

```
age=18
if age<18:
    print('you are eligible to vote')

num=int(input('enter a number:'))
if num%2==0:
    print('even number')
```

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

enter a number:46666666666666666666  
number is even

```
marks=int(input('enter your marks'))
if marks>=90:
    print('grade:a')
elif marks>=75:
    print('grade:b')
elif marks>=50:
    print('grade:c')
else:
    print('grade:f')
```

```
for i in range(5):
    print('iteration:',i)

iteration: 0
iteration: 1
iteration: 2
```

```
iteration: 3
iteration: 4

for i in range(5,10):
    print('iteration:',i)

iteration: 5
iteration: 6
iteration: 7
iteration: 8
iteration: 9
```

while function

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

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

control flow tools

break : exit the loop prematurely

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

5
```

pass function

```
for i in range(3):
    if i==5:
        pass
    print(i)

0
1
2
```

sum of numbers in a given 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+=1
print('the sum is:',sum)

enter the start of the range:24
enter the end of the range:45
the sum is: 22

```

fibonacci numbers

```

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

enter the number of terms9
0 1 1 2 3 5 8 13 21

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:24
the factorial is: 620448401733239439360000

```

SIMPLE CALCULATOR USING IF ELSE

```

num1=float(input('enter first number:'))
num2=int(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:30
enter second number:4
enter operation(+,-,*,/):-
result: 26.0
```

check 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:2023
not a leap year
```

sum of all even numbers in range

```
start=int(input('enter start of range:'))
end=int(input('enter end of strange'))
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:20
enter end of strange30
sum of even numbers: 150
```