CSC 135 HW #2

1. Design a DFA for the set of all the strings over the alphabet {a, b} such that all the strings start with zero or more of { bbb , bab } and ends with bbb.
    1. What is the NFA for the language
    2. What is the transition table for the NFA
    3. What is the transition table for the DFA
    4. Design the DFA based on the step d
2. Write the regular expression for the following over {a,b} or {0,1}
    1. Strings with exactly three occurrences of ba.
    2. Strings with at most 3 occurrences of ba
    3. L = { a^n b^m | m + n is even}
    4. Set of all the strings with exactly 2 a's over {a,b}
    5. All the strings containing the substring ccc over the set {a, b, c}
    6. set of all the strings when ever run of 'a' has a length of 4 over {a,b, c}.
3. Create the regular expression for the given DFA. Must use the process of creating an equation for each state then solving the equation for the final state.