

Python – if Statement Tutorial

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1. Simple if Statement

```
x = 5

if x > 0:
    print("EngineersTutor.com")
```

Output: EngineersTutor.com

2. if with a Non-Zero Value

```
x = 5

if x:
    print("EngineersTutor.com")
```

Output: EngineersTutor.com

Key point: A non-zero integer such as 5 is treated as True in an if condition.

3. if with Relational Operator (>)

```
x = 5

if x > 10:
    print("EngineersTutor.com")
```

Output: No output

Key point: The condition $5 > 10$ is False, so the indented statement is skipped.

4. if with Equality Operator (==)

```
x = 5

if x == 10:
    print("EngineersTutor.com")
```

Output: No output

Key point: == compares two values. Here, $5 == 10$ is False.

5. if with Arithmetic Expression

```
x = 5
y = 10
```

```
if x + y:  
    print("EngineersTutor.com")
```

Output: EngineersTutor.com

6. if with Arithmetic Expression and Relational Operator (>)

```
x = 5  
y = 10
```

```
if (x + y) > 30:  
    print("EngineersTutor.com")
```

Output: No output

Key point: The condition $5 > 10$ is False, so the indented statement is skipped.

7. if with Multiple Statements – Indentation

```
x = 5  
y = 10
```

```
if (x + y) < 30:  
    print("EngineersTutor.com")  
    print("Teach Easy")  
    print("Albert")  
    print("Stephen")
```

Output: EngineersTutor.com

Teach Easy

Albert

Stephen

Key point: Python uses indentation (commonly 4 spaces) to define the statements belonging to the if block. Curly braces are not used.

Important Python if Rules Used in This Tutorial

- The if statement ends with a colon (:).
- The statement controlled by if must be indented.
- Four spaces are commonly used for indentation.
- Python does not use curly braces { } to define an if block.
- == means 'equal to'; = is the assignment operator.
- A non-zero integer is treated as True; 0 is treated as False.
- If a condition is False, the indented statements are not executed.

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