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**Roll Number: 45**

**Experiment Number: 9**

**Title: Sum of series 1/1! + 2/2! + 3/3!...**

**Theory:**  The following code uses a nested loop where first loop is used to counter till user input and nested loop is used to counter till the first loop counter and get factorial of that counter.

**Code://This code prints the sum of series 1/1! + 2/2! + 3/3!... n/n! where '!' is factorial;**

**#include "iostream"**

**using namespace std;**

**int main() {**

**float number;**

**cout<<"Enter a number till which the series is wanted: ";**

**cin >> number;**

**float seriesSum = 0.0;**

**for (int i = 1; i <= number; i++)**

**{**

**float fact = 1;**

**for (int j = 1; j <= i; j++)**

**{**

**fact = fact \* j;**

**}**

**seriesSum = seriesSum + (i/fact);**

**if(i<number) {**

**cout << i << "/" << i << "! + ";**

**}**

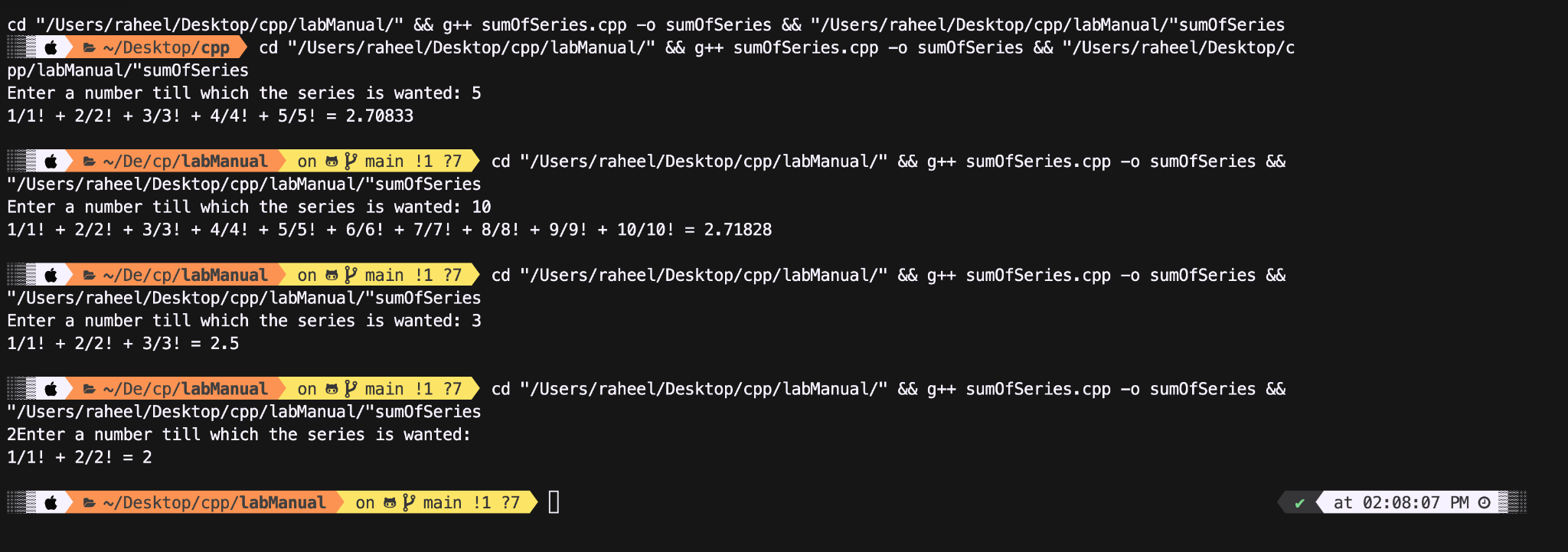
**else{**

**cout << i << "/" << i << "! = " << seriesSum << endl;**

**}**

**}**

**}**

**Output:(screenshot):**