Course Objectives & Structure (Notes in Hinglish)

Is lecture mein Stephane (instructor) ne bataya hai ki ye course kaise structured hai aur hum exactly kya seekhne wale hain. Ye **Apache Kafka Series** ka **Volume 1** hai jo beginners ke liye hai.

1. Core Topics We Will Learn (Kya Cover Hoga?)

Course ko theoretically aur practically divide kiya gaya hai:

- **Kafka Theory:**
  - **Kafka Cluster & Brokers:** Kafka ka setup kaise hota hai.
  - **Producers:** Source system se data Kafka cluster mein kaise aata hai.
  - **Consumers:** Cluster se data target system tak kaise pahunchta hai.
  - **Management:** Kafka ko manage kaise karte hain (Old way: **Zookeeper**, New way: **KRaft mode**).
- **Ecosystem & Tools:**
  - **Conduktor:** Kafka ko Graphical UI se use karna.
  - **Extended APIs:** Kafka Connect, Kafka Streams, aur Confluent Schema Registry ka introduction.
- **Real World Usage:**
  - Enterprise mein Kafka architectures kaise design hoti hain.
  - Advanced topic configurations.

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2. Course Structure Breakdown (Text Diagram)

Course ko 3 parts mein divide kiya gaya hai taaki learning step-by-step ho.

Text Diagram: Course Flow

```
START
  |
  v
[ PART 1: FUNDAMENTALS ]
  |-- Theory (4 hours): End-to-end understanding
  |-- Setup: Install Kafka (Linux, Mac, Windows)
  |-- CLI: Terminal se Kafka use karna
  |-- Java Code: Basic Producer/Consumer code likhna
  |
  v
[ PART 2: REAL WORLD ARCHITECTURE ]
  |-- Complex Project 1: Wikimedia Producer (Real-time data)
  |-- Complex Project 2: OpenSearch Consumer (Data storage)
  |-- Enterprise Use Cases: Case studies
  |
  v
[ PART 3: ADVANCED ]
  |-- Topic Configurations
  |-- Advanced Tuning & Settings
```

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3. Prerequisites (Is course ke liye kya aana chahiye?)

Start karne se pehle kuch basic requirements hain:

1. **Command Line / Terminal:** Aapko terminal use karna aana chahiye (basic commands).
2. **Java Knowledge:**
   - Course mein **Java 11** use hoga.
   - Agar aapko Java aati hai toh best hai.
   - *Note:* Agar Java **nahi** aati, toh bhi koi dikkat nahi. Aap code download karke follow kar sakte hain, bas logic samajhna zaruri hai.
3. **Operating System:**
   - **Linux / Mac:** Strongly preferred (sabse best experience).

- **Windows:** Supported hai, lekin kuch caveats (limitations) hain jo instructor explain karenge.

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4. Target Audience (Ye Course kiske liye hai?)

- **Developers:** Jo applications banana chahte hain jo Kafka use karein.
- **Architects:** Jo enterprise pipeline mein Kafka ka role samajhna chahte hain.
- **DevOps:** Jo Kafka brokers, topics aur partitions ki working samajhna chahte hain.

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5. The Learning Path (Developer vs Admin)

Instructor ne clarify kiya hai ki Kafka ki duniya bahut badi hai. Ye course **"Kafka for Beginners"** hai jo foundation banayega. Uske baad aap direction choose kar sakte hain:

Role	Recommended Future Courses (After this one)
If you want to be a Developer	Kafka Connect, Kafka Streams, ksqlDB, Confluent Components.
If you want to be an Admin	Kafka Security, Kafka Monitoring, Cluster Setup & Administration.

Summary Example:

Imagine aapko ek **News Website** (like Wikimedia) se saare changes real-time mein track karne hain.

- **Part 1** mein aap seekhenge ki ye theory mein kaise hota hai.
- **Part 2** mein aap actual **Java code** likhenge jo Wikimedia se data fetch karega (Producer) aur usse database mein save karega (Consumer).

Next Step: Would you like to start with the **Kafka Theory (Cluster & Brokers)** notes now?