|  |  |
| --- | --- |
|  |  |
| Project 1B – Addition of Two Polynomials |  |
|  |  |
|  | 10/23/2022Introduction to Data Structure with C++ |
|  | Connor ClawsonLubaba Masangu *Thanh Dat Nguyen* |

## Introduction

This was a joint project between Connor Clawson, Lubaba Masangu, and Thanh Dat Nguyen. The program takes user input of two polynomials and sums them together. The project was developed over four weeks with each person contributing a different part of the project.

## Member’s contribution

Connor Clawson wrote the Parser class, managed the GitHub repository, cowrote this report, designed the UML diagram, and lead the team during the project. Thanh Dat Nguyen wrote the Term class and cowrote this report. Lubaba Masangu wrote the main function.

Tasks were distributed amongst the team democratically. Decision factors included confidence in skillset, time availability, and reliability of individuals computer hardware.

## UML class diagram

## Graphical user interface Description automatically generated with medium confidence

## Test case

Test case 1, sample polynomial from rubric.

Polynomial 1: 3x^4+2x^2+3x+7

Polynomial 2: 2x^3+4x+5

Result output: 3x^4+ 2x^3+2x^2+7x+12

Test produced expected output.

Test case 2, values of 0.

Polynomial 1: 0x^5+0

Polynomial 2: 3-3-x

Result output: -x

Test produced expected output.

Test case 3, unsupported text input.

Polynomial 1: just text

Polynomial 2: N/A

Result output: infinite loop on main function.

Test produced expected output.

Test case 4, non-numeric character on main menu.

Menu entry: s

Result output: infinite loop on main function.

Test produced expected output.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Improvements |
|  |

Thanh has discussed overloading of multiplication and division operators for the term class in future versions. Connor wants to implement measures to address invalid input since “not everyone reads instructions.” Lubaba proposed having the user define the variable character for a given term.

## GitHub Repository

Repository package is available here:

<https://github.com/CClawsonSCC/SCC-Team-Project-1>