

Exercise 1: Setting Up JUnit

TOOL: IntelliJ IDEA

- groupId: org.example
- ArtifactId: junitdemo

generated pom.xml and added:

```
<dependencies>
```

```
  <dependency>
```

```
    <groupId>junit</groupId>
```

```
    <artifactId>junit</artifactId>
```

```
    <version>4.13.2</version>
```

```
    <scope>test</scope>
```

```
  </dependency>
```

```
</dependencies>
```

Create Calculator Class

```
package org.example;
```

```
public class Calculator {
```

```
  public int add(int a, int b) {
```

```
    return a + b;
```

```
  }
```

```
  public int subtract(int a, int b) {
```

```
    return a - b;
```

```
  }
```

```
  public int multiply(int a, int b) {
```

```
    return a * b;
```

```
  }
```

```
public int divide(int a, int b)

if (b == 0) throw new IllegalArgumentException("Cannot divide by zero")

return a / b;

}

}
```

Create CalculatorTest Class

```
package org.example;
```

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

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

```
public class CalculatorTest {
```

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

```
    @Test
```

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

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

```
    }
```

```
    @Test
```

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

```
        assertEquals(2, calc.subtract(5, 3));
```

```
    }
```

```
    @Test
```

```
    public void testMultiply() {
```

```
    assertEquals(12, calc.multiply(4, 3));  
}
```

@Test

```
public void testDivide() {  
    assertEquals(5, calc.divide(10, 2));  
}
```

@Test(expected = IllegalArgumentException.class)

```
public void testDivideByZero() {  
    calc.divide(5, 0);  
}  
}
```

Test output:

