

# Project Plan for Polynomial Calculator

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# **1 Introduction**

## **1.1 Project Scope**

The scope of the Polynomial Calculator project includes the planning, design, development, testing and publishing of the application. The scope of this project also includes completion of all documentation and manuals to be used in conjunction with the software.

## **1.2 Audience**

The project targets the academic audience, mainly students or teachers in the science fields.

## **1.3 Project Management Approach**

The Project Creator, Adrian-Ioan Tuns, has the complete authority and responsibility for managing and executing the project according to this Project Plan.

# **2 Milestone List**

The attached table lists the milestones for the Polynomial Calculator Project.

## 3 Cost

### 3.1 Software Cost

Software cost amounts to a total of 0 RON for the used technologies.

### 3.2 Skill Learn Time Cost

The cost for the learning time is given by the hours spent on tutorials and information gathering, which amounts to 35-40 hours in a span of 10 weeks.

## 4 Expected Outputs

The expected output of the project is an calculator application that can compute the following operations on polynomials of integer coefficients, with one variable that were correctly introduced from the keyboard: addition, difference, multiplication, division, differentiation and integration.

For example:

Addition:  $(-5x^2 - 10x + 2) + (3x^2 + 7x - 4) = -2x^2 - 3x - 2$

Difference:  $(15x^2 + 12x + 20) - (9x^2 + 10x + 5) = 6x^2 + 2x + 15$

Multiplication:  $(4x - 10) * (2x + 3) = 8x^2 - 8x - 30$

Division:  $(x^2 - 4x - 12)/(x + 2) = x - 6$

Differentiation:  $f(x^3 + 2x + 5)' = 3x^2 + 2$

Integration:  $\int(3x^2 + 2x) = x^3 + x^2$

## 5 Risk Management

### 5.1 Potential Risks in the Development

The following risks can be encountered in the development of the application:

- Wrong computations results.
- Errors in the implemented application design-pattern.
- Unresponsiveness of the GUI.

### 5.2 Finding Solutions for the Risks

Solutions proposed for the eventual risks:

- Further analyzes and improvements to the computations methods.
- Reinforcing the implemented design or implementing another design in a worst case scenario.
- Analyzing the GUI and improving its implementation.