

# Exercise 1: Setting Up Junit

##CalculatorTest.java:

```
package org.apache.maven.archetypes.maven_archetype_quickstart;
```

```
import org.junit.Test;
```

```
import static org.junit.Assert.assertEquals;
```

```
public class CalculatorTest {
```

```
    @Test
```

```
    public void testAdd() {
```

```
        Calculator calc = new Calculator();
```

```
        int result = calc.add(2, 3);
```

```
        assertEquals(5, result);
```

```
    }
```

```
    @Test
```

```
    public void testSubtract() {
```

```
        Calculator calc = new Calculator();
```

```
        int result = calc.subtract(5, 2);
```

```
        assertEquals(3, result);
```

```
    }
```

```
    @Test
```

```
    public void testAddNegativeNumbers() {
```

```
        Calculator calc = new Calculator();
```

```
        assertEquals(-5, calc.add(-2, -3));
```

```
    }
```

```
}
```

##Calculator.java

```
package org.apache.maven.archetypes.maven_archetype_quickstart;
```

```
public class Calculator {
```

```

        public int add (int a, int b) {
            return a + b;
        }

        public int subtract(int a, int b) {
            return a - b;
        }
    }
}

```

##pom.xml

```

<?xml version="1.0" encoding="UTF-8"?>

<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>org.apache.maven.archetypes </groupId>
    <artifactId>maven-archetype-quickstart</artifactId>
    <version>0.0.1-SNAPSHOT</version>

    <name>maven-archetype-quickstart</name>
    <url>http://www.example.com</url>

    <properties>
        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
        <maven.compiler.release>17</maven.compiler.release>
    </properties>

    <dependencies>

```

```
<dependency>
  <groupId>junit</groupId>
  <artifactId>junit</artifactId>
  <version>4.13.2</version>
  <scope>test</scope>
</dependency>
```

```
<dependency>
  <groupId>org.slf4j</groupId>
  <artifactId>slf4j-api</artifactId>
  <version>1.7.36</version>
</dependency>
```

```
<dependency>
  <groupId>org.slf4j</groupId>
  <artifactId>slf4j-simple</artifactId>
  <version>1.7.36</version>
</dependency>
```

```
</dependencies>
```

```
<build>
```

```
  <pluginManagement><!-- lock down plugins versions to avoid using Maven defaults (may
be moved to parent pom) -->
```

```
    <plugins>
```

```
      <!-- clean lifecycle, see https://maven.apache.org/ref/current/maven-core/lifecycles.html#clean\_Lifecycle -->
```

```
        <plugin>
```

```
          <artifactId>maven-clean-plugin</artifactId>
```

```
          <version>3.4.0</version>
```

```
        </plugin>
```

```
      <!-- default lifecycle, jar packaging: see https://maven.apache.org/ref/current/maven-core/default-bindings.html#Plugin\_bindings\_for\_jar\_packaging -->
```

```
<plugin>
  <artifactId>maven-resources-plugin</artifactId>
  <version>3.3.1</version>
</plugin>
<plugin>
  <artifactId>maven-compiler-plugin</artifactId>
  <version>3.13.0</version>
</plugin>
<plugin>
  <artifactId>maven-surefire-plugin</artifactId>
  <version>3.3.0</version>
</plugin>
<plugin>
  <artifactId>maven-jar-plugin</artifactId>
  <version>3.4.2</version>
</plugin>
<plugin>
  <artifactId>maven-install-plugin</artifactId>
  <version>3.1.2</version>
</plugin>
<plugin>
  <artifactId>maven-deploy-plugin</artifactId>
  <version>3.1.2</version>
</plugin>
<!-- site lifecycle, see https://maven.apache.org/ref/current/maven-
core/lifecycles.html#site_Lifecycle -->
<plugin>
  <artifactId>maven-site-plugin</artifactId>
  <version>3.12.1</version>
```

```

</plugin>

<plugin>

  <artifactId>maven-project-info-reports-plugin</artifactId>

  <version>3.6.1</version>

</plugin>

</plugins>

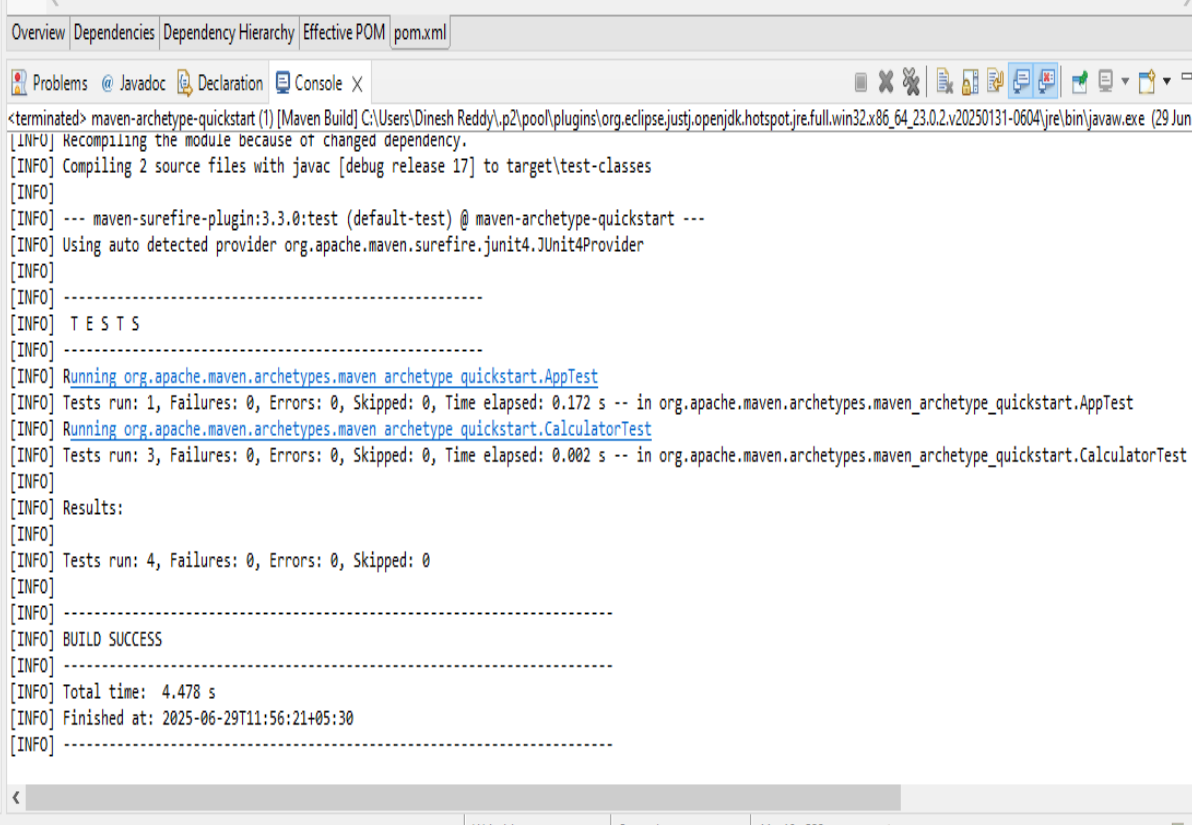
</pluginManagement>

</build>

</project>

```

## OUTPUT:



```

<terminated> maven-archetype-quickstart (1) [Maven Build] C:\Users\Dinesh Reddy\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_23.0.2.v20250131-0604\jre\bin\javaw.exe (29 Jun :
[INFO] Recompiling the module because of changed dependency.
[INFO] Compiling 2 source files with javac [debug release 17] to target\test-classes
[INFO]
[INFO] --- maven-surefire-plugin:3.3.0:test (default-test) @ maven-archetype-quickstart ---
[INFO] Using auto detected provider org.apache.maven.surefire.junit4.JUnit4Provider
[INFO]
[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running org.apache.maven.archetypes.maven_archetype_quickstart.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.172 s -- in org.apache.maven.archetypes.maven_archetype_quickstart.AppTest
[INFO] Running org.apache.maven.archetypes.maven_archetype_quickstart.CalculatorTest
[INFO] Tests run: 3, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.002 s -- in org.apache.maven.archetypes.maven_archetype_quickstart.CalculatorTest
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 4, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 4.478 s
[INFO] Finished at: 2025-06-29T11:56:21+05:30
[INFO] -----

```