1. A picture containing icon

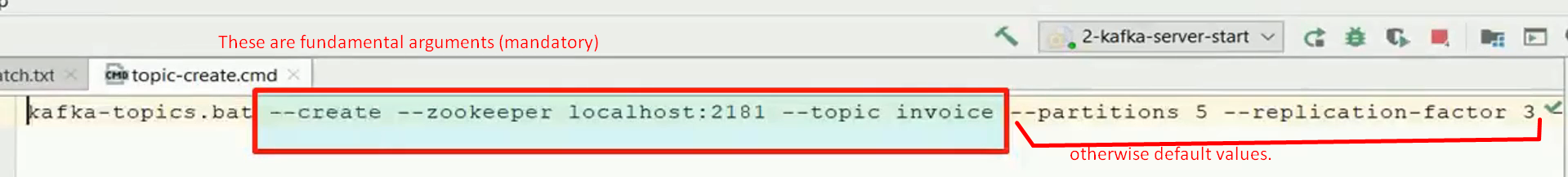
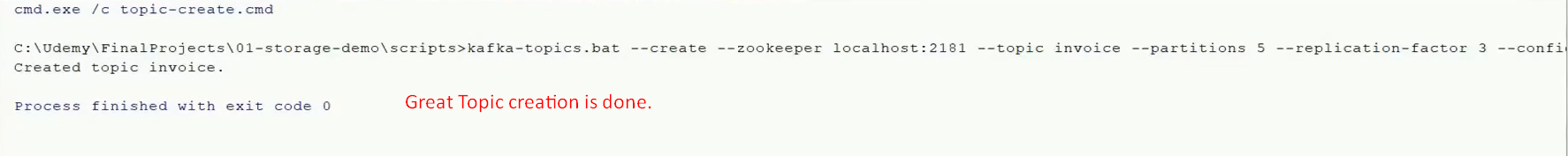
   Description automatically generated  
     
   
2. Diagram

   Description automatically generatedWe already learnt that Apache Kafka organizes msgs in **Topic**.  
   and the **Broker** creates a **log file** (c:/tmp/kakfa-logs-0/000000000.log) under **Log Dir** (c:/tmp/kakfa-logs-0) for each Topic to store these msgs.   
   Jatin 🡺 Topic: Logical, File: Physical.
3. However, a log file is **partitioned, replicated, and segmented** (See the above Diagram)
4. In this lecture, I will not only explain but will also show you the Kafka **Log** **File Organization**. This lecture is going to be a working section.
5. Let’s start with a high-level concept of Topic.

`

1. **A topic is a logical name to group your msgs**.  
   Like in DB, you create Table to store your records.  
   So, in Kafka, you should create Topic to store your msgs.
2. Diagram

   Description automatically generated
3. Let’s create a topic to see things in action.
4. Diagram

   Description automatically generatedActually, we want to understand how a topic (partition) is organized at the broker level.  
   We will create a topic and will investigate these **Data Dir** (kafka-log-0, kafka-log-1, kafka-log-2) to see how a topic is held at the physical level.
5. Let’s create Topic.  
      
   The above **topic-create.cmd** file is under scripts of the project.  
   
6. Let’s talk about Topic Partition.



1. In Kafka, a Topic may store millions of msgs.
2. Hence, practically impossible to keep those msgs in a single file.
3. Topic partition is a mechanism to break a topic into smaller parts.
4. For Apache Kafka, **a partition is nothing but a physical Dir**.  
   Apache Kafka creates a separate Dir for each topic partition.  
   Actually, we created a topic with 5 partitions and 3 replicas whereas we have 3 nodes in Kafka Cluster.  
   So a partition say A will have 3 copies thus one copy on each node. So, each node will have a total of 5 partitions. You can do calculations.
5. Diagram

   Description automatically generated
6. cGraphical user interface, application, PowerPoint

   Description automatically generated