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**Roll Number: 45**

**Experiment Number: 7**

**Title: Sum of digits till sum is single digit**

**Theory:**  This program uses recursion to keep on adding all digits of the number till the sum of all numbers is a single digit number. The function takes the last digit of the current number (num % 10) and adds it to the sum of the digits of the remaining part of the number

**Code:**

**#include <iostream>**

**using namespace std;**

**int sumOfDigits(int num) {**

**if (num < 10) {**

**return num;**

**}**

**return sumOfDigits(num % 10 + sumOfDigits(num / 10));**

**}**

**int main() {**

**int number;**

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

**cin >> number;**

**int result = sumOfDigits(number);**

**cout << "Sum of digits until it becomes a single-digit number: " << result << endl;**

**return 0;**

**}**

**Output:(screenshot):**

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