Assignment number 7 for Computer Architecture

The assignment is to create a MIPS program that does an integer multiply using adds and shifts. The program is to input two positive integers between 0 and 32767 (the program must verify that the numbers are in this range and if not, print and error message and then ask the user to reinput the number). The program will then use shifts and adds to do an integer multiply. The program’s output will be the answer to the problem (the product). The numbers are restricted to the given range so that you do not have to worry about negative numbers or overflow in the 32 bit registers you have to work with. Make certain to have a prompt before the input, so that the user will know what to do. Also have a message stating what the output is.

For this assignment, turn in your code, a screenshot showing the output of a run of your program, and an observations file with a comment about how much time you spent on the program and what you learned doing it. Note that I may test the code for additional cases.

Make certain that you have your name and the assignment number at the top of your observations file as well as at the top of your code file. Submit your code and observations to the class website DropBox for the problem. As always with assembly language, have a lot of comments in your code and make it neat.

This program is worth 25 points.

This program is due on Nov 4.

Note that this is an individual assignment, you are not to work with someone on it. It is OK to ask for and to give some help for a problem within the assignment, but the work must be your own. Note that you may borrow code from book or any example programs that I have placed out on the class website, but not from any other source.