KTH Computer Science
and Communication

SimpleGraphPlotter v1.6

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Contents

Chapter 1

Introduction

In the following part firstly the problem will be explained and secondly the requirements for a basic plotter will be enlisted. A plotter is a program that can plot functions from strings which defines the functions by ordinary math syntax.

1.1 Requirements

A few basic things is needed to have a functioning math plotter:

1. Define a function given ordinary math syntax.
2. Parse the inputed function and plot it accordingly.
3. Add/Remove functions from plotarea.
4. Plotarea should be scrollable both vertical and horizontal.
5. Range should be fixed to the unit-cube.[1]
6. Display axis of the plot.
7. Parser must be properly tested.

1.2 Scope

The amount of functionallity that is possible to put in a system like this is almost endless so a few delimitations has to be made in order to complete the project. The currently biggest restriction to the plotter is the lack of ability to zoom or change the range from the unit-cube. No support for parametric nor complex functions[2].

[1] This restriction will be handled in section 1.2

[2] Since no native support in c++ for complex numbers which means all the basic math functions would have to be rewritten in order for this to work.

Chapter 2

Structure

2.1 UML

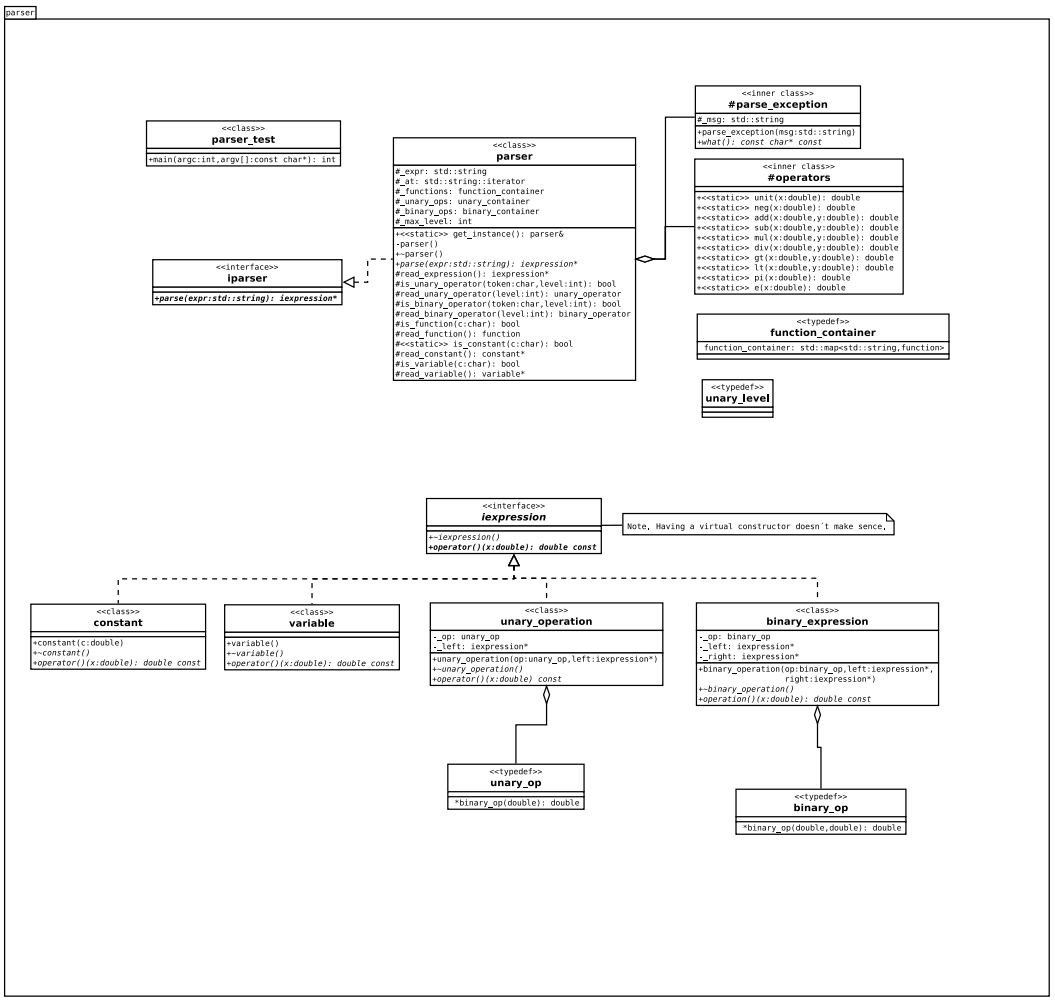

Figure 2.1. An UML showing the structure and the enclosure.