**Exercise 2: Writing Basic JUnit Tests**

**Main class:**

public class Main {

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 division(int a,int b){

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

return a/b;

}

}

**Test Class:**

import org.junit.Test;

import static org.junit.Assert.assertEquals;

public class MainTest {

Main main = new Main();

@Test

public void testAddition() {

Main main = new Main();

assertEquals(5, main.add(2, 3));

}

@Test

public void testSubtraction() {

Main main = new Main();

assertEquals(1, main.subtract(3, 2));

}

@Test

public void testMultiply() {

Main main = new Main();

assertEquals(12, main.multiply(3, 4));

}

@Test

public void testDivide() {

assertEquals(2, main.division(10, 5));

}

@Test(expected = IllegalArgumentException.class)

public void testDivideByZero() {

main.division(10, 0);

}

}

