

if statement

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

is else statement

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

enter a number4
number is even
```

if else else

```
marks=int(input("enter your marks:"))
if marks>=90:
    print("your grade is A")
elif marks>=75:
    print("your grade is B")
elif marks>=50:
    print("your grade is C")
else:
    print("your grade is F")

enter your marks:58
your grade is C
```

for loop

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

iteration: 0
iteration: 1
iteration: 2
iteration: 3
iteration: 4
```

start stop

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

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

start step stop

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

```
iteration: 5  
iteration: 15  
iteration: 25  
iteration: 35  
iteration: 45
```

while loop

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

```
iteration: 0  
iteration: 1  
iteration: 2  
iteration: 3  
iteration: 4
```

control flow

```
for i in range(1,10):  
    if i==5:  
        break  
    print("iteration:",i)
```

```
iteration: 1  
iteration: 2  
iteration: 3  
iteration: 4
```

continue

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

```
        continue
    print("iteration:",i)

iteration: 0
iteration: 1
iteration: 2
iteration: 3
iteration: 4
iteration: 6
iteration: 7
iteration: 8
iteration: 9
```

pass

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

iteration: 0
iteration: 1
iteration: 2
iteration: 3
iteration: 4
iteration: 5
iteration: 6
iteration: 7
iteration: 8
iteration: 9
```

hands on practice

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

enter a number:7
number is odd
```

sum of number in given range

```
start=int(input("enter the starting number:"))
end=int(input("enter the ending number:"))
sum=0
```

```
for i in range(start,end+1):
    sum+=i
print("sum of numbers from",start,"to",end,"is",sum)
```

```
enter the starting number:2
enter the ending number:10
sum of numbers from 2 to 10 is 54
```

sum of factorial

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

```
enter a number:5
factorial of is: 1
factorial of is: 2
factorial of is: 6
factorial of is: 24
factorial of is: 120
```

fibonacci

```
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 terms:6
0 1 1 2 3 5
```

simple calculator using if else

```
num1=float(input("enter the first number:"))
num2=float(input("enter the second number:"))
operation=input("enter the 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)
```

```

elif operation=="*":
    print("result:",num1**num2)
elif operation=="//":
    print("result:",num1//num2)
else:
    print("invalid operation")

enter the first number:5
enter the second number:10
enter the operation(+, -, *, /, //, **, %):%
result: 5.0

```

leap year

```

year=int(input("enter a year"))
if year%4==0 and year%100!=0 or year%400==0:
    print(year,"is a leap year")
else:
    print(year,"is not a leap year")

enter a year2001
2001 is not a leap year

```

find the largest of three numbers

```

num1=float(input("enter the first number:"))
num2=float(input("enter the second number:"))
num3=float(input("enter the third number:"))
if num1>=num2 and num1>=num3:
    print("largest number is:",num1)
elif num2>=num1 and num2>=num3:
    print("largest number is:",num2)
else:
    print("largest number is:",num3)

enter the first number:4
enter the second number:50
enter the third number:8
largest number is: 50.0

```

a give number is +ve,-ve,0

```

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

```

```
else:  
    print("zero")
```

enter a number-2
negative

sum of even in range

```
start=int(input("enter start range:"))  
end=int(input("enter end 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 range:2
enter end range:10
sum of even numbers: 30

```
a=int(input("enter a number:"))  
if a%5==0 and a%10==0:  
    print("number is divisible by both 5 and 10")  
else:  
    print("number is not divisible by both 5 and 10")
```

enter a number:6
number is not divisible by both 5 and 10

check a character is vowel or not

```
vowels="aeiouAEIOU"  
char=input("enter a character:")  
if char in vowels:  
    print("character is a vowel")  
else:  
    print("character is a consonant")
```

enter a character:A
character is a vowel

check a give number is prime or not prime

```
num=int(input("enter the value:"))  
if num/1==num and num%num==0 or (num/1!=num):  
    print("number is prime")  
else:  
    print("number is not prime")
```

```
enter the value:12
number is prime
```

smallest of 4 number

```
num1=int(input("enter the first number:"))
num2=int(input("enter the second number:"))
num3=int(input("enter the third number:"))
num4=int(input("enter the fourth number:"))
if num1<=num2 and num1<=num3 and num1<=4:
    print("smallest number is:",num1)
elif num2<=num1 and num2<=num3 and num2<=4:
    print("smallest number is:",num2)
elif num3<=num1 and num3<=num2 and num3<=4:
    print("smallest number is:",num3)
else:
    print("smallest number is:",num4)
```

```
enter the first number:10
enter the second number:5
enter the third number:26
enter the fourth number:6
smallest number is: 6
```

to print 1 to 10 number

```
for i in range (1,11):
    print(i,end=" ")

1 2 3 4 5 6 7 8 9 10
```

to print 1 to 20 even numbers

```
for i in range(1,20):
    if i%2==0:
        print(i)

2
4
6
8
10
12
14
16
18
```

sum of 1 to 100

```

start=int(1)
end=int(100)
sum=0
for i in range(start,end+1):
    sum+=i
print("sum of numbers from",start,"to",end,"is",sum)

```

sum of numbers from 1 to 100 is 5050

```

s="computerscience"
rev=''
for i in s:
    rev=i+rev
print(rev)

```

ecneisretupmoc

sum of odd number

```

start=int(input("enter start range:"))
end=int(input("enter end range:"))
odd_sum=0
for num in range(start,end+1):
    if num %2!=0:
        odd_sum+=num
print("sum of odd numbers:",odd_sum)

```

enter start range:1
enter end range:50
sum of odd numbers: 625