

## Conditional Statement :

Python if statement is one of the most commonly used conditional statements in programming languages. It decides whether certain statements need to be executed or not. It checks for a given condition, if the condition is true, then the set of code present inside the " if " block will be executed otherwise not.

### If statement

The if condition is considered the simplest of the three and makes a decision based on whether the condition is true or not. If the condition is true, it prints out the indented expression. If the condition is false, it skips printing the indented expression.

#### Example 1

```
In [4]: a = 20
        b = 20
        if a == b:
            print("a and b is equal")
```

a and b is equal

```
In [5]: # Another condition :-
        a = 21
        b = 20
        if a == b:
            print("a and b is equal")
```

#### Interpretation :-

In cell 4 and 5 using if statement. In the cell 4 if the condition is meeting it will print the result. In cell 5 if statement is not meeting then it will print nothing.

### If -else statement

#### Example 1

```
In [31]: citizen_name = input("Enter the name of citizen :\n")
        country = input("Enter the name of country living :\n")
        country_citizen = input("Enter the name of birth country :\n")
        if country==country_citizen:
            print(f"{citizen_name} is {country_citizen}'s citizen")
        else:
            print(f"{citizen_name} is not a citizen of {country}")
```

Enter the name of citizen :  
sneha  
Enter the name of country living :  
japan  
Enter the name of birth country :  
india  
sneha is not a citizen of japan

## Example 2

```
In [34]: # Variable declaration:
applicant = input("Enter the name of applicant :\n")
required_degree = ("GIS")
applicant_degree = input("Enter the educational classification :\n")
# Conditional checking:
if applicant_degree==required_degree:
    print(f"{applicant} is eligible for Research Assistant post.")
else:
    print(f"{applicant} is not eligible for Research Assistant." )
```

Enter the name of applicant :  
Sneha Singh  
Enter the educational classification :  
GIS  
Sneha Singh is eligible for Research Assistant post.

## If-Elif Statements:-

```
In [2]: # variable declaration:
candidate_name = input("Enter the name of a candidate : \n")
candidate_age =int(input("Enter the age of candidate : \n"))
# Conditional Checking:
if candidate_age<=1:
    print(f"{candidate_name} is an infant")
elif candidate_age<=3:
    print(f"{candidate_name} is a toddler")

elif candidate_age<=6:
    print(f"{candidate_name} is a pre-schooler")

elif candidate_age<=12:
    print(f"{candidate_name} is a school-aged child")

elif candidate_age<=17:
    print(f"{candidate_name} is an adolscent")

elif candidate_age>=18:
    print(f"{candidate_name} is an adult")

elif candidate_age>=60:
    print(f"{candidate_name} is an old-age")
```

```
Enter the name of a candidate :  
sneha  
Enter the age of candidate :  
14  
sneha is an adolscent
```

## If-Elif-Else Statements

if-elif-else are conditional statements that provide you the decision making that is required when you want to execute code based on a particular condition. The if-elif-else statement used in Python helps automate the decision making process. The most complex of these conditions is the if-elif-else condition. When you run into a situation where you have several conditions, you can place as many elif conditions as necessary between the if condition and the else condition.

### 1. Example

```
In [13]: # Variable Declaration:  
student_name = input("Enter the name of student : \n")  
student_percent = int(input(f"Enter the percentage of {student_name} :\n"))  
# conditional Checking:  
if student_percent<=80:  
    print(f"{student_name} is First Division.")  
elif student_percent>=70:  
    print(f"{student_name} is Second Division.")  
else:  
    print(f"{student_name} is Pass.")
```

```
Enter the name of student :  
Sneha  
Enter the percentage of Sneha :  
80  
Sneha is First Division.
```

```
In [ ]:
```