

**MIPS Assembly Language Programming**  
Programming Assignment # 5  
100 points

**Due: 11:59pm, Nov. 30, 2009**

Write a main program and function called *balance* in MIPS assembly language that balances your check book. The main program should prompt the user for the current balance read as a single-precision floating-point number, then prompt the user for the amounts of any deposits and checks written. The number of items entered from this prompt should be arbitrary with data ended by the user entering a value of zero. The deposit amounts are entered as positive numbers and the amounts for checks written as negative numbers. They are read as single-precision floating-point numbers. The function *balance* has 2 input arguments: the first is the current balance and the second is the number of deposits and checks written (the sum of the two). The individual deposits and check amounts are provided by the stack. The function *balance* returns one value: the new checkbook balance. After reading the current balance, deposits and check amounts, the main program should call *balance* to compute the new checkbook balance. Upon return the main program should print out the new balance as a floating-point number with an output header of "The new checkbook balance is ". It is not necessary to print the balance with a dollar sign nor with exactly two digits in the fractional part.

The code must follow proper MIPS convention for calling and returning from functions. Remember to properly document your main program and *balance*. You are welcome to use the code *var\_fsum.s* in the Supplemental Lecture Material as the basis for your effort. Some modification will be necessary, but the amount of coding should not be large.

Please email your code **as an attachment** to [eeecs355fall2009@gmail.com](mailto:eeecs355fall2009@gmail.com) by 11:59pm, Monday, November 30. **40 points** will be **deducted** from your grade for a late submission. Students not submitting code by 11:59pm Tuesday, December 1, will receive a **zero** for the lab.