CALCULATOR

Project Objectives

* To develop a basic calculator using C++.
* To understand and apply fundamental programming concepts like variables, conditionals, switch-case, and user input/output.
* To perform basic arithmetic operations: addition, subtraction, multiplication, and division.

Key Features

1. **User Input Handling** – Takes input from the user for numbers and operation type.
2. **Arithmetic Operations** – Supports +, -, \*, and /.
3. **Input Validation** – Handles division by zero error gracefully.
4. **Clear Output** – Displays accurate results in a user-friendly format.
5. **Modular Design** *(optional)* – Can be extended using functions for each operation.

Coding

#include <iostream>

using namespace std;

int main() {

double num1, num2;

char op;

cout << "Enter first number: ";

cin >> num1;

cout << "Enter operator (+, -, \*, /): ";

cin >> op;

cout << "Enter second number: ";

cin >> num2;

switch(op) {

case '+':

cout << "Result: " << num1 + num2 << endl;

break;

case '-':

cout << "Result: " << num1 - num2 << endl;

break;

case '\*':

cout << "Result: " << num1 \* num2 << endl;

break;

case '/':

if (num2 == 0)

cout << "Error: Cannot divide by zero." << endl;

else

cout << "Result: " << num1 / num2 << endl;

break;

default:

cout << "Invalid operator!" << endl;

}

return 0;

}

Concepts Used

* Input/Output using cin and cout
* Conditional Statements (switch-case)
* Basic Data Types (double, char)
* Error Handling (e.g., division by zero)