CSCI 325
Spring 2013
Bowring
HW 10 – DUE 10 AM 15.Mar.2013

Instructions:
Submit **HW10_[lastname].pdf** by dropping it into your Assignments folder on Google Drive. Please document your code.

1. Modify the Turing machine of example 2 of your notes so that it stops in position 0 rather than position 1.

2. Define of Turing machine with tape input alphabet {a,b,*} that takes as an input string a sequence of a's and b's, followed by an asterisk (*), followed by another sequence of a's and b's. The Turing machine should concatenate the second string to the first string. For example, the input string Daba*bbaD should be changed to the string DababbaD by the Turing machine.

3. Define a Turing machine that recognizes palindromes over the input alphabet {a,b} (that is, input strings that read the same from left-to-right as they do from right-to left).

    [Suggestion: Read the first letter and erase it, but remember whether it was an a or b. Go to the last letter and check to be sure that it's the same as what use to be the first letter. If it isn't, reject the string, but if it is erase this last letter. Now return to the beginning of what is left of the input string and repeat the process. If you get to the condition where there are no letters remaining in the input string then the input string is accepted.]