Joe Del Rocco
jdelrocco [at] stetson [dot] edu
Assistant Professor of Practice, Computer Science
Stetson University
421 N Woodland Blvd, DeLand, FL, 32723
www.stetson.edu

CSCI 141
(all sections)
Fall 2021
Assignment

Assignment 2

Due: Monday 9/27/2021 11:59pm

Contents

Directions

For this assignment, you will implement a GCD algorithm. We have discussed a variant of this algorithm in class, so you should be familiar with it. The algorithm will be provided as a flowchart. Your job is to implement this algorithm in Java. See the Example Output for guidance on how the program should perform.

Here is the assignment invitation link on GitHub Classroom:
https://classroom.github.com/a/F0zKioMW

Input Validation

You can assume that the user will enter and integer when asked, however for this assignment you cannot assume that the integer entered by the user will be positive. Therefore, you must continue to ask the user to enter the integer if their input is 0 or negative. Do this for both inputs you are requesting from the user to make absolutely sure that the user inputs positive integers.

Hint

Use an indefinite loop (perhaps a `do-while` loop) when reading each user input. You don't know how many times the user will enter bad input.

The Algorithm

Technically this is not the exact algorithm that Euclid provided in his 13 book math treatise, *Elements*, but it is commonly referenced and easier to understand. The flowchart of the algorithm is shown on the next page.

Submission

You will commit and push your changes to your specific GitHub Classroom repository for this assignment. Please follow the directions in this assignment to install all software. Commit and push your code changes early and often any time before the due date. Please see the advice below; it is important for grading purposes. **Failure to follow these directions will result in a loss of points.**

Always make sure to:

- Keep all source files in the folder called `src`, which is one directory in from the root of your repo
- Do not commit multiple copies of the same named source file; modify the ones provided to you. In other words, do not make an old and new version of the same file
- The main starting source file should always be called `Main`
- When loading resources, do not use absolute paths to files on your drive; use relative paths
- Do not have the keyword `package` at the top of any files. Some IDEs add your files to a custom package by default. Please remove this, as it complicates grading.

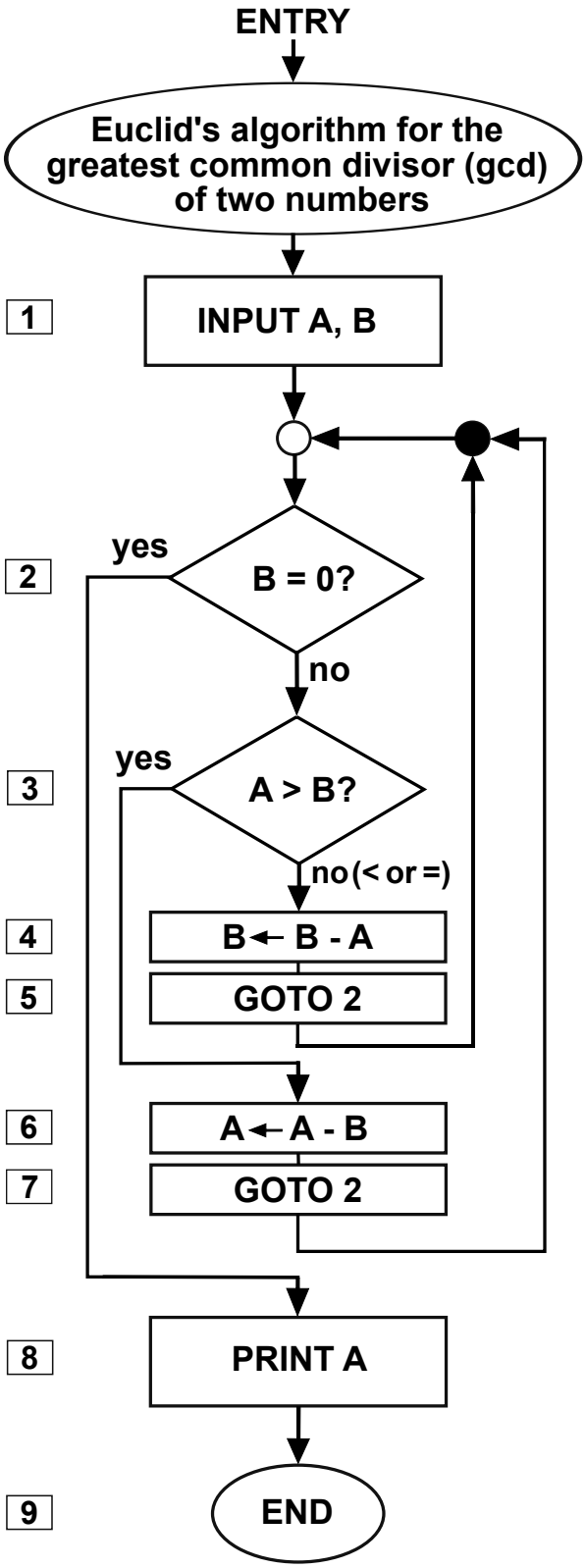

Figure 1: "Euclid flowchart" by Somepics is licensed under CC BY-SA 4.0.

Rubric

Task	Percentage
Assignment files submitted to Canvas instead of GitHub	Grade is 0%
General attempt at the assignment	50%
Input validation to ensure positive integers	20%
Algorithm aligns w/ flowchart	20%
GCD answer is correct	10%
Total	100%

Example Output