HW 3 – Order of Evaluation
CS 421 – Fall 2012
Revision 1.0

Assigned Tuesday, September 18, 2012
Due Tuesday, September 25, 2012, 11:59pm
Extension 48 hours (20% penalty)

1 Change Log

1.0 Initial Release.

2 Objectives and Background

The purpose of this HW is to test your understanding of:

- Order of evaluation in OCaml

3 What to `handin`

Answer each problem below, save your work as a PDF (either scanned if handwritten or converted from a program), and hand in the PDF.

4 Problems

1. (20 pts) Below is a fragment of Ocaml code. Describe everything that is displayed on the screen (its observable behavior) after this code has been cut-and-pasted into an interactive Ocaml session, and explain why this behavior is observed. This should include both the type information that the compiler gives back for each declaration, and any other things printed to the screen. For the type information, no explanation is required (but it should be correct). Give explanations for all other things printed, and the order in which they occur.

```
let f g x =
  (let r =
    if ((print_string "a"; x > 5) && (g(); x > 10))
    then
        (print_string "b"; x - 7)
    else
        let z = (print_string "c"; 15) in (print_string "d"; z)
    in (g(); r));;
let u = (f (fun () -> print_string "e\n") (f (fun () -> print_string "f\n") 3));;
```