Computing GCF and LCM

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Contents

Chapter 1

Computing GCF and LCM

This program takes two numbers as command line arguments and computes the prime factors of each number, the common prime factors of both numbers, and the gratest common factor, and least common multiply between both numbers.

prerequisites

- Visual Studio (Available online for mac and windows)
- MonoGame

Running

Once you are in root directory of the project, execute the following command to build the project:

```
csc Program.cs
```

Following the above command, there should be a generated Program.exe executable. Use the following command to run the executable:

```
mono Program.exe
```

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Chapter 2

Namespace Index

2.1 Namespace List

Here is a list of all namespaces with brief descriptions:

Chapter 3

Data Structure Index

3.1 Data Structures

Here are the data structures with brief descriptions:

Chapter 4

File Index

4.1 File List

Here is a list of all files with brief descriptions:

Chapter 5

Namespace Documentation

5.1 Package P1_Base

Data Structures

- class Program

Chapter 6

Data Structure Documentation

6.1 P1_Base.Program Class Reference

Static Public Member Functions

- static void PrintResults (int a, int b)
- static List< int > CalculatePrimeFactors (int num)
- static int LeastCommonMultiple (int a, int b)
- static int GreatestCommonFactor (int a, int b)

Static Private Member Functions

- static void Main (string[] args)

Static Private Attributes

- static List< int > primeFactorA = new List<int>()
- static List< int > primeFactorB = new List<int>()

6.1.1 Detailed Description

Definition at line 9 of file Program.cs.

6.1.2 Member Function Documentation

6.1.2.1 static List<int> P1_Base.Program.CalculatePrimeFactors (int *num*) [inline], [static]

Calculates the prime factors of a given number

Parameters

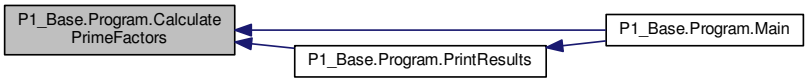
num	the number to calculate the prime factors for

Returns

List<int>: prime factors

Definition at line 109 of file Program.cs.

Here is the caller graph for this function:



6.1.2.2 static int P1_Base.Program.GreatestCommonFactor (int *a,* int *b*) [inline], [static]

Calculates the greatest commn factor of two given numbers

Parameters

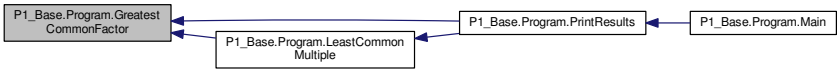
a	the first number to be used in calculating GCF
b	the second number to be used in calculating GCF

Returns

int: the greatest common factor

Definition at line 150 of file Program.cs.

Here is the caller graph for this function:



6.1.2.3 static int P1_Base.Program.LeastCommonMultiple (int *a,* int *b*) [inline], [static]

Calculates the least common multiples using |a∗b|/GCF(a, b)

Parameters

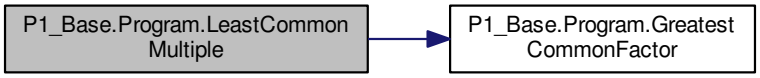
a	the first number to be used in calculating LCM
b	the second number to be used in calculating LCM

Returns

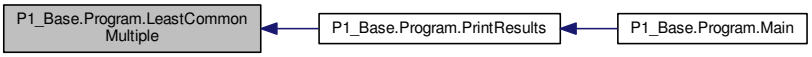
int: least common multiple

Definition at line 136 of file Program.cs.

Here is the call graph for this function:



Here is the caller graph for this function:

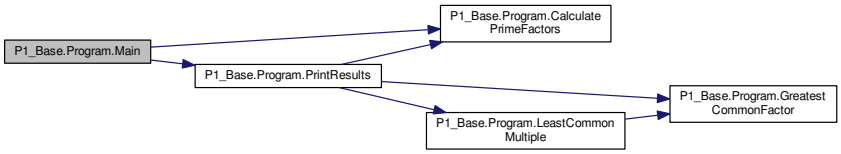


6.1.2.4 static void P1_Base.Program.Main (string[] *args*) [inline],[static],[private]

Driver method

Definition at line 22 of file Program.cs.

Here is the call graph for this function:



6.1.2.5 static void P1_Base.Program.PrintResults (int *a*, int *b*) [inline],[static]

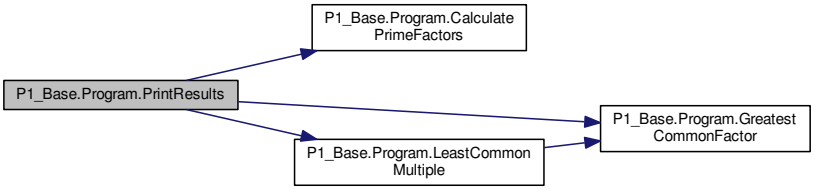
Prints the results calculated to the console

Parameters

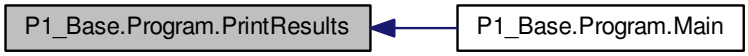
a	: the first number given
b	: the second number given

Definition at line 89 of file Program.cs.

Here is the call graph for this function:



Here is the caller graph for this function:



6.1.3 Field Documentation

6.1.3.1 List<int> P1_Base.Program.primeFactorA = new List<int>() [static], [private]

Holds the prime factors of the first number passed

Definition at line 14 of file Program.cs.

6.1.3.2 List<int> P1_Base.Program.primeFactorB = new List<int>() [static], [private]

Holds the prime factores of the second number passed

Definition at line 18 of file Program.cs.

The documentation for this class was generated from the following file:

- Program.cs

Chapter 7

File Documentation

7.1 obj/Debug/P1_Base.csproj.FileListAbsolute.txt File Reference

7.2 obj/Release/P1_Base.csproj.FileListAbsolute.txt File Reference

7.3 obj/Debug/TemporaryGeneratedFile_036C0B5B-1481-4323-8D20-8F5ADCB23D92.cs File Reference

7.4 obj/Debug/TemporaryGeneratedFile_5937a670-0e60-4077-877b-f7221da3dda1.cs File Reference

7.5 obj/Debug/TemporaryGeneratedFile_E7A71F73-0F8D-4B9B-B56E-8E70B10BC5D3.cs File Reference

7.6 Program.cs File Reference

Data Structures

- class P1_Base.Program

Namespaces

- package P1_Base

7.7 Properties/AssemblyInfo.cs File Reference

7.8 README.md File Reference

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