Creating an Eclipse-Maven Project
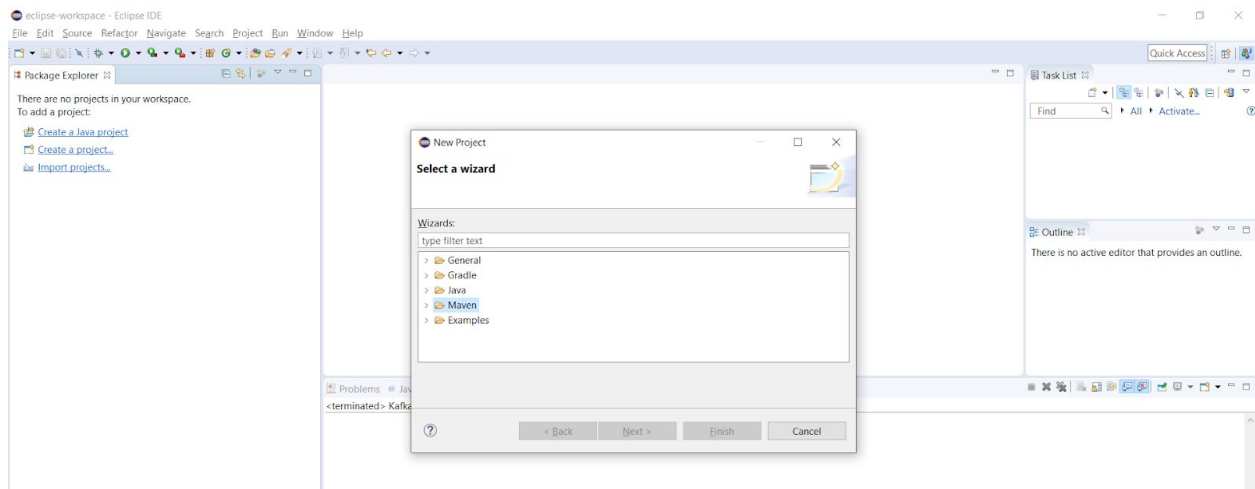
Prerequisite

1. Make sure you have Maven plugin on your Eclipse
2. JDK 1.8 or above installed on your system.

Steps to create a new Maven Project

1. Open Eclipse IDE and then go to **File → New → Project**. A prompt will appear as shown below.

2. From the multiple options available, select the one which says **Maven** and then click on the drop-down arrow to the left of it. From the options that appear, select **Maven Project**.
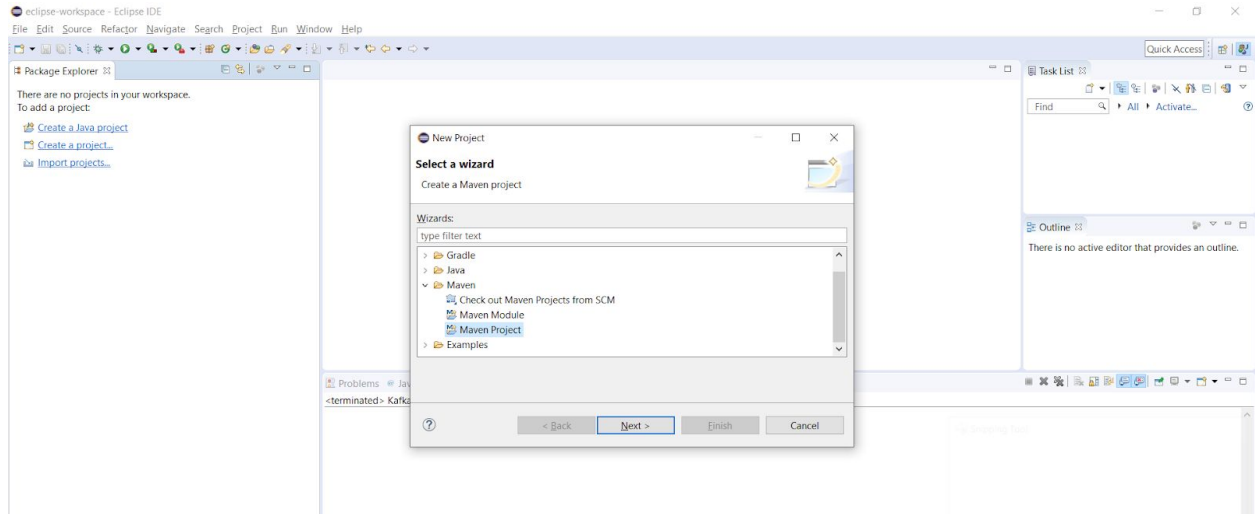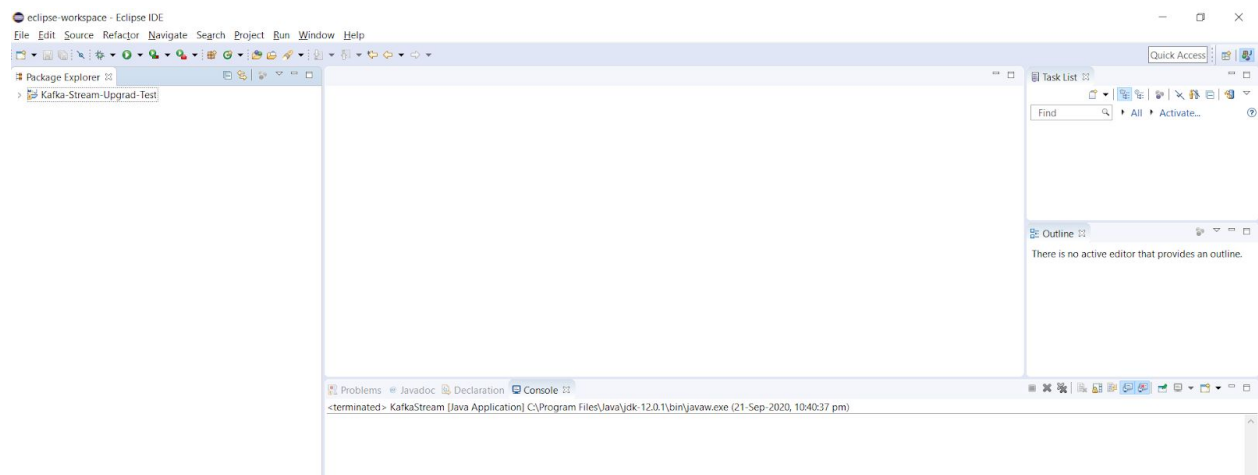
3. Then click on **Next**. Keep on clicking **Next** until you are prompted to enter the Group ID, Artifact ID and Package Name.
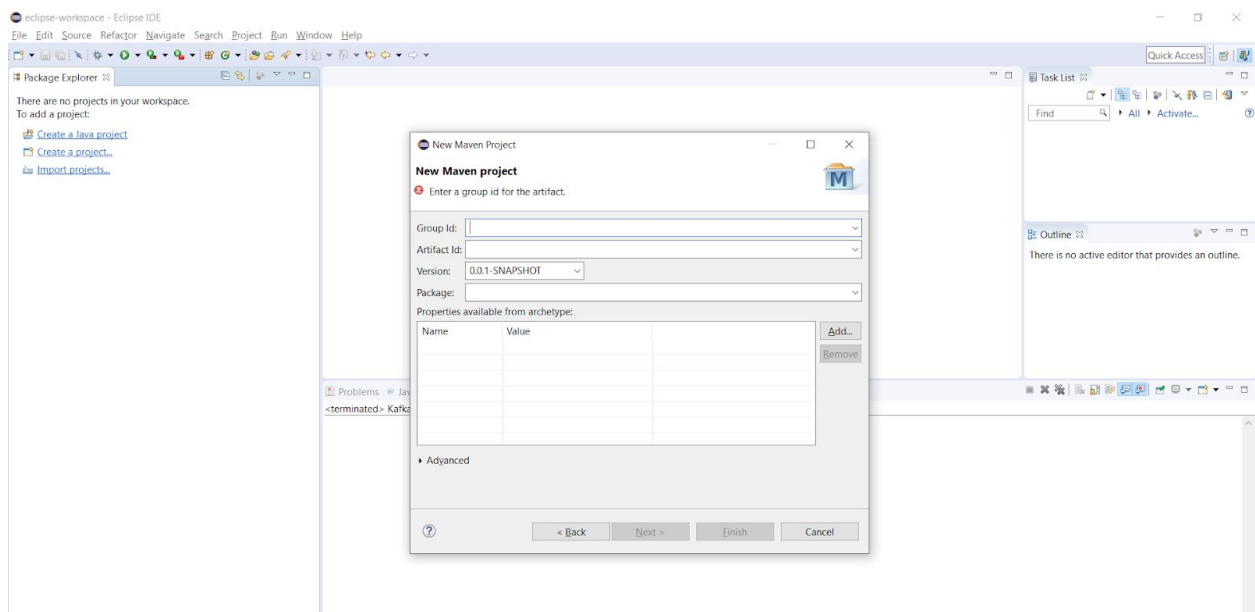
4. In the **Group ID** enter **Kafka-Stream-Upgrad-Test** and the same in the **Artifact ID**. In the Package enter **tutorial** and then click on **Finish**.
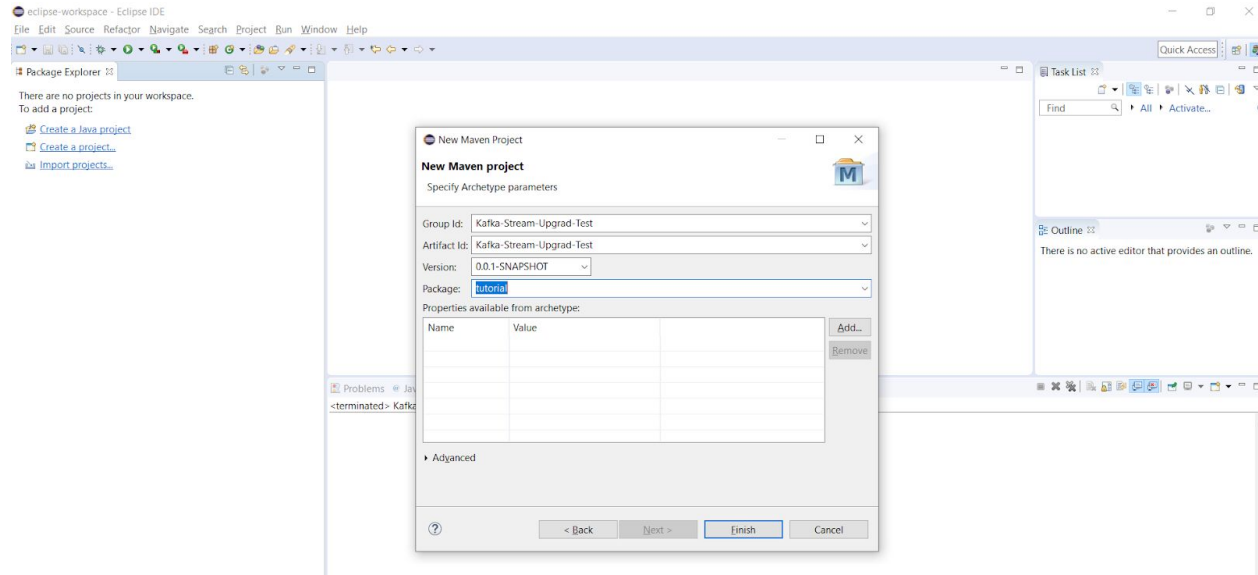
5. Once you click on Finish, the project will get created and will reflect in the **Package Explorer** as shown below.

6. Click on the drop-down arrow to the left of the project and then open the **pom.xml** file by double-clicking on it. It would appear something like this.
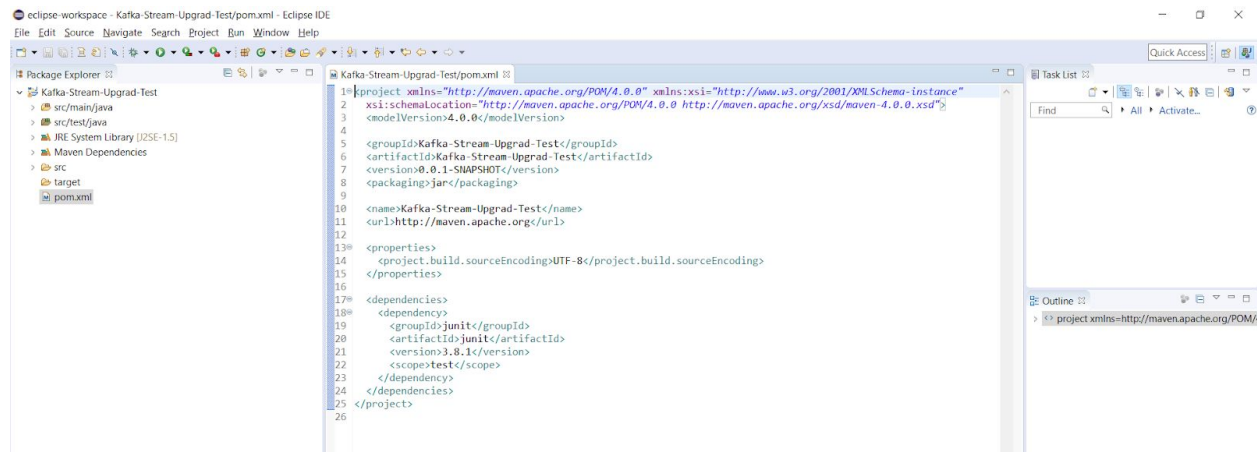
7. Here you need to add some properties and dependencies. Follow the next steps very carefully.

8. Insert the following between **<packaging>jar</packaging>** and **<name>Kafka-Stream-Upgrad-Test</name>** tag.

```
<properties>
      <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
      <java-version>1.8</java-version>
      <maven.compiler.source>1.8</maven.compiler.source>
      <maven.compiler.target>1.8</maven.compiler.target>
</properties>
```

9. Once done, **delete** the following present between **<url>http://maven.apache.org</url>** and **<dependencies>** tag.

```
<properties>
     <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
</properties>
```

10. Next, insert the following between **</dependency>** and the **</dependencies>** tag.

```
<dependency>
<groupId>org.apache.kafka</groupId>
<artifactId>kafka-clients</artifactId>
<version>2.3.0</version>
</dependency>
<dependency>
<groupId>org.apache.kafka</groupId>
```

```
<artifactId>kafka-streams</artifactId>
<version>2.3.0</version>
</dependency>
```

11. Next, enter the following between the **</dependencies>** and **</project>** tag.

```
<build>
      <plugins>
            <plugin>
                  <artifactId>maven-assembly-plugin</artifactId>
                  <configuration>
                        <archive>
                              <manifest>

<mainClass>tutorial.KafkaStream</mainClass>
                              </manifest>
                        </archive>
                        <descriptorRefs>

<descriptorRef>jar-with-dependencies</descriptorRef>
                        </descriptorRefs>
                  </configuration>
            </plugin>
      </plugins>
   </build>
```

12. My Final **pom.xml** looks something like this.

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>

  <groupId>Kafka-Stream-Upgrad-Test</groupId>
  <artifactId>Kafka-Stream-Upgrad-Test</artifactId>
  <version>0.0.1-SNAPSHOT</version>
  <packaging>jar</packaging>
<properties>
      <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
```

```xml
        <java-version>1.8</java-version>
        <maven.compiler.source>1.8</maven.compiler.source>
        <maven.compiler.target>1.8</maven.compiler.target>
</properties>
  <name>Kafka-Stream-Upgrad-Test</name>
  <url>http://maven.apache.org</url>


  <dependencies>
    <dependency>
      <groupId>junit</groupId>
      <artifactId>junit</artifactId>
      <version>3.8.1</version>
      <scope>test</scope>
    </dependency>

<dependency>
<groupId>org.apache.kafka</groupId>
<artifactId>kafka-clients</artifactId>
<version>2.3.0</version>
</dependency>
<dependency>
<groupId>org.apache.kafka</groupId>
<artifactId>kafka-streams</artifactId>
<version>2.3.0</version>
</dependency>

  </dependencies>
  <build>
      <plugins>
            <plugin>
                  <artifactId>maven-assembly-plugin</artifactId>
                  <configuration>
                        <archive>
                              <manifest>

<mainClass>tutorial.KafkaStream</mainClass>
                              </manifest>
                        </archive>
                        <descriptorRefs>

<descriptorRef>jar-with-dependencies</descriptorRef>
```

```
                    </descriptorRefs>
                </configuration>
            </plugin>
        </plugins>
    </build>
</project>
```
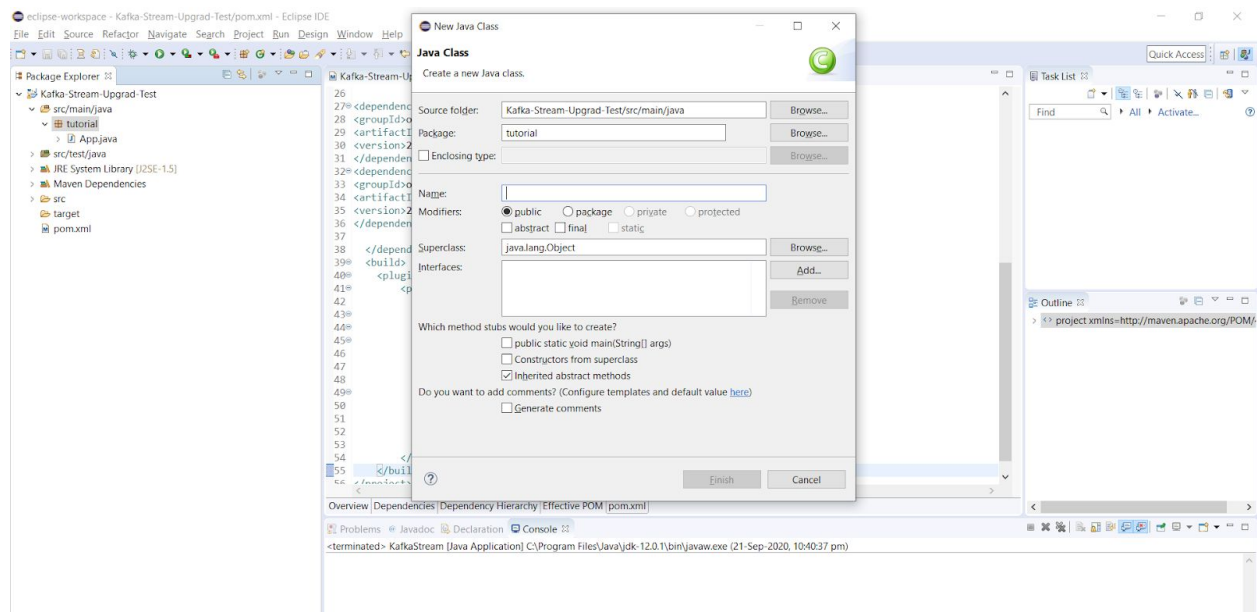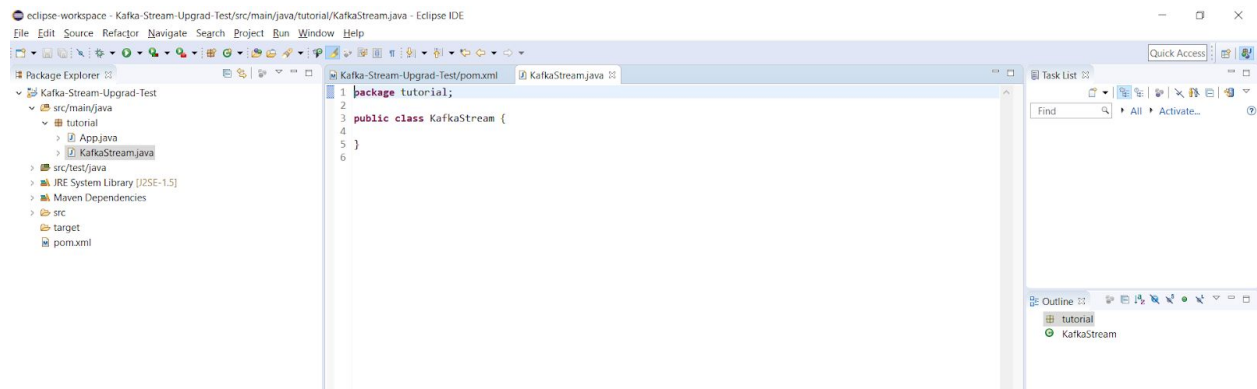
13. Once that is done, save the **pom.xml** file. Next, click on the drop-down arrow left to the **src/main/java**. Right click on the **tutorial** package, then select **new** and then select the **class**.

14. Name your class as **KafkaStream** and then click on **Finish**. A class with the specified name will get created in the tutorial package.

15. Inside the class create a **main** method and write your code inside it. Import the following packages. Insert the following between the line **package tutorial;** and **public class KafkaStream{**

```java
import java.io.IOException;
import java.util.Map;
import java.util.Properties;

import org.apache.kafka.common.serialization.Serde;
import org.apache.kafka.common.serialization.Serdes;
import org.apache.kafka.streams.KafkaStreams;
import org.apache.kafka.streams.StreamsBuilder;
import org.apache.kafka.streams.StreamsConfig;
import org.apache.kafka.streams.kstream.KStream;
import org.apache.kafka.streams.kstream.Predicate;
import org.apache.kafka.streams.kstream.Produced;
import org.apache.kafka.streams.kstream.internals.ConsumedInternal;

import com.fasterxml.jackson.databind.ObjectMapper;
import com.fasterxml.jackson.databind.ObjectReader;
```

Once the code is written follow the steps mentioned in the document above to run the project.