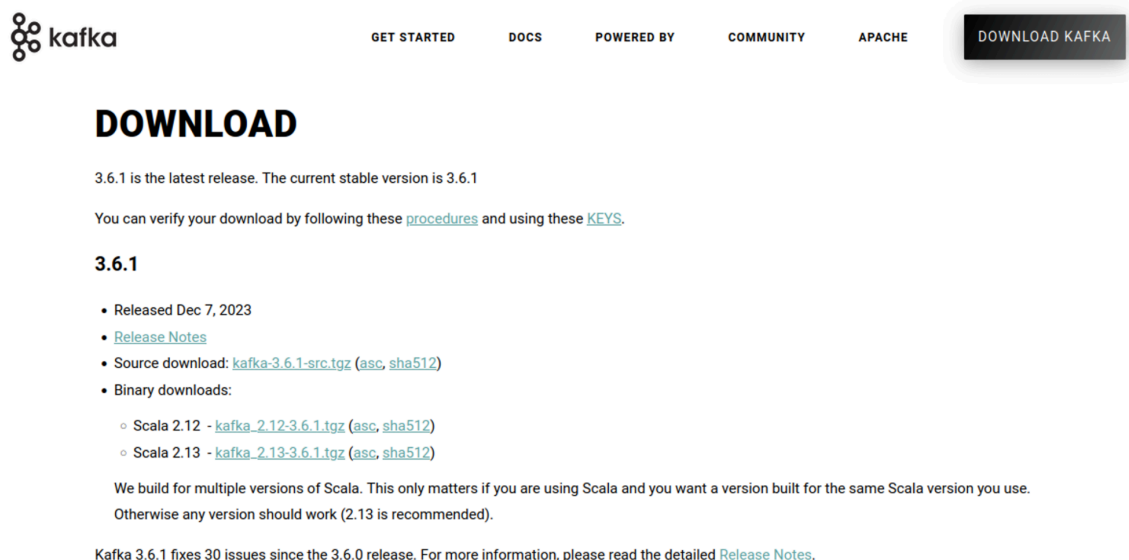## Lab 6 submission

Kafka Exercise

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Make a report on the following with proper screenshots

Step 1: Download and install kafka

Download Binary download of the latest version

unzip the folder

Step 2: Set the Kafka environment
Start Zookeeper (in a new terminal):
bin/zookeeper-server-start.sh config/zookeeper.properties

```
[2024-01-25 02:50:50,588] INFO Shutting down (kafka.server.KafkaServer)
Viswaksena@ubuntu:~/kafka$ bin/zookeeper-server-start.sh config/zookeeper.properties
[2024-01-25 02:51:20,663] INFO Reading configuration from: config/zookeeper.properties (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-01-25 02:51:20,663] WARN config/zookeeper.properties is relative. Prepend ./ to indicate that you're sure! (org.apache.zookeeper.server.quorum.QuorumPee
rConfig)
[2024-01-25 02:51:20,666] INFO clientPortAddress is 0.0.0.0:2181 (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-01-25 02:51:20,666] INFO secureClientPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-01-25 02:51:20,666] INFO observerMasterPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-01-25 02:51:20,666] INFO metricsProvider.className is org.apache.zookeeper.metrics.impl.DefaultMetricsProvider (org.apache.zookeeper.server.quorum.Quoru
mPeerConfig)
[2024-01-25 02:51:20,667] INFO autopurge.snapRetainCount set to 3 (org.apache.zookeeper.server.DatadirCleanupManager)
[2024-01-25 02:51:20,668] INFO autopurge.purgeInterval set to 0 (org.apache.zookeeper.server.DatadirCleanupManager)
[2024-01-25 02:51:20,668] INFO Purge task is not scheduled. (org.apache.zookeeper.server.DatadirCleanupManager)
[2024-01-25 02:51:20,668] WARN Either no config or no quorum defined in config, running in standalone mode (org.apache.zookeeper.server.quorum.QuorumPeerMain)
[2024-01-25 02:51:20,668] INFO Log4j 1.2 jmx support not found; jmx disabled. (org.apache.zookeeper.jmx.ManagedUtil)
[2024-01-25 02:51:20,668] INFO Reading configuration from: config/zookeeper.properties (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-01-25 02:51:20,668] WARN config/zookeeper.properties is relative. Prepend ./ to indicate that you're sure! (org.apache.zookeeper.server.quorum.QuorumPee
rConfig)
[2024-01-25 02:51:20,668] INFO clientPortAddress is 0.0.0.0:2181 (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-01-25 02:51:20,668] INFO secureClientPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-01-25 02:51:20,669] INFO observerMasterPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2024-01-25 02:51:20,669] INFO metricsProvider.className is org.apache.zookeeper.metrics.impl.DefaultMetricsProvider (org.apache.zookeeper.server.quorum.Quoru
mPeerConfig)
[2024-01-25 02:51:20,669] INFO Starting server (org.apache.zookeeper.server.ZooKeeperServerMain)
[2024-01-25 02:51:20,675] INFO ServerMetrics initialized with provider org.apache.zookeeper.metrics.impl.DefaultMetricsProvider@a3d8174 (org.apache.zookeeper.
server.ServerMetrics)
[2024-01-25 02:51:20,676] INFO ACL digest algorithm is: SHA1 (org.apache.zookeeper.server.auth.DigestAuthenticationProvider)
[2024-01-25 02:51:20,676] INFO zookeeper.DigestAuthenticationProvider.enabled = true (org.apache.zookeeper.server.auth.DigestAuthenticationProvider)
[2024-01-25 02:51:20,678] INFO zookeeper.snapshot.trust.empty : false (org.apache.zookeeper.server.persistence.FileTxnSnapLog)
[2024-01-25 02:51:20,683] INFO  (org.apache.zookeeper.server.ZooKeeperServer)
[2024-01-25 02:51:20,683] INFO   _____                                           (org.apache.zookeeper.server.ZooKeeperServer)
[2024-01-25 02:51:20,683] INFO  |___  /                  |  |                       (org.apache.zookeeper.server.ZooKeeperServer)
[2024-01-25 02:51:20,683] INFO     / /  ___    ___   | | _____  ___  ___  ___ _ __  (org.apache.zookeeper.server.ZooKeeperServer)
[2024-01-25 02:51:20,683] INFO    / /  / _ \  / _ \  | |/ / _ \/ _ \|  _ \/ _ \ '__| (org.apache.zookeeper.server.ZooKeeperServer)
[2024-01-25 02:51:20,683] INFO   / /__| (_) || (_) | |   <  __/  __/| |_) |  __/ |  (org.apache.zookeeper.server.ZooKeeperServer)
[2024-01-25 02:51:20,683] INFO  /_____|\___/  \___/  |_|\_\___|\___|| .__/ \___|_|  (org.apache.zookeeper.server.ZooKeeperServer)
[2024-01-25 02:51:20,683] INFO                                      | |             (org.apache.zookeeper.server.ZooKeeperServer)
```

Start Kafka server (in another terminal):
bin/kafka-server-start.sh config/server.properties

```
Viswaksena@ubuntu:~/kafka$ bin/kafka-server-start.sh config/server.properties
[2024-01-25 02:50:11,139] INFO Registered kafka:type=kafka.Log4jController MBean (kafka.utils.Log4jControllerRegistration$)
[2024-01-25 02:50:11,354] INFO Setting -D jdk.tls.rejectClientInitiatedRenegotiation=true to disable client-initiated TLS renegotiation (org.apache.zookeeper.
common.X509Util)
[2024-01-25 02:50:11,405] INFO Registered signal handlers for TERM, INT, HUP (org.apache.kafka.common.utils.LoggingSignalHandler)
[2024-01-25 02:50:11,406] INFO starting (kafka.server.KafkaServer)
[2024-01-25 02:50:11,406] INFO Connecting to zookeeper on localhost:2181 (kafka.server.KafkaServer)
[2024-01-25 02:50:11,416] INFO [ZooKeeperClient Kafka server] Initializing a new session to localhost:2181. (kafka.zookeeper.ZooKeeperClient)
[2024-01-25 02:50:11,419] INFO Client environment:zookeeper.version=3.8.3-6ad6d364c7c0bcf0de452d54ebefa3058098ab56, built on 2023-10-05 10:34 UTC (org.apache.
zookeeper.ZooKeeper)
```

Step3: Create a topic to store the events you create

bin/kafka-topics.sh --create --topic my_topic

--bootstrap-server localhost:9092 --partitions 1

--replication-factor 1

```
Viswaksena@ubuntu:~/kafka$ bin/kafka-topics.sh --create --topic my_topic --bootstrap-server localhost:9092 --partitions 1 --replication-factor 1
WARNING: Due to limitations in metric names, topics with a period ('.') or underscore ('_') could collide. To avoid issues it is best to use either, but not b
oth.
Created topic my_topic.
```

Step4: Write events to a topic

bin/kafka-console-producer.sh --topic my_topic

--bootstrap-server localhost:9092

```
Viswaksena@ubuntu:~/kafka$ bin/kafka-console-producer.sh --topic my_topic --bootstrap-server localhost:9092
>Hi from server
>Kafka rocks
>This is my first time using of kafka
>Viswaksena here
```

Step5: Read the events

bin/kafka-console-consumer.sh --topic my_topic --from-beginning --bootstrap-server
localhost:9092

```
Viswaksena@ubuntu:~/kafka$ bin/kafka-console-consumer.sh --topic my_topic --from-beginning --bootstrap-server localhost:9092
Hi from server
Kafka rocks
This is my first time using of kafka
Viswaksena here
```