Indentation : It is one of the most important feature in Python. It indicates the block of code. ¶

In [1]:
```
if 6>2:
    print(True)
```

```
True
```

In [2]:
```
if 6>2:
print(True)
```

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

Conditional Statement :- It is used to the check the flow of control according to the given condition.

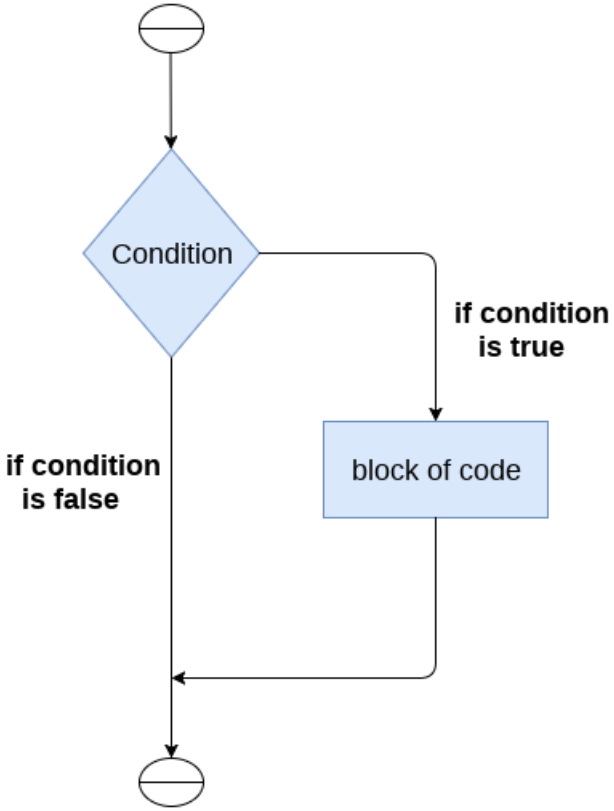
- Single/Simple if
- if-else
- Nested if
- if-elif-else

If Statement	The if statement is used to test a specific condition. If the condition is true, a block of code (if-block) will be executed.
If - else Statement	The if-else statement is similar to if statement except the fact that, it also provides the block of the code for the false case of the condition to be checked. If the condition provided in the if statement is false, then the else statement will be executed.
Nested if Statement	Nested if statements enable us to use if ? else statement inside an outer if statement.

if statement : The if statement is used to test a particular condition and if the condition is true, it executes a block of code known as if-

block.

Syntax: if expression:



In [3]:
```
num = int(input('Enter a number: '))
if num%2==0:
    print('even number')
```

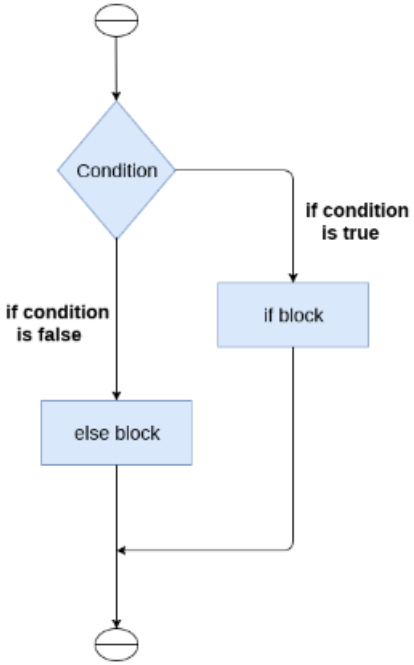
```
Enter a number: 4
even number
```

In [4]:
```
num = int(input('Enter a number: '))
if num%2==0:
    print('even number')
```

```
Enter a number: 5
```

if-else statement : If the condition is true, then the if-block is executed. Otherwise, the else-block is executed.

```
Syntax:
if condition:
    #block of statements
else:
    #another block of statements (else-block)
```



In [5]:
```
num = int(input('Enter a number: '))
if num%2==0:
    print('even number')
else:
    print('odd number')
```

```
Enter a number: 4
even number
```

In [6]:
```
num = int(input('Enter a number: '))
if num%2==0:
    print('even number')
else:
    print('odd number')
```

```
Enter a number: 5
odd number
```

In [ ]:

Q. Wapp to check whether the entered number is divisible by 7 or not.

In [ ]:

Q. Wapp to check whether the entered number is even or odd.

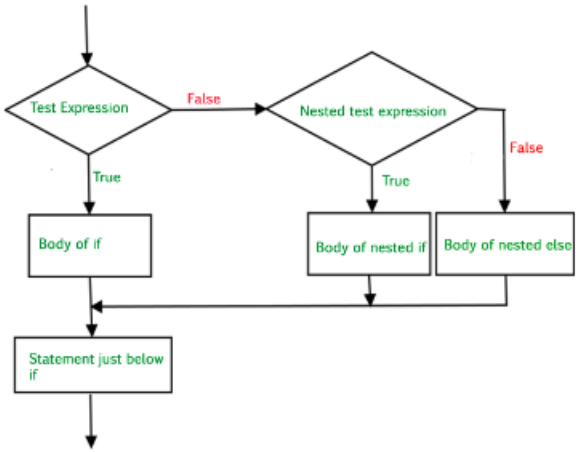
In [ ]:

Nested if : to check more than one condition at a time.

```
Syntax:
if condition:
       # block of statements

       if condition:
          # block of statements

       else:
          # block of statements
  else:
     # block of statements
```



In [9]:
```
num = int(input('Enter a number: '))
if num%2==0:
    if num>0:
        print('number is positive and even')
    else:
        print('number is negative and even')
else:
    if num<0:
        print('number is negative and odd')
    else:
        print('number is positive and odd')
```

```
Enter a number: -4
number is negative and even
```

In [ ]:

In [ ]:

Wapp to check whether the entered number is positive or negative as well as even or odd.

In [ ]:

if-elif-else: The elif statement enables us to check multiple conditions and execute the specific block of statements depending upon the

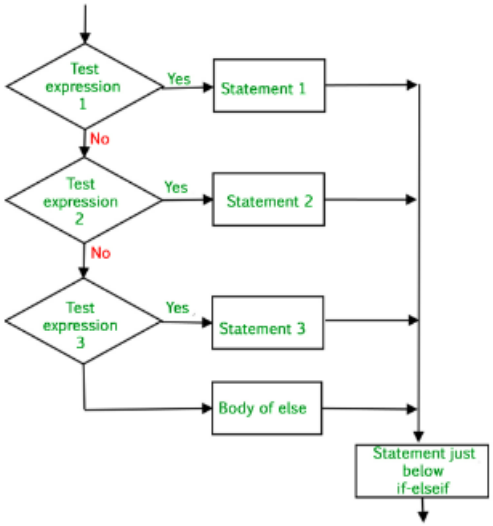
true condition among them. We can have any number of elif statements in our program depending upon our need.

Syntax:

```
if expression 1:
    # block of statements

elif expression 2:
    # block of statements

elif expression 3:
    # block of statements
```



In [11]:
```
num = int(input('Enter a number: '))
if num==1:
    print('sunday')
elif num==2:
    print('monday')
elif num==3:
    print('tuesday')
elif num==4:
    print('Wedneshday')
elif num==5:
    print('thursday')
elif num==6:
    print('friday')
elif num==7:
    print('saturday')
else:
    print('invalid input')
```

```
Enter a number: 9
invalid input
```

In [ ]:

In [ ]:

Q. Wapp to check whether the entered character is vowel or consonant.

In [ ]:

Q. Wapp to check whether the entered character is a digit or not.

In [ ]:

Q. Take values of length and breadth of a rectangle from user and check if it is a square or not.

In [ ]:

Q. Wapp to check the NCC eligibility of the students. The criteria is:

1. height should be >= 180cm and
2. weight should be >= 60kg.

Q. Wapp to check the eligibility of a student for scholarship.

Criteria:
1. his/her science mark >= 80
2. his/her maths mark >= 80
3. his/her english mark >= 75
He/She is only allowed to avail the scholarship if he/she fulfill all the criterias.

Q. Wapp to accept a number from 1 to 7 and display the name of the day.

```
input    >> 1
output   >> 'Monday'
```

Q. Wapp to check whether the traingle is Equilateral, Isosceles or Scalene where sides are entered by the user.

Q. Take the age of 3 people as input and determine the oldest among them.

Q. Wapp to check whether the entered angle is valid for triangle, where angles are entered by user.

Q. Write a Traffic light program that will check for the following conditions:

If the light is green – Car is allowed to go
If the light is yellow – Car has to wait
If the light is red – Car has to stop
Other signal – unrecognized signal. Example black, blue, etc…

Q. A school has following rules for grading system:

a. Below 25 - F
b. 25 to 45 - E
c. 45 to 50 - D
d. 50 to 60 - C
e. 60 to 80 - B
f. Above 80 - A
Ask user to enter marks and print the corresponding grade along with students name, roll and section.