SWE2721 Lab 14 Triangle Trouble Revisited

1 Introduction

Telly loves triangles. At least he does on Sesame Street. However, have you ever thought of how to go about determining if a set of numbers defines a valid triangle?

In this lab, you are going to revisit what you did in Lab 1. However, now you will be responsible for both implementing and testing the software. The software can either read in from the console or read in one or more files which define triangles. The software reads in the definitions and tries to construct triangles.

2 Lab Objectives

- Use testing techniques to appropriately test a software system.
- Design and implement tests using taught techniques.
- Use Mock Objects, boundary value analysis, input redirection, reflection, MCDC, and other techniques to design tests.

3 Deliverables / Submission

When you have completed your lab assignment, tag your final version (which should be on the trunk) with the label LabSubmission1.0. Your code should be thoroughly commented and build cleanly without Java compiler warnings. (Note: You are not required to use branches in this course unless you desire to do so. If you do use branches, you must make sure your final submission is on the trunk / main branch upon submission.)

When completed, submit through Canvas the following lab report in **pdf format** detailing your experiences. One lab report should be submitted per pair of students, with the person whose last name is alphabetically first making the submission.

1. Title Page
    a. Name of both lab partners
    b. Date
    c. Assignment Title
    d. Repository Link (A complete url of the github repo. Please try to make it clickable in the pdf document. However, even if it is not clickable, please make sure the url is there and complete.)
2. Introduction
    a. What are you trying to accomplish with this lab?
        i. What are the goals and what will you be doing with this lab. This section shall be written IN YOUR OWN WORDS. DO NOT copy directly from the assignment. This should be multiple, grammatically correct sentences which completely explain the purpose for this lab.
3. Testing Discussion
    a. Answer in a paragraph or so the following questions.
        i. What testing methods did you select for each of the classes you were testing? You may use different techniques for each class. Based upon the class purpose, why did you select the test type you selected?
        ii. How did you go about determining your test cases?
        iii. How did you organize your test cases?
4. Things gone right / Things gone wrong.
    a. This section shall discuss the things which went correctly with this experiment as well as the things which posed problems during this lab.
5. Conclusions
    a. What have you learned with this experience?
    b. What improvements can be made in this experience in the future?
6.

If you have any questions, consult your instructor.

4 Lab Overview

Lab is overviewed in a video. The UML you will be building is shown in Figure 1. You will be provided templates for the files, but the implementation and testing are entirely up to you and your lab partner. JavaDoc is also available in the repository.

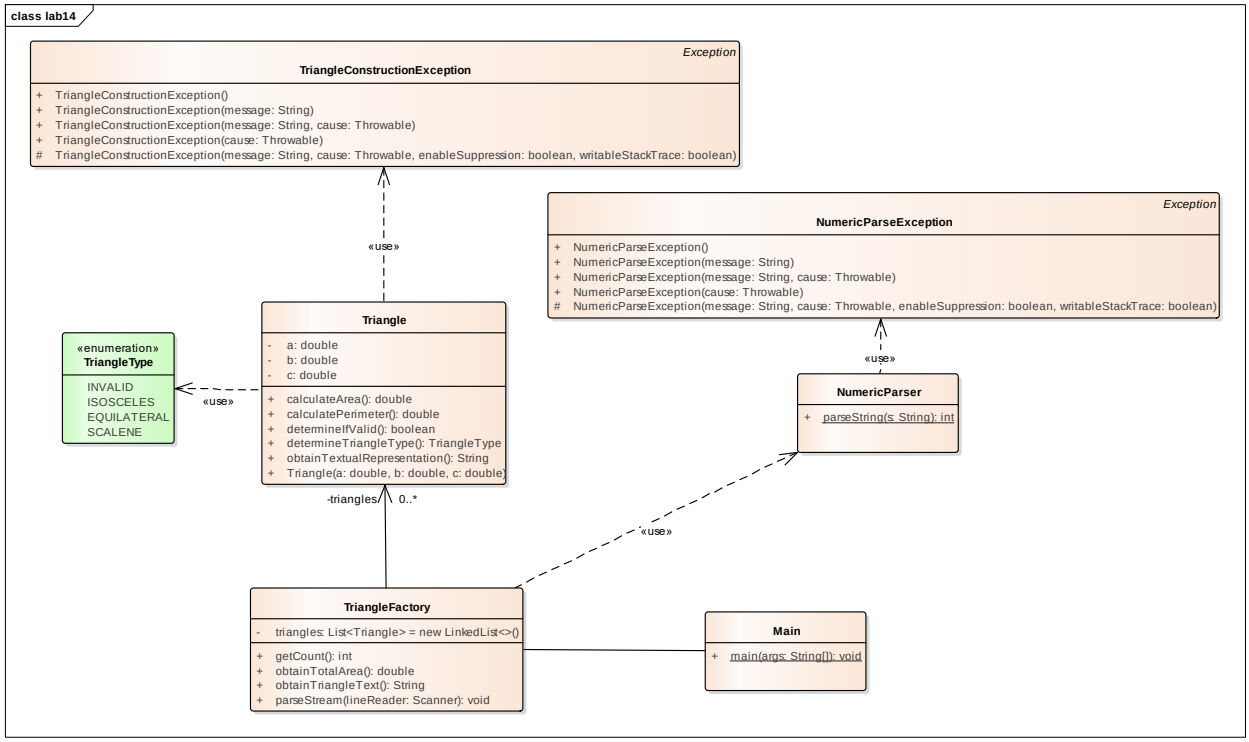

Figure 1 UML for lab.