Assignment 2 – Unit Testing

TEST PLAN

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Version History

Version #	Written by	Revision date	Approved by	Approval date	Outline
1.0	Michele Dylan Faisal Cheyenne	2022/02/05	Michele Dylan Faisal Cheyenne	2022/02/05	Test plan creation

INTRODUCTION

This test plan outlines our group's strategy to develop and run test cases for the JFreeChart application. We will be using JUnit version 4, JMock version 2.5.1 and hamcrest core version 1-3. This plan identifies the 10 functions to be tested, the division of work and schedule for the team.

1   TEST STRATEGY

1.1   Scope of Testing

1.1.1 Features to be tested

As specified in the assignment outline we will be testing 2 classes: "Range" and "DataUtilities" from the "org.jfree.data" package.

From these classes we will be testing the following methods:

Class	Function	Description
Range	getUpperBound	Returns the upper bound for the range.
Range	getLowerBound	Returns the lower bound for the range.
Range	getCentralValue	Returns the central value for the range.
Range	contains	Returns true if the range contains the specified value and false otherwise.
Range	isNaNRange	Returns true if both the lower and upper bounds are Double.NaN, and false otherwise.
DataUtilities	equals	Tests two arrays for equality.
DataUtilities	calculateColumnTotal	Returns the total of the values in one column of the supplied data table.
DataUtilities	calculateRowTotal	Returns the total of the values in one column of the supplied data table.

DataUtilities	createNumberArray	Constructs an array of Number objects from an array of double primitives.
DataUtilities	getCumultivePercentages	Returns a KeyedValues instance that contains the cumulative percentage values for the data in another KeyedValues instance.

1.1.2 Features not to be tested
The classes and methods not specified in section 1.1.1.

1.2   Test Type
The features specified in section 1.1 are tested through the implementation of Black-Box Unit Testing, for the JFreeChart application provided.

1.3   Test Logistics
1.3.1 Who will test?
Tests will be developed by 2 group pairs, consisting of the members of this plan. Each pair will focus on 1 of the classes, after which, the pairs will swap their target classes and review the test cases built.

1.3.2 When will the tests occur?
Tests will be run anytime from 2022-02-05 to 2022-02-09, at any point where a pair group is available.

2   TEST OBJECTIVES
The test objectives for this test plan is to verify the capabilities of the Range and DataUtilities classes and its methods.

3   TEST DELIVERABLES
Test deliverables are provided as below

3.1   Before Testing
- Test Plan Documents

3.2   During Testing

- Test Case XML file

3.3   After Testing

- Lab Report
- Virtual Demo
- Eclipse Project Test Suite