CONDITIONAL STATEMENTS

- we have 3 cases in conditional statements
- Case-1: if
- Case-2: if-else
- Case-3: if-elif-else
- when we ask the question to the computer it will give True or False
- If True then we can excute the statements
- If False also we can excute statements

CASE-1: if

In [ ]:
```
#syntax
# if the statements starts  with any keyword
# end of the statements must contain colmn(:)
# when : is there we need to provide indentation(offically know as 4 spaces afte

# if <condition>:
#    <st1>
#    <st2>
#    -----
#    <stn>

# if the condition is True then only it will go to the inside statements and the
```

In [34]:
```
100>10
```

Out[34]: True

In [33]:
```
if 100>10:
    print("sruthi")
```

```
sruthi
```

In [30]:
```
if 100>10:
    print("raju")
```

```
raju
```

In [31]:
```
if 30>10:
    print("Hello world")
```

```
Hello world
```

In [32]:
```
if True:
    print("python")
```

```
python
```

In [29]:
```
if False:
    print("sruthi")
```

Error1:Indentation error

In [24]:
```
if 100>10:
print("hello")
```

```
  Cell In[24], line 2
    print("hello")
    ^
IndentationError: expected an indented block after 'if' statement on line 1
```

Error2:miss the column(:)at the end

In [25]:
```
if 100>10
print("byte")
```

```
  Cell In[25], line 1
    if 100>10
             ^
SyntaxError: expected ':'
```

Error3:No condition

In [26]:
```
if:
print("sruthi")
```

```
  Cell In[26], line 1
    if:
      ^
SyntaxError: invalid syntax
```

In [27]:
```
print(1)
print(2)
if 100>10:
    print("manish")
    print("bye")
```

```
1
2
manish
bye
```

In [28]:
```
print(1)
print(2)
if 100<10:
    print("manish")
    print("bye")
```

```
1
2
```

In [23]:
```
print(1)    (#1st block)
print(2)
########################(# 2nd block)
if 100>10:
    print("sruthi")
    print("bye")
```

```
################################  ( #3rd block)
print("Hello")
print("raju")
```

```
  Cell In[23], line 1
    print(1)    (#1st block)
                ^
SyntaxError: '(' was never closed
```

In [22]:
```
print(1)
print(2)
########################
if 100>10:
    print("sruthi")
    print("bye")
print("hai")
################################
print("Hello")
print("raju")
```

```
1
2
sruthi
bye
hai
Hello
raju
```

In [21]:
```
print(1)
print(2)
########################
if 100<10:
    print("sruthi")
    print("bye")
################################
print("Hello")
print("raju")
##############################
if 1000>10:
    print("world")
```

```
1
2
Hello
raju
world
```

Case-2:if else

In [ ]:
```
# syntax

#if<condition>:
   # <st1>
    #<st2>
#else:
    #<st1>

#if block only requires condition
#if the given condition fails the program excutes the else part
# so else part does not requires any condition to excute
```

In [17]:
```
if 100>20:
    print("Hello")
else:
    print("Bye")
```

```
Hello
```

In [18]:
```
if 100<20:
    print("Hello")
else:
    print("Bye")
```

```
Bye
```

In [19]:
```
if 100>20:
    print("Hello")
else False:
    print("Bye")
```

```
  Cell In[19], line 3
    else False:
         ^
SyntaxError: expected ':'
```

In [35]:
```
print(1)
if 100>10:
    print("good")
    print(2)
print(3   ######if and else not contain any middle values
else:
    print("bad")
    print(4)
print(5)
```

```
  Cell In[35], line 5
    print(3   ######if and else not contain any middle values
         ^
SyntaxError: '(' was never closed
```

In [3]:
```
print(1)
if 100>10:
    print("good")
    print(2)

else:
    print("bad")
    print(4)
print(5)
```

```
1
good
2
5
```

In [16]:
```
print(1)
if 100>10:
    print("good")
    print(2/0)
```

```
else:
    print("bad")
    print(4)
print(5)
```

```
1
good
```

```
---------------------------------------------------------------------------
ZeroDivisionError                         Traceback (most recent call last)
Cell In[16], line 4
      2 if 100>10:
      3     print("good")
----> 4     print(2/0)
      6 else:
      7     print("bad")

ZeroDivisionError: division by zero
```

In [13]:
```
5/4     #normal division
```

Out[13]:
```
1.25
```

In [14]:
```
5//4      #floor division(takes quotient value)
```

Out[14]:
```
1
```

In [15]:
```
5%4      #modulo division
```

Out[15]:
```
1
```

In [12]:
```
# wap ask the user to enter a number from keyboard and check whether it is even
num=eval(input("Enter a number"))
if num%2==0:
    print(f"The {num} number is even")
else:
    print(f"The {num} number is odd")
```

```
The 78 number is even
```

In [11]:
```
num=eval(input("Enter a number"))
if num%2==0:
    print(f"The {num} number is even")
else:
    print(f"The {num} number is odd")
```

```
The 9 number is odd
```

In [10]:
```
##### 2nd method########
num=eval(input("Enter a number"))
if num%2!=0:
    print(f"The {num} number is odd")
else:
    print(f"The {num} number is even")
```

```
The 6 number is even
```

In [9]:
```
import random
num=random.randint(10,100)
if num%2==0:
```

```
    print(f" the {num}number is even")
else:
    print(f" The {num} number is odd")
```

```
the 48number is even
```

In [6]:
```
#Game program
# there is two numbers
# num1 comes from random
# num2 takes from keyboard
# if both thenumbers are equal
# the print you won
#else
# print you loss
import random
num1=random.randint(10,10)
num2=eval(input("Enter a number"))
if num1==num2:
    print("you won")
else:
    print("you lose")
```

```
you lose
```

In [7]:
```
#wap ask the user enter how much distance need to travel
#     ask the user enter the charge per km
#     if the distance >25 km
#       then print total charge
#    otherwise
#       print free ride
dis=eval(input("How much need to travel"))
charge=eval(input("enter charge per kms"))
total=dis*charge
if dis>=25:
    print(f"the total charge is {total}")
else:
    print("free ride")
```

```
free ride
```

case-3 if elif else

In [ ]:
```
#if we have 3 conditions
# then we use if elif else
#always first condition under if block
#last condition is on else block
# remaining all are comes under elif block

#syntax

#if<con1>:
   #st1
#elif<con2>:
   #<st2>
#else:
   #<st3>


example:
condition1   cond2    cond3   cond4
if block     elif      elif    else block
```

```
con1          con2       con3     con4       con5
if            elif       elif     elif        else
```

In [5]:
```
#wap ask the user enter a number
# if the number equal to 1 then print 1:if
# if the number equal to 2 then print 2:elif
# if the number equal to 3 then print 3:elif
# if the number equal to 4 then print 4:elif
# otherwise print bye:else
num=eval(input("Enter a number"))
if num==1:
    print("1")
elif num==2:
    print("2")
elif num==3:
    print("3")
elif num==4:
    print("4")
else:
    print("bye")
```

```
4
```

In [4]:
```
if 19>4:                          # if first condition is true it only prints t
    print("Hello")
    print("hai")
elif 30>50:                       # if first condition is false then it prints
    print("Hai")
elif 0:
    print("good job")            # if second also false it prints third stateme
else :                            # if all the above conditions are false it pr
    print("bye")
```

```
Hello
hai
```

In [3]:
```
marks_per=eval(input("Enter marks in percentage%"))
if marks_per>=90:
    print("A grade")
elif marks_per>=70:
    print("B grade")
elif marks_per>=50:
    print("C grade")
elif marks_per>=35:
    print("D grade")
else:
    print("Fail")
```

```
C grade
```

In [2]:
```
age=eval(input("Enter the age"))
if age>=90:
    print("lucky man")
elif age>=70:
    print("old man")
elif age>=50:
    print("sc")
elif age>=35:
    print("middle age")
```

```
elif age>=20:
    print("young")
elif age>=13:
    print("teen")
else:
    print("child")
```

sc

In [1]:
```
num1=eval(input("Enter a number1:"))
num2=eval(input("Enter a number2:"))
print("enter operation 1 for addition")
add=num1+num2
print("enter operation 2 for multiplication")
mul=num1*num2
print("enter operation 3 for  subtraction")
sub=num1-num2
print("enter operation 4 for division")
divi=num1/num2
operation=eval(input("enter the operation between 1 to 4"))
if operation==1:
       print(f"{num1} ,{num2} addition of two numbers is {add}")
elif operation==2:
        print(f"{num1} ,{num2} subtraction of two numbers is {sub}")
elif operation==3:
            print(f"{num1} ,{num2} multiplication of two numbers is {mul}")
elif operation==4:
              print(f"{num1} ,{num2} division of two numbers is {division}")
```

```
enter operation 1 for addition
enter operation 2 for multiplication
enter operation 3 for  subtraction
enter operation 4 for division
4 ,4 subtraction of two numbers is 0
```

In [52]:
```
gender=input("Enter the gender")
if gender=="male":
        age=eval(input("Enter the male  age"))
        if age>=30:
              print("Middle age")
        else:
              print("boy")
elif gender=="female":
        age=eval(input("Enter the age"))
        if age>=30:
              print("Middle age women")
        else:
              print("girl")
else:
     print("please enter valid gender")
```

boy

In [59]:
```
gender=input("Enter the gender")
if gender=="female":
    id=input("do you have an id card")
    if id=="yes":
        print("free ride")
    else:
        dist=eval(input("Enter how much distance you want to travel"))
```

```
        charge=eval(input("enter charge per km"))
        total=dist*charge
        print(f"the total charge is {total}")
elif gender=="male":
        dist2=eval(input("How much distance you need to travel"))
        charge1=eval(input("enter charge per km"))
        total2=dist2*charge1
        print(f"the total charge is {total2}")
else:
    print("valid gender")
```

```
the total charge is 670
```

In [6]:
```
#wap to ask the user enter 3 numbers
#find the biggest number


num1=eval(input("Enter the number1:"))
num2=eval(input("enter the number2:"))
num3=eval(input("enter the number3:"))
if num1>num2:
    print("num1 is big")
elif num2>num3 :
    print("num2  is biggest")
elif num3>num2:
    print("num3 is big")
else:
    print("")
```

```
num1 is big
```

In [4]:
```
num1=eval(input("Enter the number1:"))
num2=eval(input("enter the number2:"))
num3=eval(input("enter the number3:"))
if num1>num2 and num1>num2:
    print("num1 is big")
elif num2>num3 :
    print("num2  is biggest")
else:
    print("num3 is big")
```

```
num2  is biggest
```

In [2]:
```
import random
num=random.randint(10,100)
try:
    if num%2==0:
        print(f" the {num}number is even")
    else:
        print(f" The {num} number is odd")
except Exception as e:
    print(e)
```

```
the 30number is even
```

In [ ]:

In [ ]:

In [ ]:

In [ ]: