

# CS3133

## HW#4

DUE: Thursday, September 12

(12 points) Consider the language  $L = \{0^m 1^n \mid n > m \geq 0\}$ .

- (a) Show that  $L$  is context free by deriving a context free grammar  $G$  such that  $L = L(G)$ .
- (b) Prove that  $L = L(G)$ .
- (c) Prove that  $L$  is not regular.