Please do the first part of this lab by yourself. Please check each other's work AFTER you have both completed it. Work in groups of two on the program.

Using the shift-and-add algorithm for multiplication from lecture and explained on my Web site, multiply the following. Shift the left-hand operand "right" and the right-hand operand "left". Check your work by multiplying the normal way. Show your work. Turn this in on paper on the due date.

\[
\begin{align*}
25 \times 37 & \quad 52 \times 13 \\
33 \times 26 & \quad 15 \times 78
\end{align*}
\]

Write a MIPS program to implement the multiplication by shifting and adding algorithm. Get two positive integers from the user (from the console, you don't need to actually prompt here), then multiply by using \texttt{sll} and \texttt{srl} instructions to manipulate the operands, using \texttt{andi} with \texttt{1} to check for odd/even and \texttt{addu} to add as needed. Then check your result by using the \texttt{mult} instruction. Print both results to the console with some explanatory text (tell me which result is from which type of multiplication). You may keep all of your values in registers.

Check each other's work on the first part. I don't need to see your checks. Turn in the program the usual way.