Daniel Moe

Programming II, SD 254

July 25, 2012

Lab 1

Compiler: Dev-C++

Files: gcd.cpp

gcd.exe

|  |  |  |
| --- | --- | --- |
| Score | | |
|  | Team | Individual |
| Content & Quality |  |  |
| Format & mechanics |  |  |
| Timeliness |  |  |

#include <cstdlib>

#include <iostream>

using namespace std;

int gcd(int larger, int smaller);

int main(int argc, char \*argv[])

{

int rtrn; //return value

int temp; //temporary number holder

int rem; //remainder

int larger; //larger int

int smaller; //smaller int

cout << "Input two numbers: "; //prompt user to input two numbers

cin >> larger;

cin >> smaller;

if (smaller > larger) //verify if the 2nd input is larger than 1st

{

temp = larger; //temporarily store he smaller number

larger = smaller; //set the larger number as "larger"

smaller = temp; //set the smaller number as "smaller"

}

rtrn = gcd(larger,smaller); //gcd function call

cout << "The greatest common divisor is: " << rtrn << endl;

system("PAUSE");

return EXIT\_SUCCESS;

}

int gcd(int larger, int smaller) //greatest common divisor module

{

int rtrn; //return integer

if (larger % smaller == 0) //the numbers divide evenly

rtrn = smaller;

else //the numbers DONT divide evenly

rtrn = gcd(larger, larger%smaller); //recursive function call

return rtrn;

}