

Vision & Scope Document

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CS456

Version 1.0

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Team Members

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<u>Team member</u>	<u>Main Roles</u>
Erika Vazquez	Programmer
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Thamer Seyab	Designer
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Problem Statement

Project Background

There are a lot of students in schools who struggle with mathematic courses. There is a lot of calculations involved whether it be in algebra, calculus, and more higher level math courses. There are also other people in general who work with mathematical calculations on a daily basis, that would agree that calculators are vital to perform and produce faster and more reliable answers - as opposed to having to calculate mathematical equations and the like, on paper.

Math can be tedious, and most students can agree that it is not their favorite subject. However, we believe that having a calculator makes it a little more enjoyable - being that we live in a society where technology is literally everywhere and the fact that people in general like pushing and/or clicking buttons .

People are prone to make errors, many errors. However, a good calculator is accurate and will give you an answer very quickly. If someone is not looking to find the answer right away, it could still be a complementary device to verify that the answer is correct. The need for a calculator, that not only calculates basic operations with numbers, but that also takes into account variables and other stuff, is why we intend to build our own calculator, goCalculator.

Stakeholders

Students: use the calculator to help them solve math equations or to verify their answers

Professor: He could give ideas, comment/review on the solution for the calculator's development

People who Work with Math Calculations: get accurate and quick answers to math equations

Development Team: business analysts, testers, programmers, designers, and project manager....
They are the ones building the calculator

Users

Students: use the calculator to help them solve math equations or to verify their answers

People who Work with Math Calculations: get accurate and quick answers to math equations

List of Risks

- ☐ Not completing intended goal due to the fact that all team members need time for midterms, finals, studying for other classes, or extracurricular activities
- ☐ Lack of experience in project management, testing, risks management
- ☐ Not having a substitution if a team member can no longer continue to work on the project due to whatever reason.
- ☐ Development time is only 2 months or less, pressure is high even though it's a small project
- ☐ Development team is not able to deliver components upon review

- ❑ Development team could deliver a low quality product, resulting in needing more time for improvement
- ❑ Productivity could be reduced if there is low motivation
- ❑ Team members needing extra time to become familiar to unknown tools and techniques
- ❑ Problems within the team member ideas could result in little productivity, poor performance, and rework
- ❑ Team member's role in the team may not match their strengths
- ❑ Team member(s) not pulling their weight, resulting in a unsuccessful product

Assumptions

- ❑ Development team will use JAVA language to develop the calculator
- ❑ Calculator will be a desktop application
- ❑ There won't be enough time to develop a GUI
- ❑ Development team will have at least one hour meeting per week
- ❑ Development time is approximately less than 2 months
- ❑ Development team will produce first build on or right after midterm week.
- ❑ Each team member will work on the project at least 6 hours per week

Vision of the Solution

Vision Statement

Our team is tasked with developing a calculator, as part of the Software Engineering project. The calculator that we've named goCalculator will allow people to input a math equation, such as an algebraic expression, and will result in an accurate and quick answer. Students can use our calculator to help them solve a tough equation on their homework assignment or to simply verify their answers. goCalculator would also be helpful to people who generally work in a field where computing variables and equations is an everyday thing. It reduces the time to solve an equation, compared to having to compute a complex math problem by hand.

List of Features

- ☐ Can do basic operations like addition, subtraction, multiplication, division
- ☐ Can compute equations consisting of variable(s)
- ☐ Can solve polynomial equations
- ☐ Can calculate other operations with exponents
- ☐ Can compute algebraic equations
- ☐ Space for user to type in equation

Phase Release

We plan to release a beta version before this month of October ends, with most of the features working. The general release will probably be at the end of November. Depending on where we are at mid November, we might actually build a user interface for the general release

Features that will Not be Developed

- ☐ The graphic user interface - due to time constraint

Use Cases

- ☐ $x+x$, when $x=1$
- ☐ $3x^2 - x$ when $x=2$
- ☐ $X * y$ when $x=3$ and $y=6$
- ☐ x^8 when $x = 2$
- ☐
- ☐
- ☐
- ☐