
```

#even number identify

```
n = int(input("Enter the range: "))
for i in range(2,n+1,2):
    print(i, end=",")
```

6.To find the number of vowels and consonants in a word using function.

```
word = input("Enter the range: ")


vowel = "aeioUAEIOU"


vowel_count = 0
consonant_count = 0


for i in word:


   if i.isalpha():
      if i in vowel:


         vowel_count += 1
      else:
         consonant_count += 1


print(f'word = {word} \nvowel ={vowel_count} \n consonant = {consonant_count}')
```