**ALGORITHM**

**Step 1: Set up the project structure**

Open Eclipse and create a new Maven project.

Choose a suitable project name and location.

Select the desired Maven archetype or choose the default archetype.

Configure the project details, such as Group Id and Artifact Id.

Finish creating the Maven project.

**Step 2: Add dependencies**

Open the project's pom.xml file.

Add the necessary dependencies for JUnit 5, Apache Tomcat, and any other dependencies required for the user authentication class.

Save the pom.xml file to let Maven download the dependencies.

**Step 3: Create the authentication class**

Create a new Java class for the user authentication logic.

Implement the necessary methods for user authentication.

Write the business logic for user authentication, including any necessary validation or database interactions.

**Step 4: Create the JUnit test class**

Create a new JUnit test class for the authentication class.

Annotate the test class with to use JUnit 5 platform.

Write individual test methods to test different aspects of the authentication class.

Use assertions to verify the expected behavior of the authentication methods.

**Step 5: Run the unit tests**

Right-click on the JUnit test class.

Select "Run As" and choose "JUnit Test" to run the tests.

Observe the test results in the JUnit view in Eclipse.

Make sure all the tests pass successfully.