

## Assignment #3

### Writing Requirements

CS 3398, Fall 2013

**due: Wednesday, October 2, 2013.**

Write a user level and a system level functional requirement for each of the two functions described below. Your answers should be in the format of the example on slide 4 of the Chapter 4 lecture (the system level requirement will be a sequence of steps).

Type your answers into a file. Print a copy and bring it to class the day it is due.

Keep in mind these instructions about functional requirements from the IEEE standard 830:

Functional requirements should define the fundamental actions that must take place in the software in accepting and processing the inputs and in processing and generating the outputs. These are generally listed as "shall" statements starting with "The system shall..."

These include

- a) Validity checks on the inputs
- b) Exact sequence of operations
- c) Responses to abnormal situations, including
  - Error handling and recovery
- d) Relationship of outputs to inputs, including
  - Formulas for input to output conversion

1. Write requirements for **the cash-dispensing function of a bank ATM**. You should assume the user's ATM card has already been submitted, the PIN verified, and "withdraw cash" is the chosen operation. Consider what information must be gathered, what conditions must be checked, and what information must be recorded or changed.
2. Write requirements to describe a function to **allow a librarian to record a book loan**. In the system, a book has an ISBN and may have multiple copies. Each copy has a number (1, 2, 3, ...) and is either available or has a due date and the id of the current borrower. Books are loaned for two weeks at a time. Assume the librarian is logged in and has already indicated they want to record a book loan. Assume that the borrower knows the ISBN of the book they want to borrow (but has not found the actual book), and that the librarian will retrieve the copy from the stacks, as specified by the system. Consider what information must be gathered, what conditions must be checked, and what information must be recorded or changed.