SENG 438
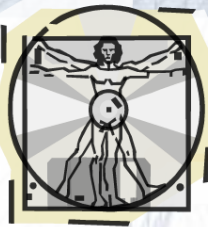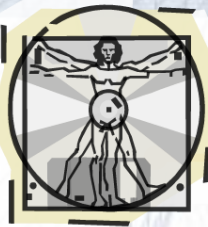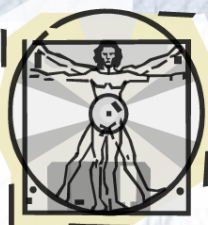# Software Testing, Reliability & Quality

Assignment 2

Assignment 2

- Requirement-based testing
  - SUT - JFreeChart
  - Requirements
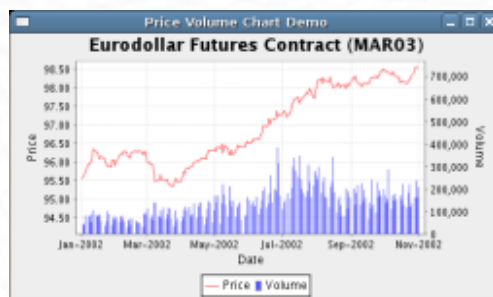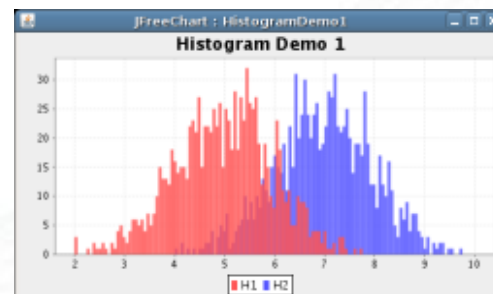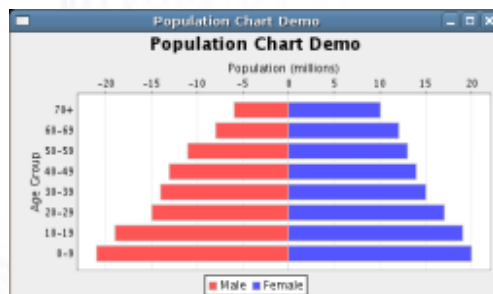 - Test design
  - Test execution

Activities

- 1st week: Familiarization (setup Eclipse, Junit, mock framework, ensure they work together)

- 1st week: Writing tests (write test cases and suite for Junit, prepare stubs or mocks)

- 2nd week: Executing unit test using Junit and demo
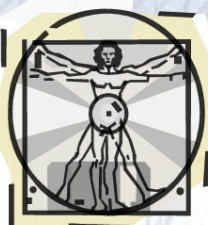
- 2nd week: Reporting the results

SUT: JFreeChart

- The JFreeChart framework is a free/open-source chart library intended to be integrated into other systems as a quick and simple way to add charting functionality to Java applications
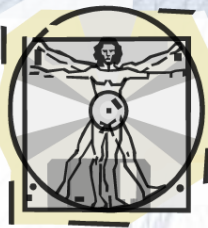
http://www.jfree.org/jfreechart

JFreeChart – Requirements

- **Reminder:** SW Requirements can come in many different formats, e.g., plain English, UML models, Javadoc, …

- In Assignment 2, we will use the Javadoc documentation of JFreeChart as its requirements
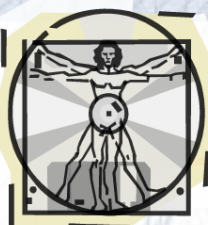 - Online now

Test Requirements

- JFreeChart classes under test

- org.jfree.data.DataUtilities

    - Has 9 methods

- org.jfree.data.Range

    - Has 19 methods

- You have to write tests for 5 methods from each class

Test Design

- Equivalence class testing

- Boundary value analysis

- Robustness testing

- Worst case testing

Test Execution

- Junit 4 or 5
- You need to use **mocking**
  - For "Values2D" and "KeyedValues"

- You are free to choose your mocking framework
- Example of jMock tests for the SUT of the Assignment 2 will be given
  - jMock or any other mocking framework