**🎬 Topic: Conditional Statements (if, elif, else)**

### **✅ What Are Conditional Statements?**

They help your program **make decisions** based on certain **conditions**.

💡 Like real life:  
 "If it's raining, take an umbrella. Else, wear sunglasses."

## **✅ Syntax in Python:**

if condition:

# code if condition is True

elif another\_condition:

# code if elif is True

else:

# code if none of the above is True

### **🔹 1. Basic if Statement**

age = 20

if age >= 18:

print("You are eligible to vote")

✅ it checks the condition and runs the code inside only if it's True.

### **🔹 2. if with else**

age = 16

if age >= 18:

print("You are eligible to vote")

else:

print("You are not eligible to vote")

✅ else runs when the condition is False.

### **🔹 3. if, elif, else (Multiple Conditions)**

marks = 75

if marks >= 90:

print("Grade A")

elif marks >= 70:

print("Grade B")

elif marks >= 50:

print("Grade C")

else:

print("Fail")

✅ Explain:

* Only **one block** is executed (the first True one).
* Once a condition matches, it **skips the rest**.

### **🔹 4. Real-Time Use Case: Login System**

username = input("Enter username: ")

password = input("Enter password: ")

if username == "admin" and password == "1234":

print("Login successful!")

else:

print("Invalid credentials")

✅ Combine **comparison** and **logical** operators here.

### **🔹 5. Nested Conditions**

age = 25

has\_license = True

if age >= 18:

if has\_license:

print("You can drive")

else:

print("You need a license to drive")

else:

print("You are too young to drive")

✅ Mention: Good for real-world validations, but **avoid deep nesting**.

## **✅ 1. Exam Eligibility Example (using and)**

### **📘 Logic:**

If **marks >= 50** and **attendance >= 75**, student is eligible for the exam.

### **🧑‍💻 Code:**

marks = 55

attendance = 80

if marks >= 50 and attendance >= 75:

print("Eligible for exam")

else:

print("Not eligible")

## **✅ 2. Mobile Recharge Offer (using or)**

### **📘 Logic:**

If **recharge amount >= 399** or **data balance >= 1GB**, user gets bonus.

### **🧑‍💻 Code:**

recharge\_amount = 200

data\_balance = 1.5 # in GB

if recharge\_amount >= 399 or data\_balance >= 1:

print("You are eligible for bonus data")

else:

print("No bonus data")

## **✅ 3. Restaurant Offer (using and + or)**

### **📘 Logic:**

If the **bill is above ₹1000** and it's a **weekend**,  
 **or** the user is a **Gold Member**, they get 20% off.

### **🧑‍💻 Code:**

bill = 1200

day = "Saturday"

membership = "Gold"

if (bill > 1000 and day in ["Saturday", "Sunday"]) or membership == "Gold":

print("You get 20% discount")

else:

print("No discount")

## **🧠 Best Practices:**

* Use **elif** instead of multiple if checks.
* Keep conditions **readable** and **logical**.
* Indentation matters! (Each block inside if/else should be indented)

## **✅ Quick Recap Table:**

| **Statement** | **Description** |
| --- | --- |
| if | Checks a condition |
| elif | Checks another condition if the first is False |
| else | Runs if no condition is True |

### **About the Author**

**Gowtham SB** is a **Data Engineering expert, educator,** **and content creator** with a passion for **big data technologies, as well as cloud and Gen AI** . With years of experience in the field, he has worked extensively with **cloud platforms, distributed systems, and data pipelines**, helping professionals and aspiring engineers master the art of data engineering.

Beyond his technical expertise, Gowtham is a **renowned mentor and speaker**, sharing his insights through engaging content on **YouTube and LinkedIn**. He has built one of the **largest Tamil Data Engineering communities**, guiding thousands of learners to excel in their careers.

Through his deep industry knowledge and hands-on approach, Gowtham continues to **bridge the gap between learning and real-world implementation**, empowering individuals to build **scalable, high-performance data solutions**.

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