App.java

package app;

import java.util.Arrays;

public class App {

public static void main(String[] args) throws Exception {

System.out.println("Hello Java");

}

public static String getTriangleType(int a, int b, int c) throws Exception {

assert a > 0 && b > 0 && c > 0 : "one of the edge is negative or zero";

int[] edges = new int[] { a, b, c };

// sort the edges

Arrays.sort(edges);

// the sum of two shortest edges is little than the biggest edge cannot form a

// triangle

if (edges[0] + edges[1] <= edges[2]) {

throw new Exception("this three edges cannot form a triangle");

}

if (edges[0] == edges[1] && edges[1] == edges[2]) { // check three edges is equal

return "is equailateral triangle";

}

else if (edges[0] == edges[1] || edges[1] == edges[2]) { // check there are two edges is equal

if (edges[0] \* edges[0] + edges[1] \* edges[1] == edges[2] \* edges[2]) {

return "is isosceles right triangle";

}

return "is isosceles triangle";

}

// check a square + b square == c square

else if (edges[0] \* edges[0] + edges[1] \* edges[1] == edges[2] \* edges[2]) {

return "is right angle triangle";

}

else {

return "is triangle";

}

}

}

AppTest.java

package app;

import static org.junit.jupiter.api.Assertions.assertEquals;

import static org.junit.jupiter.api.Assertions.assertThrows;

import org.junit.jupiter.api.AfterAll;

import org.junit.jupiter.api.AfterEach;

import org.junit.jupiter.api.BeforeAll;

import org.junit.jupiter.api.BeforeEach;

import org.junit.jupiter.api.Test;

public class AppTest {

App app = new App();

// @BeforeAll

// void beforeAll() {

// System.out.println(">>>>>>>>>>>>>>>>>>>>>>>.");

// }

// @AfterAll

// void afterAll() {

// System.out.println("<<<<<<<<<<<<<<<<<<<<");

// }

// @BeforeEach

// void before() {

// System.out.println("Test started.");

// }

// @AfterEach

// void after() {

// System.out.println("Test finished.");

// }

@Test

void getTriangleTypeTest() {

try {

assertEquals("is triangle", App.getTriangleType(2, 3, 4));

// assertEquals("is equailateral triangle", App.getTriangleType(3, 3, 3));

// assertEquals("is isosceles triangle", App.getTriangleType(2, 2, 1));

// assertEquals("is right angle triangle", App.getTriangleType(3, 4, 5));

// assertEquals("is triangle", App.getTriangleType(3, 5, 6));

// assertThrows(Exception.class, ()->App.getTriangleType(1, 2, 3));

} catch (Exception e) {

e.printStackTrace();

}

// assertEquals(true,true);

}

}

在開發的階段利用test case去幫助developer測試程式碼的正確性，不像平常寫作業，用已設計好的test case一次測試多種輸入不要developer自己手動輸入，加快了除錯的時間，十分有用及有效率。