

```
In [1]: print('hai')
```

```
i want to say hai to you , if you are my friend
if rain comes i will stay at hostel otherwise i will come to inst
if i go to exam i will pass otherwise i will fail
if rain comes i will stay at home otherwise i will come to inst
if papa not there i will go to ground
```

hai

```
In [ ]: # syntax
```

```
if <condition>:
    <write the code>
```

**if**

**if-else**

**if-elif-else**

**Case-1: if**

```
In [5]: 100>10
```

Out[5]: True

```
In [7]: if 100>10:
        print('hai')
```

hai

```
In [9]: if 100<10:
        print('hai')
```

**mistake-1**

```
In [12]: if 100>10:
        print('hai')
```

```
Cell In[12], line 2
    print('hai')
    ^
```

**IndentationError:** expected an indented block after 'if' statement on line 1

```
In [30]: if 100>10:
        print('hai')
```

hai

```
In [26]: 100>10
```

Out[26]: True

**mistake-2**

```
In [33]: if 100<10
        print('hai')
```

```
Cell In[33], line 1
      if 100<10
      ^
SyntaxError: expected ':'
```

```
In [ ]: **mistake-3**

if:
    print('hai')
```

```
In [35]: if 100==100:
        print('hai')
```

hai

```
In [37]: if 100=100:
        print('hai')
```

```
Cell In[37], line 1
      if 100=100:
      ^
SyntaxError: cannot assign to literal here. Maybe you meant '==' instead of '='?
```

```
In [ ]: a=10    # = means assignment
        a==10  # == means condition
```

```
In [39]: if True:
        print('hai')
```

hai

```
In [45]: false=False
if false:
    print('hai')
```

```
In [47]: if True:
        print('hai')
        print('hello')
```

hai  
hello

```
In [57]: print('hey')
        #####
        if True:
            print('hai')
            print('hello')
        #####
        print('bye')
```

hey  
hai  
hello  
bye

```
In [59]: print('hey')
        #####
```

```

if False:
    print('hai')
    print('hello')
#####
print('bye')

```

hey  
bye

```

In [70]: print('hey')
#####
if True:
    print('hai')
    print('hello')
#####
print('bye')

```

Cell In[70], line 5  
 print('hello')  
 ^

IndentationError: unexpected indent

```

In [72]: # second if inside first if
if True:
    print('hai')
    if True:
        print('bye')

```

hai  
bye

```

In [76]: if False:
        print('hai')
        if True:
            print('bye')
        # why here no answer

```

```

In [78]: if False:
        print('hai')
        if True:
            print('bye')
        # why here answer

```

bye

```

In [84]: if True:
        print('hai')
        if False:
            print('bye')
        if True:
            print('okay')

```

hai

```

In [86]: if False:
        print('hai')
        #####
        if True:
            print('bye')
            #####

```

```
if True:
    print('okay')
```

hai  
okay

### if-else

```
In [ ]: # syntax

if <condition>:
    <write your code>
else:
    <write your code>
```

```
In [89]: if True:
          print('hai')
          else:
              print('bye')
```

hai

```
In [91]: if False:
          print('hai')
          else:
              print('bye')
```

bye

```
In [93]: n1=100
          n2=200
          if n1>n2:
              print(f"{n1} is greater")
          else:
              print(f"{n2} is greater")
```

200 is greater

```
In [97]: n1=eval(input('enter the n1:'))
          n2=eval(input('enter the n2:'))
          if n1>n2:
              print(f"{n1} is greater")
          else:
              print(f"{n2} is greater")
```

150 is greater

```
In [103... from random import randint
n1=randint(100,200)
n2=randint(100,200)
print('n1:',n1)
print('n2:',n2)
if n1>n2:
    print('you are in if area')
    print(f"{n1} is greater")
else:
    print('you are in else area')
    print(f"{n2} is greater")
```

```
n1: 133
n2: 151
you are in else area
151 is greater
```

- every time we can provide values in 3 ways
  - hard coded
  - using keyboard
  - using random

```
In [106... print('good morning')
if True:
    print('good afternoon')
print('why you are in middle')
else:
    print('Good eve')
print('Good night')
```

Cell In[106], line 5

else:

^

SyntaxError: invalid syntax

```
In [108... print('good morning')
if True:
    print('good afternoon')
else:
    print('Good eve')
print('Good night')
```

```
good morning
good afternoon
Good night
```

```
In [112... print('good')
print('night')
```

```
good
night
```

```
In [ ]: # Q4) WAP ask
# ask the user enter distance in km (50km)
# if distance greater than 25km
# ask the user enter the charge per km
# print total charge
# otherwise
# print enjoy free ride

# idea
# step-1: distance = eval(input)
# step-2: if <condition>
# step-3: charge=eval()
# step-4: total charge= distance tarvelled * charge
```

```
# step-5: else:
# step-6:     print free ride
```

```
In [11]: distance=eval(input('enter the how much distance wants to tarvel:'))
free_distance=25
print(f'wow govt is giving {free_distance} km.')
if distance>free_distance:
    charge=eval(input('enter the charge per km:'))
    charge_distance=distance-free_distance
    print(f'the chargeble distance:{charge_distance}')
    total_charge=charge_distance*charge
    print(f'the total charge for {charge_distance}*{charge}={(charge_distance)*c

else:
    print('enjoy the free ride')
```

wow govt is giving 25 km.  
enjoy the free ride

```
In [ ]: # Lets play a game
# take one number randomly between 1 to 10  n1
# take another number from keyboard          n2
# if both numbers are match then print won
# othersiw print katam zindagi

# idea
# import random
# n1=<random number>
# n2=eval
# if <con>:
#     print won
# else:
#     print
```

```
In [27]: from random import randint
n1=randint(1,10)
print(n1)
n2=eval(input('enter the number:'))
if n1==n2:
    print('won')
else:
    print('katam zindagi')
```

8  
won

```
In [ ]: # Q3) WAP ask the user enter a number
#         print positive if number greater than>=0
#         otherwise print negative

# Idea:
# step-1: num= eval(input())
# step-2: if <cond>:
# step-3:     print()
# step-4: else:
# step-5:     print()
```

```
In [33]: number=eval(input('enter the number:'))
if number>=0:
```

```

    print(f'{number} is a postive')
else:
    print(f'{number} is a negative')

```

0 is a postive

```

In [39]: # Q4) WAP ask the user enter a number
#         if the number is greater than or equal zero
#         if the number==0
#             print zero
#         else:
#             print postive
#         otherwise print negative

```

```

num=eval(input('enter the number:')) # 0
if num>=0: # if 0>=0 Tr
    if num==0:
        print('zero')
    else:
        print('positive')
else:
    print('negative')

```

zero

```

In [ ]: #Q5) WAP ask the user enter a gender
# if gender equal to male
#     ask the distance
#     enter the charge
#     print the total charge
# else
#     print free ride

#Q6) WAP ask the user enter a number
# find that number is even numberb or odd number

#Q7) wap ask the user enter
#     course name
#     ask the user enter institute name
# if course name equal to data science and institute name equal to naresh it
# print life is secure
# otherwise
#     print katam zindagi

```

```

In [47]: #Q5) WAP ask the user enter a gender
# if gender equal to male
#     ask the distance
#     enter the charge
#     print the total charge
# else
#     print free ride

gender=input('enter the gender either male or female')
if gender=='male':
    distance=eval(input('enter the distance:'))
    charge=eval(input('enter the charge'))
    total_charge=distance*charge
    print('total charge is:',total_charge)

```

```
else:
    print('free ride')
```

free ride

```
In [51]: #Q7) wap ask the user enter
# course name
# ask the user enter institute name
# if course name equal to data science and institute name equal to naresh it
# print life is secure
# otherwise
# print katam zindagi

course_name=input('enter the course name:')
institute=input('enter the inst name:')
if course_name=='Data science' and institute=='Naresh IT':
    print('life secure')
else:
    print('gone')
```

gone

```
In [53]: course_name.lower()
```

```
Out[53]: 'data science'
```

```
In [ ]: #Q6) WAP ask the user enter a number
# find that number is even numberb or odd number

# Q8)wap
# ask the user enter a gender
# if gender equal to Male
#     ask the user enter age
#     if age > 60 print ss
#     otherwise print man
# otherwise
#     ask the user enter age
#     if age > 60 print ss
#     otherwise print woman
```

### if-elif-else

- there are only one outcome use if
- there two outcomes use if-else
  - if need condition and else does not need conition
- there are three outcomes if-elif-else
  - if need condition elif need condition and else does not need condition

```
In [4]: # wap ask the user enter a number
# if number >0 then print postive
# if number =0 then print zero
# otherwise print negative
num=eval(input('enter the number')) # -10
if num>0: # if -10>0 F
    print('postive')
elif num==0: # -10<0 T
```



```
    print('zero')
else:
    print('negative')
```

negative

```
In [ ]: #Wap ask the user enter num
        # if num>=0 then check about zero
```

```
In [8]: # wap ask the user enter a number between 1 to 3
        # if number = 1 then print one
        # if number =2 then print two
        # if number =3 then print three
        # othersie print enter a valid number
num=eval(input('enter the number:'))
if num==1:
    print('one') # if 3==1
elif num==2:
    print('two') # elif 3==2
elif num==3:
    print('three')
else:
    print('enter a valid number')
```

one

```
In [14]: # wap ask the user enter a percentage of marks
        # if per greater than 75 print A grade
        # if per between 50 to 75 print B grade
        # if per between 35 to 50 print C grade
        # if per between 20 to 35 print D grade
        # otherwise fail

per=eval(input('enter the percentage:')) # per=60
if per>=75: # if 80>=75 T
    print('A grade')
elif per>=50: # 80>=50 T
    print('B grade')
elif per>=35: # 80>=35 T
    print('C grade')
elif per>=20: # 80>=20 T
    print('D grade')
else:
    print('Fail')
```

A grade

```
In [16]: per=eval(input('enter the percentage:'))
if per>=75: # 80>=75 T
    print('A grade')
if per>=50: # 80>=50 T
    print('B grade')
elif per>=35: # 80>=35 T
    print('C grade')
elif per>=20: # 80>=20 T
    print('D grade')
else:
    print('Fail')
```

A grade

B grade

```
In [24]: # if not works then will go next
if True:
    print('Hai')
else:
    print('bye')

# check only one conditons
# if that not True give another
```

Hai

```
In [26]: # checking two conditions
if True:
    print('Hai')
if True:
    print('bye')

# here also checking two conditions
# two conditions pakka
```

Hai

bye

```
In [28]: if True:
        print('Hai')
elif True:
    print('bye')

# here also check the condition checking
# if first condition not True
# then check the second conditio
```

Hai

```
In [ ]: if True:
        if True:
```

```
In [ ]: # wap ask the user enter a age
# if age>100 print unlucky person
# if age between 60 to 100 print SS
# if age between 30 to 60 print MA
# if age between 20 to 30 print Youth
# if age between 13 to 19 print teenage
# otherwise print kid
```

```
In [30]: age=eval(input('enter the age:'))
if age>=100:
    print('unluck')
elif age>=60:
    print('ss')
elif age>=30:
    print('MA')
elif age>=20:
    print('youth')
elif age>=13:
    print('Teenage')
else:
    print('kid')
```

youth

```
In [ ]: # wap
# ask the user enter a gender
# if gender equal to Male
#     ask the user enter age
#     if age > 60 print ss
#     if age between 30 to 60 print MAMan
#     if age between 15 to 30 print Young boy
#     otherwise print boy
# if gender equal to female
#     ask the user enter age
#     if age > 60 print ss
#     if age between 30 to 60 print MAW
#     if age between 15 to 30 print Young G
#     otherwise print G
# otherwise print enter a valid gender
```

```
In [ ]: # calcualtor program

# Print some story
# enter 1 for addition
# enter 2 for subtraction
# enter 3 for multi
# enter 4 for dif

# n1=eval
# n2=eval
# operation= eval(input('1 to 4'))
# if opertaion==1:
#     print ('Im add')
#     print ans
# elif operation==2:
# elif opertaion==3:
#     print ('Im add')
#     print ans
# elif opertaion==4:
#     print ('Im add')
#     print ans
# else
#     valid operation
```

```
In [ ]: # take three numbers
# n1
# n2
# n3
# find the greatest number

new link will come for monday
```