CS 203 Lab #7 - Learning To Write ARM Assembler

C W Liew

October 24, 2019

Goals

The purpose of this assignment is to learning assembler language programming for the ARM processor. Write the following functions in ARM assembler and evaluate using the ViSual simulator. You can assume that parameters are passed in $r0, $r1, ... and the value returned is in $r12. You can also assume that *caller_saves* so you do not have to save any registers that you use.

Update: The ViSual simulator does not support the *BX* instruction that essentially implements a return from a function. So you should have that as a comment and simulate as far as that and not expect it to return to the calling function.

1. **int add(float x, float y)**: This will return the sum of x and y.
2. **void countChar(char *s)** that will print the length of a string (array of characters that is null terminated). The string is passed as a parameter to the function ($r1).

   For this question, you will have to write an additional function that creates the array on the stack and then call the function, i.e., the assembler equivalent of:

```
int foo() {
   char* s1 = "hello";

   countChar( s1 );
}
```