

# TASK REPORT

**Task Title:** Java Console-Based Calculator

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## 1. Task Objective

The objective of this task is to design and implement a console-based calculator using Java that performs basic arithmetic operations such as addition, subtraction, multiplication, and division. The application enables users to perform multiple calculations continuously until they choose to exit.

## 2. Tools and Technologies Used

- Programming Language: Java
- JDK Version: JDK 21
- Development Environment: Visual Studio Code (VS Code)
- Concepts Used: Methods, Loops, Switch Case, Scanner Class, Conditional Statements

## 3. Task Description

The task involves developing a simple and user-friendly calculator application that accepts user input, performs selected arithmetic operations, displays accurate results, and continues execution until the user decides to terminate the program.

## 4. Functional Requirements

- Perform Addition
- Perform Subtraction
- Perform Multiplication
- Perform Division
- Handle divide-by-zero errors appropriately
- Allow repeated calculations using loop control

## 5. Conclusion

The Java Console-Based Calculator task was successfully completed using JDK 21 in Visual Studio Code. The application effectively performs all basic arithmetic operations while handling potential errors such as division by zero.

This task demonstrates a clear understanding of fundamental Java programming concepts including methods, loops, conditional statements, switch-case structures, and user input handling using the Scanner class.

Overall, completing this task enhanced core programming skills, logical thinking ability, and problem-solving techniques, forming a strong foundation for developing more advanced Java applications.