Question-1

- What kind of Java tokens does the following DFA recognize? [1 pt]
  
  **Integer Literals**

- Provide three example input strings that are accepted by the above DFA in state D after transitioning through state E, C, and G (respectively). [1pt]

  - Via state E: 123L
  - Via state C: 0x123L
  - Via state G: 0123L
Question-2  Create an NFA that is equivalent to the regular expression $0(01)^*|11$ using only the four NFA constructions discussed in class. [4pt]
Problem 2: (20 points) Consider the following NFA:
\[
\begin{array}{c}
A \\
\downarrow \\
C \\
\downarrow \\
D \\
\downarrow \\
B
\end{array}
\]

\[
\begin{array}{c}
0 \\
\varepsilon \\
1 \\
0,1 \\
1 \\
1
\end{array}
\]

(16 points) Convert this NFA into an equivalent DFA using the procedure we studied in class. Your answer should be the state diagram of a DFA. Your diagram should include only the states that are reachable from the start state. **Hint:** There are 4 states in the final DFA. [4pt]

Question-3  Convert this NFA into an equivalent DFA using the procedure we studied in class. Your answer should be the state diagram of a DFA. Your diagram should include only the states that are reachable from the start state. **Hint:** There are 4 states in the final DFA. [4pt]