

```
age=18
if age >= 18:
    print("you are eligible to vote")

you are eligible to vote

num=int(input("Enter a number:"))
if num % 2 == 0:
    print("The number even number")
else:
    print("The number odd number")

Enter a number:55
The number odd number

marks = int(input("Enter the number"))
if marks>=90:
    print("grade: A")
elif marks >=75:
    print("grade: B")
elif marks >=50:
    print("grade: C")
else:
    print("grade: F")

Enter the number7
grade: F

for i in range(5):
    print("interation:",i)

interation: 0
interation: 1
interation: 2
interation: 3
interation: 4

for i in range(5,10):
    print("interation:",i)

interation: 5
interation: 6
interation: 7
interation: 8
interation: 9

for i in range(5,50,10):
    print("interation",i)

interation 5
interation 15
interation 25
```

```
iteration 35
iteration 45

count=0
while count<5:
    print("count:",count)
    count += 1

count: 0
count: 1
count: 2
count: 3
count: 4
```

### control flow tools

```
for i in range(10):
    if (i == 5):
        break
    print(i)

0
1
2
3
4

# Continue
for i in range(10):
    if i == 5:
        continue
    print(i)

0
1
2
3
4
6
7
8
9

for i in range(10):
    if i == 5:
        pass
    print(i)
```

0  
1  
2  
3  
4  
5  
6  
7  
8  
9

```
number=int(input("Enter a number"))
if number % 2==0:
    print("The number is even")
else:
    print("The number is odd")
```

Enter a number55  
The number is odd

Sum of number in range

```
Start = int(input("Enter the start of the range:"))
end = int(input("Enter the end of the range:"))
sum = 0
for i in range(Start,end +1):
    sum += i
print("The sum is:",sum)
```

Enter the start of the range:5  
Enter the end of the range:10  
The sum is: 45

Program to find the factorial in

```
number = int(input("enter a number."))
factorial =1
for i in range(1,number+1):
    factorial *=i
    print("the factorial is",factorial)
```

enter a number.5  
the factorial is 1  
the factorial is 2  
the factorial is 6  
the factorial is 24  
the factorial is 120

**Fibonacci sequence**

```

n = int (input("Enter the of terms:"))
a,b=0,1
for i in range(n):
    print(a, end=" ")
    a,b=b,a + b

```

Enter the of terms:5  
01123

```

num1 = float(input("Enter first number:"))
num2 = float(input("Enter second number:"))
operation=input("Enter operation(+,-,*,/,//):")
if operation == '+':
    print("Result:", num1 + num2)
elif operation == '-':
    print("Result:", num1 - num2)
elif operation == '*':
    print("Result:", num1 * num2)
elif operation == '/':
    print("Result:", num1 / num2)

```

```

else:
    print("invalid operation")

```

Enter first number:6  
Enter second number:9  
Enter operation(+,-,\*,/,//):/  
Result: 0.6666666666666666

```

num1 = float(input("Enter first number:"))
num2 = float(input("Enter second number:"))
operation=input("Enter operation(+,-,*,/,//):")
if operation == '+':
    print("Result:", num1 + num2)
elif operation == '-':
    print("Result:", num1 - num2)
elif operation == '*':
    print("Result:", num1 * num2)
elif operation == '/':
    print("Result:", num1 / num2)
elif operation == '//':
    print("Result:", num1 // num2)

```

```

else:
    print("invalid operation")

```

Enter first number:6  
Enter second number:9  
Enter operation(+,-,\*,/,//)://  
Result: 0.0

check the leap year

```
year=int(input("Enter a year:"))
if(year%4==0 and year % 100!=0)or(year%400==0):
    print("Leap year")
else:
    print("Not a Leap Year")
```

```
Enter a year:2024
Leap year
```

Find the largest of three numbers

```
num1=float(input("Enter first number:"))
num2=float(input("Enter second number:"))
num3=float(input("Enetr third number:"))
if num>=num2 and num1>=num3:
    print("Largest number is:",num)
elif num2>=num3:
    print("Largest number is:",num2)
else:
    print("Largest number is:",num3)
```

```
Enter first number:7
Enter second number:6
Enetr third number:18
Largest number is: 18.0
```

```
a = int(input("enter a number"))
if a>0:
    print("positive")
elif a<0:
    print("negative")
else:
    print("Zero")
```

```
enter a number66
positive
```

Sum of All Even Number in a range

```
start = int(input("Enter start of range:"))
end = int(input("Enter end of range:"))
even_sum=0
for num in range(start,end+1):
    if num%2==0:
        even_sum+=num
print("Sum of even numbers:",even_sum)
```

```
Enter start of range:6
Enter end of range:6
Sum of even numbers: 6
```

1st program

```
num1=float(input("Enter first number:"))
num2=float(input("Enter second number:"))
num3=float(input("Enter third number:"))
if num>=num2 and num2>=num3:
    print("Largest number is:",num)
elif num2>=num3:
    print("Largest number is:",num2)
else:
    print("Largest number is:",num3)
```

```
Enter first number:8
Enter second number:80
Enter third number:77
Largest number is: 2020
```

Even or Odd numbers

2nd program

```
num=int(input("enter a number:"))
if num % 2 == 0:
    print("The number even number")
else:
    print("The number odd number")
```

```
enter a number:5
The number odd number
```

3rd program

```
num=int(input("Enter the number:"))
if num % 2 == 0 and num % 3 == 0:
    print("The number is divisible by 5 and 6.")
else:
    print("The number is not divisible by 5 and 6.")
```

```
Enter the number:6
The number is divisible by 5 and 6.
```

program 4:

```
#4
num=int(input("Enter the number"))
```

```

if num % 4==0 and num % 100!=0 or num % 400==0:
    print("its leap year")
else:
    print("its not leap year")

```

Enter the number 2020  
its leap year

program 5: Check a number is divisible by 3

```

dvd=int(input("enter a number"))
if dvd/3:
    print("dvd is divisible by 3")
else:
    print("dvd is not divisible by 3")

```

enter a number 18  
dvd is divisible by 3

program 6:

```

num=int(input("enter the number "))
if num>10:
    print("Hello")
else:
    print("Good bye")

```

enter the number 44  
Hello

program 7:if-elif-else

```

num=int(input("Enter a number"))
if num>(10):
    print("It is small number")
elif num>(20):
    print("It is medium number")
else:
    print("It is greator number")

```

Enter a number 77  
It is small number

program 8:

```

num=int(input("enter the number"))
if (num % 5==0) and (num % 10!=0):
    print(f"{num} is divisible by 5 but not 10")

```

```
else:
    print(f"{num} doesn't satisfy the condition")

enter the number60
60 doesn't satisfy the condition
```

program 9:

```
number=int(input("Enter the number"))
if 100 <= number <= 200:
    print(f"{number} is between 100 and 200")
else:
    print(f"{number} is not between 100 and 200")

Enter the number133
133 is between 100 and 200
```

program 10:

```
num=int(input("enter the number"))
if (num > 100) and (num < 500):
    print("print a message")
else:
    print("not satisfy the condition")

enter the number223
print a message
```

program 11:

```
nterms=int(input("How many terms"))
if nterms <= 0:
    print("please enter a positive integer")
elif nterms == 1:
    print("Fibonacci sequence upto",nterms,":")
    print(n1)
else:
    print("Fibonacci sequence:")
    while count < nterms:
        print(n1)
        nth = n1 + num2
        n1 = num2
        n2 = nth
        count += 1

How many terms4
Fibonacci sequence:
```



```
for number in range(2,20,30):  
    print(num)
```

223