CA PROJECT

Title: Simple Calculator

CSE228

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ABSTRACT

The Simple Calculator project aims to develop a basic calculator application in Java that can perform addition, subtraction, multiplication, and division operations. The project utilizes user input to perform the desired calculations and displays the result. This report provides an overview of the project, including its objectives, scope, application tool used, and a detailed explanation of the code implementation. Additionally, a flowchart is included to illustrate the program's workflow.

ACKNOWLEDGEMENT

A student of a university will have to write the acknowledgement for their project or research paper stating that the submission is done and is not copied. The acknowledgement sample for the university project is mostly attached after the dedication page thanking all the faculty members of the department, HOD, the Dean and the mentor.

I would like to express my special thanks to our mentor Mr. Shubham Sharma for his time and efforts he provided throughout the year. Your useful advice and suggestions were really helpful to me during the project's completion. In this aspect, I am eternally grateful to you.

I would like to acknowledge that this project was completed entirely by me and not by someone else.

INTRODUCTION

The Simple Calculator project focuses on creating a simple yet functional calculator application in Java. The calculator allows users to perform basic arithmetic calculations by entering two numbers and an operator. The program then performs the corresponding operation and displays the result.

The project aims to develop a basic calculator application that can perform addition, subtraction, multiplication, and division operations. The application utilizes user input to perform the desired calculations and displays the result. The project report provides an overview of the project, including its objectives, scope, application tool used, and a detailed explanation of the code implementation. Additionally, a flowchart is included to illustrate the program's workflow.

OBJECTIVES

The main objectives of the Simple Calculator project are as follows:

1. Develop a calculator application that can perform addition, subtraction, multiplication, and division operations.

2. Handle user input for numbers and operators.

3. Implement the necessary logic to perform the desired calculations.

4. Display the calculated result to the user.

SCOPE OF THE PROJECT

The scope of the Simple Calculator project is limited to the development of a basic calculator application with the ability to perform the four basic arithmetic operations. The project does not include advanced features such as scientific calculations, memory functions, or graphical user interface (GUI) elements. The focus is on creating a simple and functional calculator that can be used for basic calculations.

APPLICATION TOOL

The Simple Calculator project is developed using the Java programming language. Java provides a robust and platform-independent environment for building applications. In this project, the code utilizes the `Scanner` class from the `java.util` package to handle user input. The `Scanner` class allows the program to read user input from the console, enabling interaction with the calculator application.

FLOWCHART

The flowchart below illustrates the workflow of the Simple Calculator application:

Start

|

V

Enter the first number

|

V

Enter the second number

|

V

Enter the operator

|

V

Perform calculation based on the operator

|

V

Display the result

|

V

End

CODE IMPLEMENTATION

The code implementation of the Simple Calculator project follows the structure outlined in the previous sections. It starts by importing the necessary `Scanner` class from the `java.util` package. The `main` method is then defined, which serves as the entry point for the program.

Inside the `main` method, the user is prompted to enter the first number, followed by the second number, and finally the operator. The program uses the `Scanner` class to read the user input and store it in appropriate variables.

After validating the operator, the program performs the corresponding arithmetic operation using a `switch` statement. The result is stored in the `result` variable.

Finally, the calculated result is displayed to the user using the `System.out.println()` method.

SUMMARY

The Simple Calculator project demonstrates the development of a basic calculator application in Java. The application allows users to perform addition, subtraction, multiplication, and division operations by entering two numbers and an operator. The program then performs the desired calculation and displays the result. The project report provided an abstract, introduction, objectives, scope, application tool, flowchart, and a detailed explanation of the code implementation.

Overall, the Simple Calculator project serves as a foundation for understanding basic programming concepts such as user input, conditional statements, and arithmetic operations.