**Name of Student: Raheel Kotwal**

**Roll Number: 45**

**Experiment Number: 18**

**Title: Calculator**

**Theory:**  The code defines a Student class and a StudentRecord class to manage student details, allowing the user to input information for a specified number of students, displaying their details and calculating the average marks. The program uses a random roll number generator and limits the number of students to 100

**Code:**

**#include <iostream>**

**using namespace std;**

**class Calculator {**

**public:**

**double add(double a, double b) {**

**return a + b;**

**}**

**double subtract(double a, double b) {**

**return a - b;**

**}**

**double multiply(double a, double b) {**

**return a \* b;**

**}**

**double divide(double a, double b) {**

**if (b != 0) {**

**return a / b;**

**} else {**

**cerr << "Error: Cannot divide by zero.\n"; //used to indicate error messages on terminal window**

**return 0.0;**

**}**

**}**

**};**

**int main() {**

**Calculator calculator;**

**double num1, num2, res;**

**char operation;**

**cout << "Enter first number: ";**

**cin >> num1;**

**cout << "Enter second number: ";**

**cin >> num2;**

**cout << "Select operation (+, -, \*, /): ";**

**cin >> operation;**

**switch (operation) {**

**case '+':**

**cout << "Result: " << calculator.add(num1, num2) << "\n";**

**break;**

**case '-':**

**cout << "Result: " << calculator.subtract(num1, num2) << "\n";**

**break;**

**case '\*':**

**cout << "Result: " << calculator.multiply(num1, num2) << "\n";**

**break;**

**case '/':**

**res = calculator.divide(num1, num2);**

**if (res == 0.0) {**

**return 1; // return 1 means code ended somewhere unexpected (in this case division by 0)**

**}**

**cout << "Result: " << res << "\n";**

**break;**

**default:**

**cerr << "Error: Invalid operation.";**

**break;**

**}**

**return 0;**

**}**

**Output:(screenshot):**

