DATA SCIENCE COURSE TUTORIAL # 18

3.10 Nested If Else Statements

A nested `if else` means placing one `if else` statement inside another. It is used when you need to check multiple levels of conditions.

Basic Nested if Example

In this example, the inner `if` is only checked if the outer `if` condition is true.

Example:

```python
age = 20
if age >= 18:
    if age < 21:
        print("You are eligible but under 21.")
    else:
        print("You are 21 or older.")
else:
    print("You are not eligible.")
```

Output:

```
You are eligible but under 21.
```

Nested if else with Multiple Conditions

You can use nested `if else` for more complex decision-making.

Example:

```python
marks = 85
if marks >= 50:
    if marks >= 80:
        print("Excellent performance!")
    else:
        print("Good performance.")
else:
    print("Failed.")
```

Output:

```
Excellent performance!
```

Why Use Nested if else?

- When decisions depend on another decision.
- Helps to handle complex conditions step by step.
- Makes logic more structured.

Example:

```python
username = "admin"
password = "1234"

if username == "admin":
    if password == "1234":
        print("Login successful!")
    else:
        print("Incorrect password.")
else:
    print("Invalid username.")
```

Output:

```
Login successful!
```