**Exercise 1**

Setting Up JUnit Scenario: You need to set up JUnit in your Java project to start writing unit tests. Steps: 1. Create a new Java project in your IDE (e.g., IntelliJ IDEA, Eclipse). 2. Add JUnit dependency to your project. If you are using Maven, add the following to your pom.xml: junit junit 4.13.2 test 3. Create a new test class in your project.

**Program**

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("Divide by zero!");

return a / b;

}

}

public class Main {

public static void main(String[] args) {

Calculator calc = new Calculator();

try {

assert calc.add(3, 7) == 10 : "Add test failed";

assert calc.subtract(10, 5) == 5 : "Subtract test failed";

assert calc.multiply(2, 3) == 6 : "Multiply test failed";

assert calc.divide(10, 2) == 5 : "Divide test failed";

System.out.println("All tests passed successfully!");

} catch (AssertionError e) {

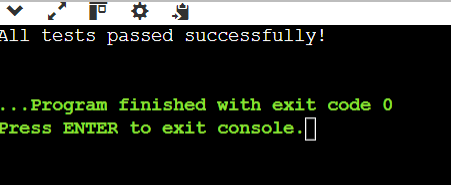
System.out.println(“ Test failed: " + e.getMessage());

}

}

}

**Output**

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