

# PYTHON

**Conditional Statements** : The Conditional statements in python are required, when we want to execute a code by satisfying the certain condition which is specified.

Different Conditional statements in python are:

- If-else
- If-elif-else
- Nested if-else

**If-else** : if-else statement evaluates condition and it will execute statements in **if block** if the condition is True, If the condition is False it will execute the statements in **else block**. Indentation is used to separate the blocks.

Syntax :

If condition:

If block statements

Else:

Else block statements

Example :

```
game='cricket'
```

```
if game=='cricket':
```

```
    print ('sachin god of cricket')
```

```
    print ('Msd great captain')
```

```
else:
```

```
    print ('Football is most liked game')
```

- First it will take the condition as **game=cricket** then it will go to check if condition.

- As the condition here in **if** is `game == cricket` satisfied the condition so the statements in if block will be executed.

- The output will be

“Sachin god of cricket”

“Msd great captain”

- if the condition in false else block statements will be executed i.e., “Football is most liked game”.

**If-elif-else** : elif is used for checking multiple conditions. If the condition for **if** is True statements in **if** block will be executed.

- If the condition for **If** is **False** this will check the condition in next immediate **elif**.

- If **elif** condition is **True** it will execute its block otherwise goes to next **elif** till it gets **True**.

- If all **elif** conditions are **False** then **else** block statements will be executed.

- **If-elif-else** statement execute only one block from all blocks based on the condition satisfied .

- **If** block can have one **else** block and one or more number of **elif** blocks.

### Syntax:

if condition:

    If block statements

elif condition:

    elif block statements

else:

    else block statements

### Example:

```
choice='p'
```

```
if choice=='a':
```

```
    print ('your choice is a')
```

```
elif choice=='b':
```

```
    print ('your choice is b')
```

```
elif choice=='c':
```

```
    print ('your choice is c')
```

```
else:
```

```
    print ('Invalid choice')
```

• Here condition is choice='p'. It will go to if condition here choice is 'a' so it goes to elif block and checks the condition and soon until the condition is satisfied .

• As the condition here is not satisfied by any block so it goes to the else block and print output as 'Invalid choice'.

**Nested if-else** : A if-else condition written in another if-else condition is called as Nested if - else.

- In nested if-else it will check first **if** condition and if the condition is True it goes to inside **if** condition.

- If inside **if** condition is True it will execute statements in inside **if block** and If inside **if** condition is False it will execute statements in inside **else block** .

- If the outside **if** condition is **False** then it will execute statements in outside **else block**.

- If again outside **else block** has another **if-else** then it will do same actions as performed by **if-else**.

Syntax:

if condition:(outer block)

if condition:

Inner if block statements

else:

Inner else block statements

else:

Outer else block statements

Example:

```
num = -8

if num >= 0:

    if num == 0:

        print ("Zero")

    else:

        print ("Positive number")

else:

    print ("Negative number")
```

• First it check **outer if** condition as it is False i.e,  $(-8 < 0)$  it directly goes to **outer else** and execute the block and give output as “Negative number”.

• If the condition in **outer if** was satisfied it would have checked **inner if** condition if it was satisfied it would have print out put as “Zero”.

• If **inner if** condition is not satisfied it goes to **inner else** and print output as “Positive number”.