

Sonargaon University



Department of Mechanical Engineering

Assignment Topic: Python Code

Course Title: Computer programming language sessional

Course Code: CSE1202

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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}')
```