

## Day 6



### If Else Conditional Statements in Python:

#### What is a Conditional Statement?

A conditional statement is used to make decisions in a program.

Python checks a condition:

- If it is True, some code runs
- If it is False, some other code runs

#### **if Statement**

Syntax

```
if condition:  
    # code runs if condition is True
```

#### **if-else Statement**

Syntax

```
if condition:  
    # runs if True  
else:  
    # runs if False
```

**if-elif-else Statement:** Used for multiple conditions

Syntax

```
if condition1:  
    # code  
elif condition2:  
    # code  
else:  
    # code
```

Example: taking user age as the input and printing on the screen.

The screenshot shows a code editor window with a Python file named "main.py". The code contains two lines of Python code: "a = int(input("Enter your age: "))" and "print("You entered: ", a)". Below the code editor, there is a terminal window showing the execution of the script and its output. The terminal window has tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL (which is underlined), and PUBLISH. The terminal output shows the command "python main.py" being run, followed by the prompt "Enter your age: 5", and the response "You entered: 5".

```
main.py  
1 a = int(input("Enter your age: "))  
2 print("You entered: ", a)  
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PUBLISH  
● PS E:\Python\Day1-10\Day6> python main.py  
Enter your age: 5  
You entered: 5
```

Example: using the “if”

```
1 a = int(input("Enter your age: "))
2 print("You entered: ", a)
3 if(a>=18):
4     print("You are eligible to vote.")

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

PS E:\Python\Day1-10\Day6> python main.py
◆ Enter your age: 19
You entered: 19
You are eligible to vote.
```

Example: using the “if-else”

```
1 a = int(input("Enter your age: "))
2 print("You entered: ", a)
3 if(a>=18):
4     print("You are eligible to vote.")
5 else:
6     print("You are not eligible to vote.")

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

● PS E:\Python\Day1-10\Day6> python main.py
Enter your age: 3
You entered: 3
You are not eligible to vote.
```

Example: using “if-elif-else”

```
1 a = int(input("Enter your age: "))
2 print("You entered: ", a)
3 if(a>=18):
4     print("You are eligible to vote.")
5 elif(a==0):
6     print("Age cannot be zero.")
7 else:
8     print("You are not eligible to vote.")

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

● PS E:\Python\Day1-10\Day6> python main.py
Enter your age: 0
You entered: 0
Age cannot be zero.
```

Example: nested if-else

```
10     age = 20
11     citizen = True
12
13     if age >= 18:
14         if citizen:
15             print("Eligible to vote")
16
```

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

- PS E:\Python\Day1-10\Day6> **python main.py**  
Eligible to vote

Example: Short-Hand if-else (Ternary Operator)

```
17     age = 17
18     result = "Adult" if age >= 18 else "Minor"
19     print(result)
```

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

- PS E:\Python\Day1-10\Day6> **python main.py**  
Minor

### Conditions & Comparison Operators:

Operator	Meaning
==	equal
!=	not equal
>	greater than
<	less than
>=	greater or equal
<=	less or equal

### Summary:

- if-else is used for decision making
- if runs when condition is True

- else runs when condition is False
- elif is used for multiple conditions
- Use comparison and logical operators
- Indentation is very important
- Ternary operator is short form of if–else

--The End--