CS 374 **Spring 2015**

Homework 2

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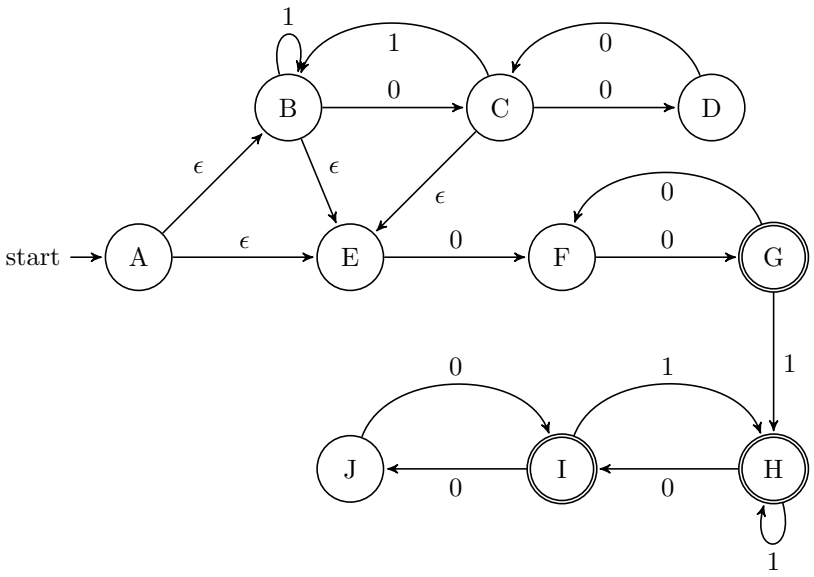
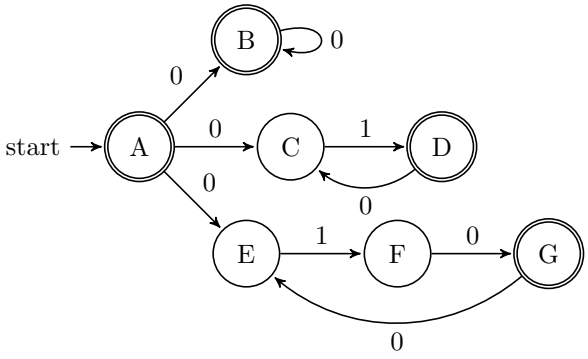
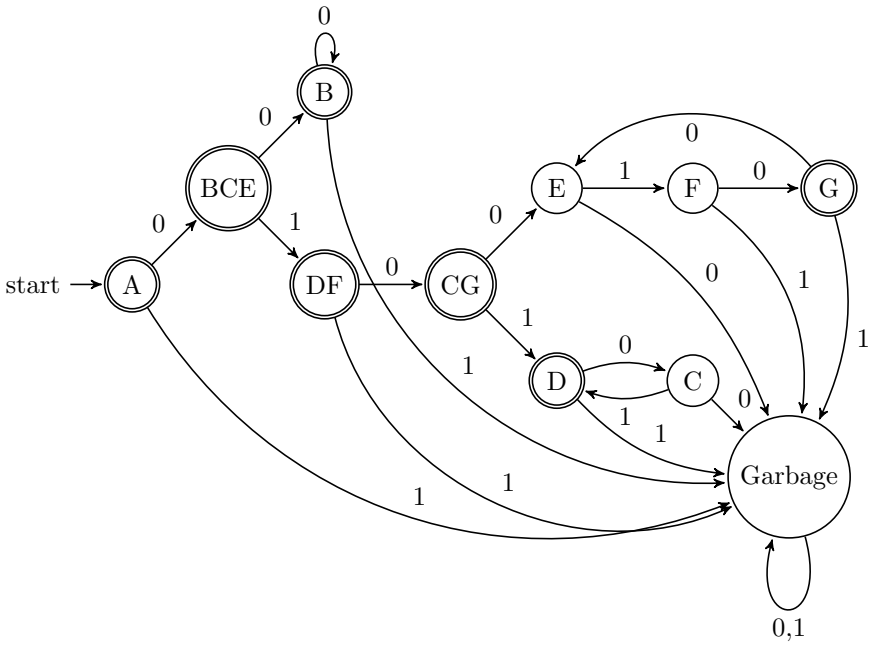
1. (a) Draw an NFA that accepts the language w — there is exactly one block of 0s of even length. (A block of 0s is a substring of 0s that is not contained in any longer substring of 0s.)



(b) i. Draw an NFA for the regular expression $(010)^* + (01)^* + 0^*$



ii. Now using the powerset construction (also called the subset construcion), design a DFA for the same language. Label the states of your DFA with names that are sets of states of your NFA.


start
A
BCE
B
DF
CG
E
F
G
D
C
Garbage
0
1
0,1