Programming a DFA

Project description: Choose (your choice) a DFA, that uses at least 3 states and any input alphabet Σ, to accept words from an infinite language, L, and write a program in C/C++ or Java that simulates the DFA. Ideally your program will not use any storage (memory) features or data structures, since this is a DFA and has no memory structures.

Written description: Write up a description of your program, how it works, what data structures you used, what are the input requirements, what are the output requirements, everything should be explained. Also, and of course, draw the graph of the DFA, identify all elements of the quintuple $(Q, \Sigma, \delta, s, F)$

Written results: Test your program for various strings (words). Write an explanation of your program runs (your results). Explain the results.