SOFTWARE DESIGN DOCUMENT(SSD)

BASIC CALCULATOR
SOFTWARE ENGINEERING PROJECT

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1. Introduction:

1.1 Purpose:

This software design document describes the architecture and system design of Basic Calculator.

1.2 Scope:

This document provides the basic functionality and description of the user interface of a basic calculator with an added EYESIGHT functionality.

2. System Overview:

2.1 Description of problem:

The calculator application should provide the basic arithmetic functions like addition, subtraction, multiplication, division along with eyesight functionality which basically should give the maximum distance that can be seen by a short-sighted person taking his lens power as input.

Along with these functionalities, we should provide an option to all clear(AC), delete(DEL) and equals(=) functions and space to display the prompts and to display the calculations being performed by user.

2.2 Technologies to be used:

To develop the software java should be used and use javafx and so that the calculator application can be used independent of the platform.

3. User-Interface:

We have created wireframes to describe user-interface of the problem and you can see it at :
https://balsamiq.cloud/sco9r/ppeqv/r7561

Brief Description Of UI Of Calculator:

AC:

On-clicking this AC button, the user should be able to clear the whole screen, whatever might be the status of calculation.

DEL:

On-clicking this DEL button, the user should be able to delete the last character in the calculation area without disturbing the state of calculation.

PLUS:

On-clicking this plus(+) button, the user should be able to add two numbers, one of which he should enter prior to the press of plus and one after the press of plus button.

On pressing the plus button without entering any number before should be taken care by not taking the plus input from the user.

MINUS:

On-clicking this minus(-) button, the user should be able to subtract two numbers, one of which he should enter prior to the press of minus and one after the press of minus button.

On pressing the minus button without entering any number before should be taken care by not taking the minus input from the user.

MULTIPLY:

On-clicking this multiply(x) button, the user should be able to multiply two numbers, one of which he should enter prior to the press of multiply and one after the press of minus button.

On pressing the multiply button without entering any number before should be taken care by not taking the multiply input from the user.

DIVIDE:

On-clicking this divide(/) button, the user should be able to subtract two numbers, one of which he should enter prior to the press of divide and one after the press of divide button.

On pressing the divide button without entering any number before should be taken care by not taking the divide input from the user.

EYE-SIGHT:

On-clicking this eyesight button, the software should prompt the user to enter you left-eye power and after taking input of left-eye power and pressing equal the user should be prompted to enter his/her right-eye power and after taking input of right-eye power and pressing equal the user should be displayed his/her maximum distance of clear vision.

EQUALS:

On-clicking the equals(=) button, the user should be displayed his intended result of calculation either it is addition, subtraction, multiplication, division or eyesight calculation.

DECIMAL:

On-clicking the dot(.) button, the user should be displayed a dot on the area of calculation and we should make sure not to display more than one dot even though the user enters.

NUMBER-PAD:

There should be a generic number pad which allows the user to input the numbers.