

Python Conditional Statements

Conditional Statements are features of a **programming** language, which perform different computations or actions depending on whether the given **condition** evaluates to true or false. Conditional statements in python are of 3 types

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

1. **If Statement** : if Statement is used to run a statement conditionally i.e. if given condition is true then only the statement given in if block will be executed.

```
if <condition>:  
    <if statement block >
```

For example consider the code given below

```
if (percentage > 33):  
    print ("Pass")
```

Explanation : In the above code if value of percentage is above 33 then only the message "Pass" will be printed.

2. **If else Statement** In the case of if else statement If given condition is true then the statement given in if block will be executed otherwise(else) the statements written in else block will be executed

```
if <condition>:  
    <if statement block >  
else:  
    <else statement block>
```

For example consider the code given below

```
if (percentage > 33):  
    print ("Pass")  
else:  
    print("Fail")
```

Explanation : In the above code if value of percentage is above 33 then only the message "Pass" will be printed otherwise it will print "Fail"

3. If elif Statement if elif is used for execution OF STATEMENTS based on several alternatives. Here we use one or more elif (short form of *else if*) clauses. Python evaluates each **condition** in turn and executes the statements corresponding to the **first if** that is true. If none of the expressions are true, and an else clause will be executed

Syntax:-

```
if <condition>:
```

```
    <statement(s)>
```

```
elif <condition>:
```

```
    <statement(s)>
```

```
.
```

```
.
```

```
else:
```

```
    <statement(s)>
```

Explanation : In the above code if value of percentage is above 33 then only the message **"Pass"** will be printed otherwise it will print **"Fail"**

Example:

```
If (percentage >90):
```

```
    Print("Outstanding")
```

```
elif (percentage >80):
```

```
    print ("Excellent")
```

```
elif (percentage >70):
```

```
    print ("VeryGood")
```

```
elif (percentage >60):
```

```
    print ("Good")
```

```
elif (percentage >33):
```

```
    print ("Pass")
```

```
else
```

```
    print("Fail")
```

Explanation : In the above code
if value of percentage is above 90 then it will print **"Outstanding"**
if value of percentage is above 80 then it will print **"Excellent"**
if value of percentage is above 70 then it will print **"Very Good"**
if value of percentage is above 60 then it will print **"Good"**
if value of percentage is above 80 then it will print **"Pass"**
if no condition is true then it will print **"Fail"**

In above code only 1 condition can be true at a time if no condition is true then else statement will be executed

4. Nested If else Statement A nested if is an if statement that is the target of another if statement. Nested if statement means an if statement within another if statement.

Syntax:-

```
if (<condition1>):
```

```
    statement(s)
```

```
    if (<condition2>):
```

```
        statement(s)
```

```
    else
```

```
else:
```

```
    if (<condition3>):
```

```
        statement(s)
```

```
    else
```

```
        Statement(s)
```

```
# Example
if color == "red":
    if item == "fruit":
        print(" It is an Apple")
    else :
        print("It may be Tomato or Rose")
else:
    if color == "Yellow":
        print("It is a Banana")
    else
        print("It may be corn or Marigold ")
```

OR

```
if color == "red":
    if item == "fruit":
        print(" It is an Apple")
    else :
        print("It may be Tomato or Rose")
elif color == "Yellow":
    print("It is a Banana")
else
    print("It may be corn or Marigold ")
```