**ASSERTIONS**

public class Assertions {

//This method returns the average amount of characters in each element of the

//String array.

public static double what(String[] s) { // Note: might be erroneous!

// precondition assertions go here

for( int j=0; j < s.length;j++){

assert s[j] != null : "This string[] contains a null element!! "

+ "\nMake sure the array is populated with valid strings... Lee Hudson";

}

assert s.length != 0: "This String[] contains no elements!"

+"\nPlease make sure the array is populated!! Lee Hudson";

double sum = 0;

double m;

for (int i = 0; i != s.length; i++) {

sum += s[i].length();

}

m = sum / s.length;

// postcondition assertions go here

assert m\*s.length == sum : "The maths don't add up!! Lee Hudson";

return m;

}

public static void main(String[] args) {

String[] sample1 = {"David", "David", "Bedour", "Chris", "Paul"};

String[] sample2 = {"", "", "", "", ""};

String[] sample3 = null;

String[] sample4 = {"David", "David", "Bedour", "Chris", "Paul"};

sample4[3] = null;

String[] sample5 = {};

String[] sample6 = {"David", "David", "Bedour", "Chris", "Younas"};

String[] sample7 = {"David", "David", "Bedour", "Chris", "Younas",

"Sharon", "Nigel"};

// use this to check that assertion checking is switched on

// assert(false): "my test false assertion worked"; // 0

// System.out.println(what(sample1)); // 1

// System.out.println(what(sample2)); // 2 - This gives 0.0, this is correct as the String[] is empty

// System.out.println(what(sample3)); // 3 - This gave a null pointer exception until my assertion was applied

// System.out.println(what(sample4)); // 4 - This gave a null pointer exception until my new assertion was applied that checked each array element

// System.out.println(what(sample5)); // 5 - This gave an arithemtic error until my assertion was applied.

// System.out.println(what(sample6)); // 6 - The variable m was an int, it is now a double so it can deal with floating points.

System.out.println(what(sample7)); // 7 - Everything appears to be fine.....

}

}

**EXCEPTIONS**

import java.io.\*;

class DLFilesExample {

public static FileInputStream openStream(String fileName)

throws FileNotFoundException {

FileInputStream fis = new FileInputStream(fileName);

System.out.println("File input stream created");

return fis;

}

public static void main(String args[]) {

FileInputStream fileInputStream = null;

//String fileName = "data.txt"; // 0

// String fileName = "foo.bar"; // 1

String fileName = null; // 2

System.out.println("Starting with file name = " + fileName);

// attempt to get file input stream

try {

fileInputStream = openStream(fileName);

}

catch (FileNotFoundException ex){

System.out.println("Whoops: FileNotFoundException caught: no such file");

}

catch(NullPointerException ex){

System.out.println("Whoops: NullPointerException caught: filename is null!!");

}

}

}