

# CHAPTER I

## Introduction

### 1.1. Background

Mathematics is one of the subjects obtained exact, start of the level of the lowest education (kindergarten) to university level. Almost in all areas of life can not be separated from the elements of mathematics. In this project will be an application that is used to solve the problem in terms of the quadratic equation. Quadratic equation is often difficult for students, in problem solving as well as the formation graph. Quadratic equation consist of the rank numbers and decimal numbers, with the results of which have a square root  $y = 0$ , these root can be more than one. All of the root can make a graph. It can be solve with many methods, so this application facilitate teachers and students to learn.

### 1.2. Scope

This project created using the java programming language with a tree as data structure. The algorithm used are Bisection Algorithm, Newton's Raphson Algorithm, and Secant Algorithm.

### 1.3. Objectives

Purpose of this application to give a quadratic equation in the form of graphs to users. Can allow a user to know the form chart needed. So that mathematics can be more easily understood.