

Deliverable-1

Topic: A logical channel in Kafka where messages are published and subscribed to.

Partition: A sub-division of a topic that stores messages in an ordered, immutable sequence, enabling parallel processing.

Offset: A unique sequential ID assigned to each message within a partition, used for tracking.

Kafka ensures message continuity by storing the last processed offset in `__consumer_offsets`, allowing the consumer to resume from where it left off upon reconnection.

Deliverable-2

Done in the original files.

Deliverable-3

#Producer

```
apoorvlodhi@Apoorvs-MacBook-Air RAI-Lab %  
apoorvlodhi@Apoorvs-MacBook-Air RAI-Lab % kcat -P -b localhost:9092 -t topic-apoorv-3  
  
hi  
this is first message in interactive kafka producer  
apoorv  
hello there  
Warm regards  
  
ok bye  
apoorvlodhi@Apoorvs-MacBook-Air RAI-Lab %  
apoorvlodhi@Apoorvs-MacBook-Air RAI-Lab % █
```

#Consumer

```
apoorvlodhi@Apoorvs-MacBook-Air RAI-Lab %  
apoorvlodhi@Apoorvs-MacBook-Air RAI-Lab % kcat -C -b localhost:9092 -t topic-apoorv-3 -o beginning -q  
  
hi  
this is first message in interactive kafka producer  
apoorv  
hello there  
Warm regards  
ok bye  
█
```

Delimiter:

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	"2025-02-06 23:25:46	Mumbai	21\u00baC"
1	"2025-02-06 23:25:47	Delhi	23\u00baC"
2	"2025-02-06 23:25:48	Chicago	19\u00baC"
3	"2025-02-06 23:25:49	Chicago	19\u00baC"
4	"2025-02-06 23:25:50	Indore	31\u00baC"
5	"2025-02-06 23:25:51	Chicago	32\u00baC"
6	"2025-02-06 23:25:52	Mumbai	28\u00baC"
7	"2025-02-06 23:25:53	Chicago	26\u00baC"
8	"2025-02-06 23:25:54	Mumbai	19\u00baC"
9	"2025-02-06 23:25:55	Chicago	28\u00baC"