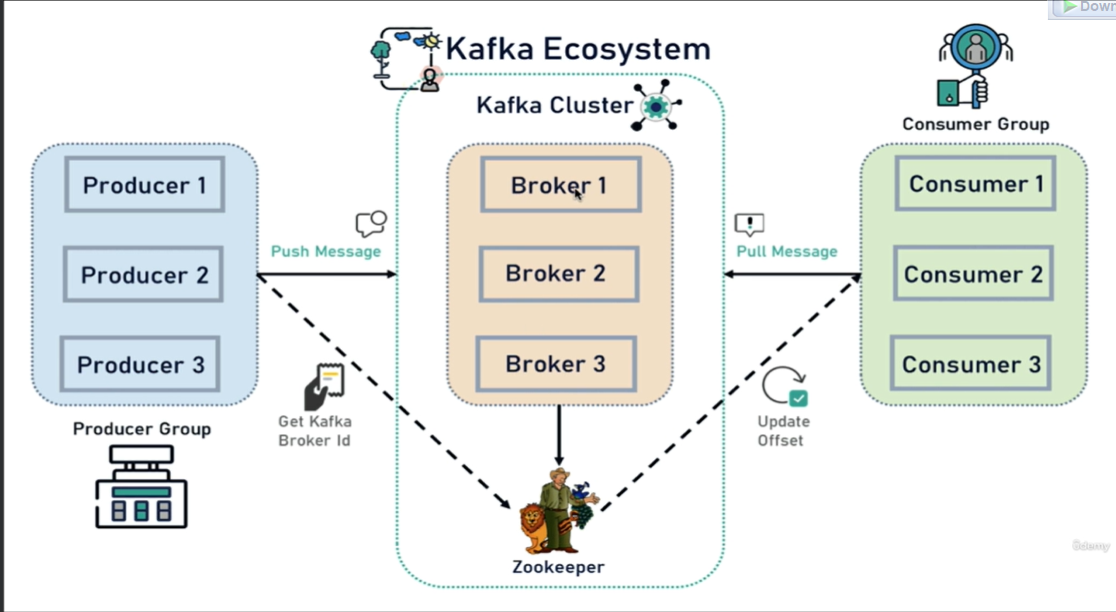
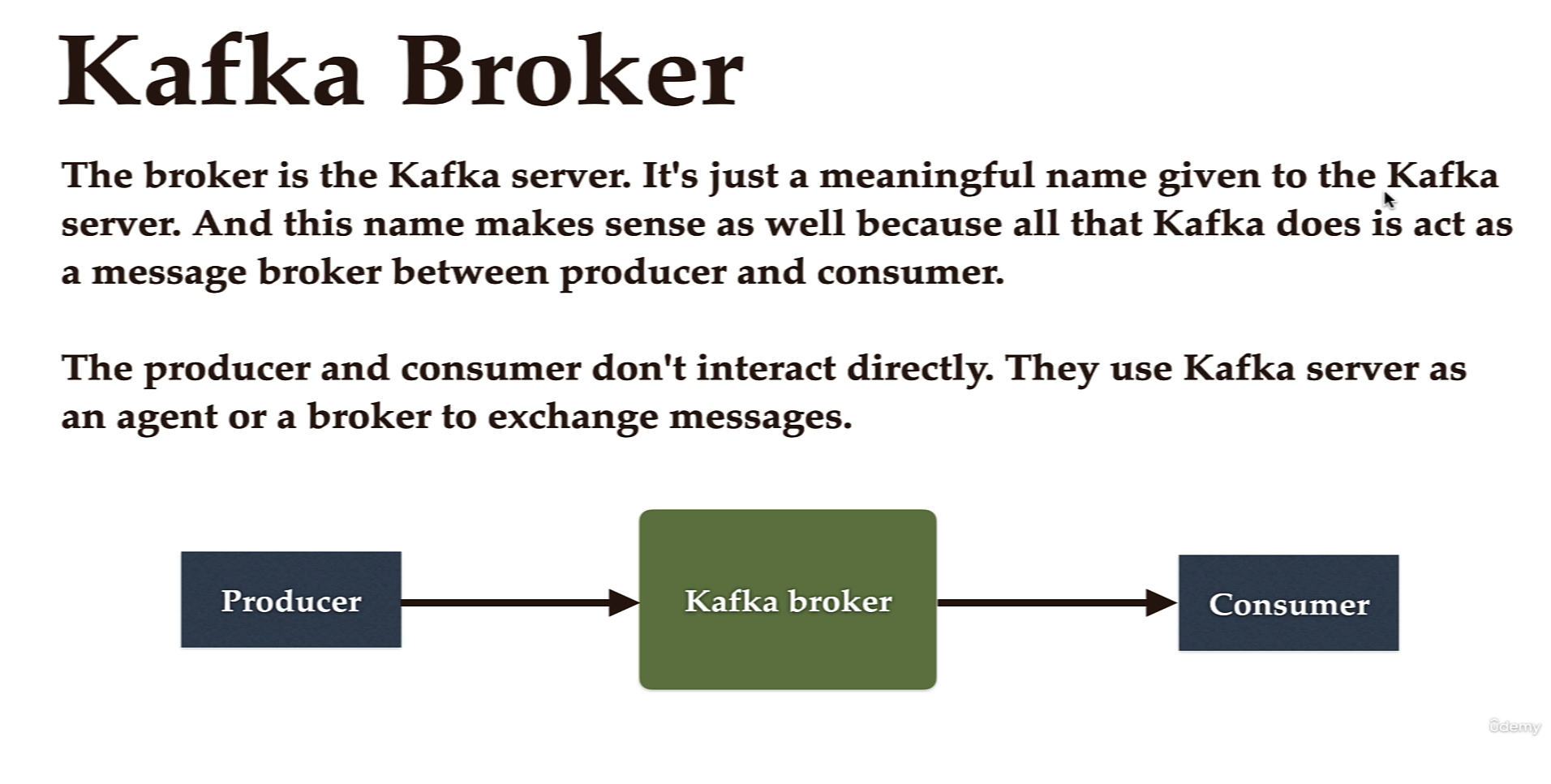
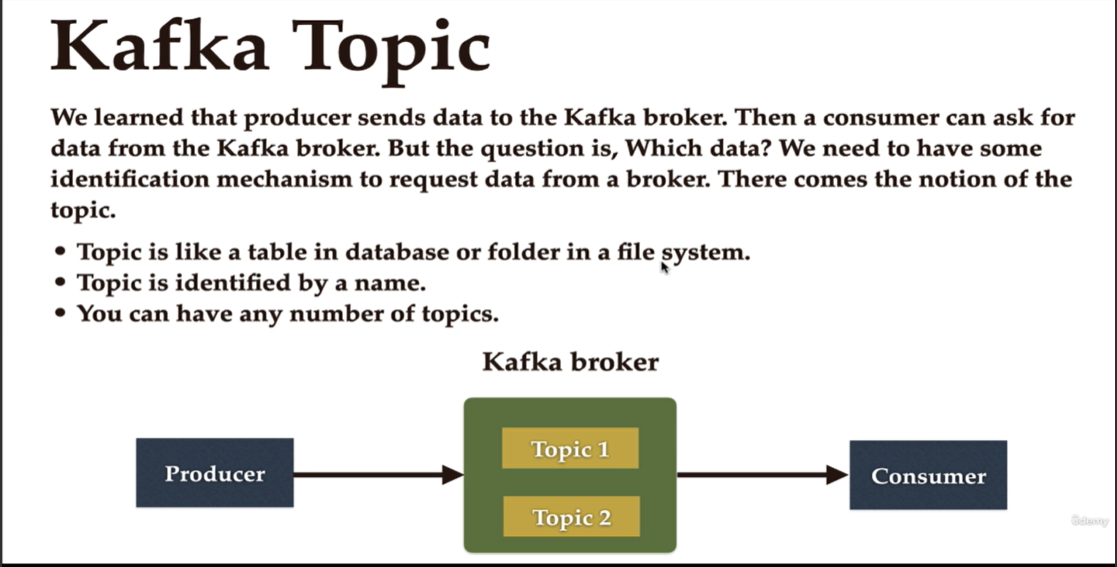
**Apache Kafka**

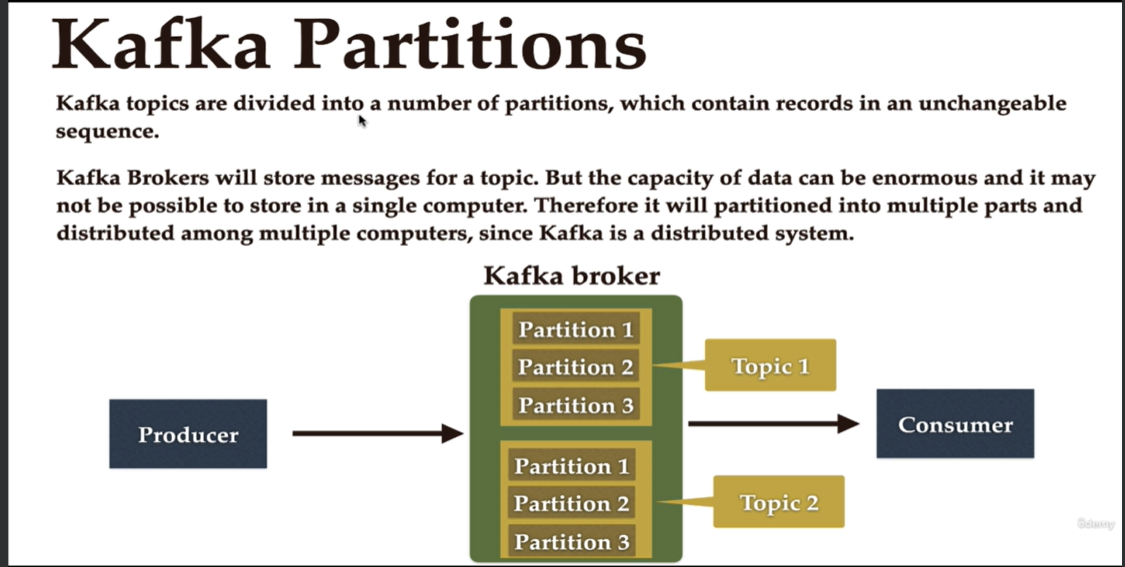
* Apache kafka is distributed system it act as a cluster.
* one microservice produces the msg and sent to the Apache Kafka broker and another microservice consumes this message from the Kafka broker,
* when we use Apache kafka which is used in the distribution system When we use Apache kafka in the production environment we have to create at least 3 kafka brokers in the kafka cluster.
* The producer can create any message message can be an event, stream of the record, plaintext, string, JSON.
* there is also a term called kafka topic it is created inside the kafka cluster and the consumer will subsribe that topic.
* zookeeper will maintain the state of this Kafka broker in Kafka cluster also zookeeper will maintain the configuration of all the topic producers and consumers.
* apache kafka is fault tolerance if one broker fails another broker will maintain that.
* There are some traditional messaging systems like active MQ and rabbit MQ. It works well as a replacement for this messaging system.

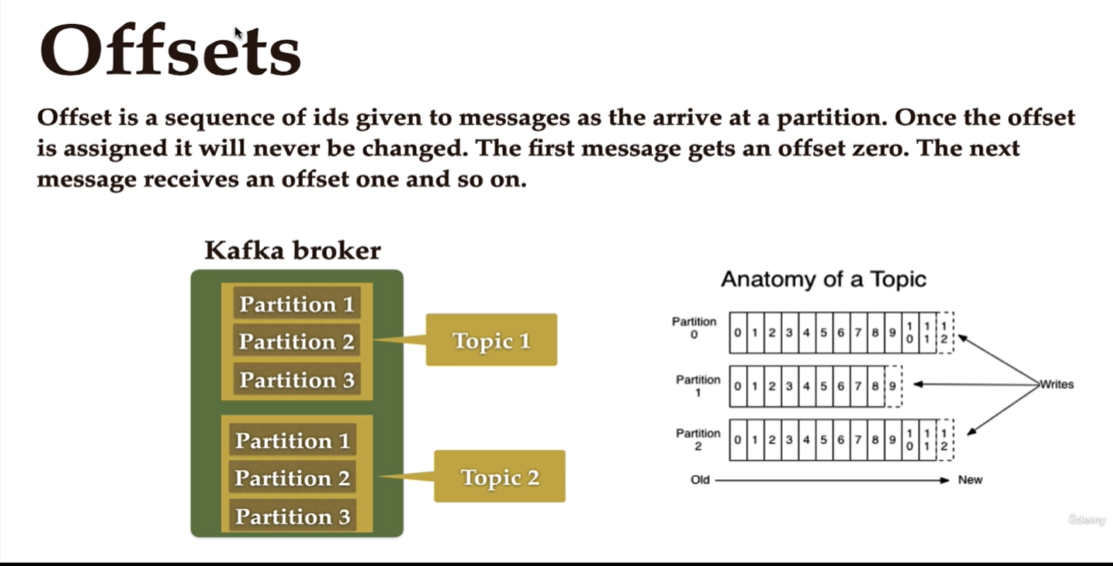




* Kafka Topic :it will provide security mechanisms to get data from broker to consumer.it catagories the data in to topics



* Topic subdivided into partition so that huge data can store over distributed network  
  
* Offset:



* How to setup apache kafka locally

https://kafka.apache.org/quickstart

Download from pache kafka for windows and go into bin and in window you have all bat file to run zookeeper service.

* To run zookeeper service go to kafka foler open cmd and give this path  
  S:\Software\kafka>.\bin\windows\zookeeper-server-start.bat .\config\zookeeper.properties
* To run kafka server in windows machine  
  S:\Software\kafka>.\bin\windows\kafka-server-start.bat .\config\server.properties
* Once you do all create topic in server by  
  S:\Software\kafka>.\bin\windows\kafka-topics.bat --create --topic topic-example --bootstrap-server localhost:9092
* Then we create events and used in kafka topics

S:\Software\kafka>.\bin\windows\kafka-console-producer.bat --topic topic-example --bootstrap-server localhost:9092

>hello world

>kafka topic event

>demo 1

>demo 2

* To read the topic from kafka broker from beginning

S:\Software\kafka>.\bin\windows\kafka-console-consumer.bat --topic topic-example --from-beginning --bootstrap-server localhost:9092

hello world

kafka topic event

demo 1

demo 2