**Course Name (CMPS-378)**

**Fall 2014**

**T 6:50 – 10 pm**

**Project #: 1**

**Title: Console Application, Arithmetic, Smallest and Largest**

**Due Date: 9/09/2016**

**GROUP #: 8**

**Grade:**

**e-mail:** [**alexander.berdkowski@laverne.edu**](mailto:alexander.berdkowski@laverne.edu) **Submitted by Alex Berdkowski**

**major: Computer Science/ Engineering concentration: Internet Programming**

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Y**  **I**  **N** | **Description - 10%**  **= Incomplete** | **Y**  **I**  **N** | **Design – 15%**  **UML and flowchart; pseudocode - if asked** | **Y**  **I**  **N** | **Code – 50%**  highlight and comments piece of the code which you had to **add** or **modify (worth 10 %)** | **Y**  **I**  **N** | **Test – 25%**  **Test plan (4 test cases – include boundary testing) with screenshot results** |

**Grade:**

**e-mail:** [**fernando.wolski@laverne.edu**](mailto:fernando.wolski@laverne.edu) **Submitted by Fernando Wolski**

**major: E-Commerce concentration:**

**Submitted to**

**Prof. Jozef Goetz**

**University of La Verne, La Verne**

**Project Evaluation**

1. **Problem Statement**

**Problem Description**: To find the minimum, maximum, and the sum of three integers input by the user. The user is asked to enter three integers. The maximum, the minimum, and the sum of the numbers are calculated. The results are displayed to the user.

**1a. Input**

The user is asked to enter three integers which are stored in three separate variables. The input is done through a console application.

**1b. Processing**

The purpose of the program is to calculate the maximum, the minimum, and the sum of the numbers input by the user. This is all done in the program’s main method. The minimum and maximum numbers are determined through a series of “if” statements. The sum is calculated by adding the three input numbers together.

**1c. Output**

The program asks the user for three integers. The program then displays the minimum and maximum numbers entered by the user. The sum of the input numbers is calculated and is also displayed to the user.

1. **Design:**

**Pseudocode**

Main method

{

Ask user for three integers

Set maximumNumber to first integer

Set minimumNumber to first integer

If( secondNumber > maximumNumber)

Set maximumNumber to secondNumber

If( thirdNumber > maximumNumber)

Set maximumNumber to thirdNumber

Set minimumNumber to first integer

If( secondNumber < minimumNumber)

Set minimumNumber to secondNumber

If( thirdNumber < minimumNumber)

Set minimumNumber to thirdNumber

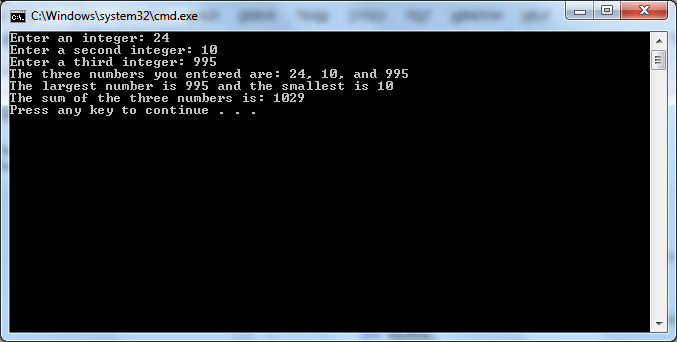
Display the three integers

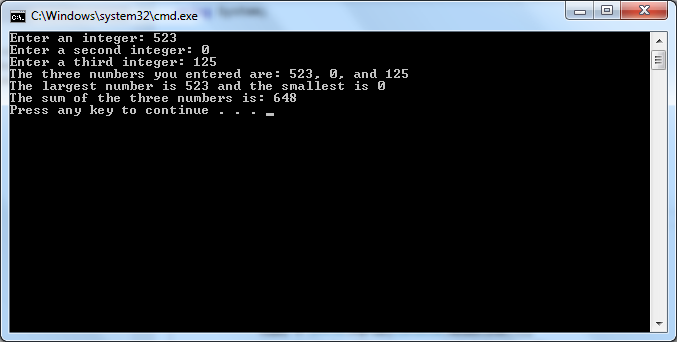
Display the maximum and minimum numbers

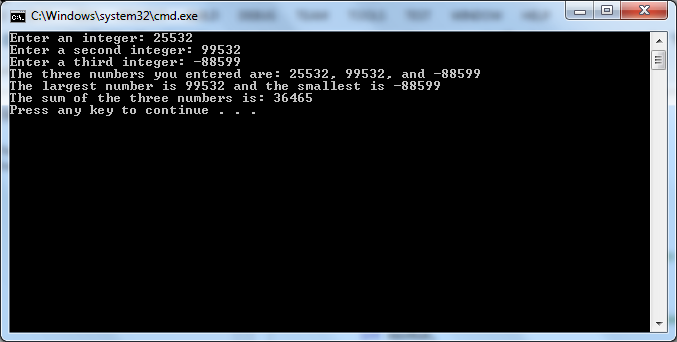
Add the three numbers and display the sum

**}**

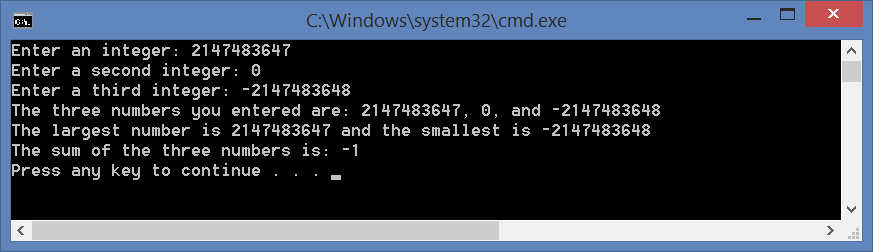
1. **Sample Inputs and Results**

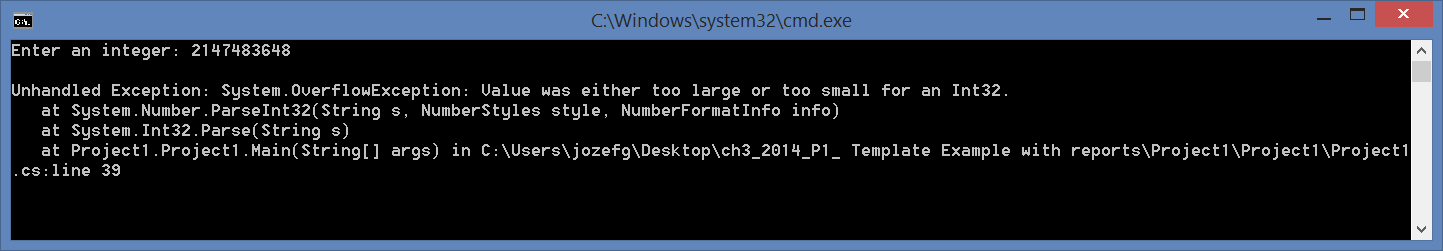






Border numbers:





1. **Source Code**

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* **Name:** Alex Berdkowski

\* **Class:** CPMS 378,

\* **Assignment #: 1,** Arithmetic, Smallest and Largest

\* **Date Due**: 9/09/14

\* **Problem Description**

\* To find the minimum, maximum, and the sum of

\* three integers input by the user. The user is asked to enter three

\* integers. The maximum, the minimum, and the sum of the numbers are

\* calculated. The results are displayed to the user.

\* **Type** **Variable** **Description**

\***Input:**

int num1, // declare first number

num2, // declare second number

num3, // declare third number

\***Output:**

int minNum, // declare smallest of numbers

maxNum; // declare largest of numbers

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

using System;

namespace Project1

{

class Project1

{

static void Main(string[] args)

{

// Variables to hold the values entered by the user

int num1, // variable to hold the first integer entered by the user

num2, // variable to hold the second integer entered by the user

num3; // variable to hold the third integer entered by the user

int maxNum, // variable to hold the maximum number

minNum; // variable to hold the minimum number

// Prompt user for three numbers

Console.Write("Enter an integer: ");

num1 = Int32.Parse(Console.ReadLine());

Console.Write("Enter a second integer: ");

num2 = Int32.Parse(Console.ReadLine());

Console.Write("Enter a third integer: ");

num3 = Int32.Parse(Console.ReadLine());

maxNum = num1; // Initialize maxNum to num1

minNum = num1; // Initialize minNum to num1

// The following if statements determines the maximum number

// and assigns the value to maxNum

if (num2 > maxNum)

maxNum = num2;

if (num3 > maxNum)

maxNum = num3;

// The following if statements determines the minimum number

// and assigns the value to minNum

if (num2 < minNum)

minNum = num2;

if (num3 < minNum)

minNum = num3;

// Displays the three numbers

Console.WriteLine("The three numbers you entered are: {0}, {1}, and {2}"

, num1, num2, num3);

// Displays the maximum and minimum numbers

Console.WriteLine("The largest number is {0} and the smallest is {1}", maxNum, minNum);

// Calculates and displays the sum of the three numbers

Console.WriteLine("The sum of the three numbers is: " + (num1+num2+num3));

} // end Main method

} // end class Project1

} // end Project1 namespace