

COMP 455
Models of Languages and Computation
Fall 2021
Homework 4
Due Tuesday, September 21, 2021

1. Consider the nondeterministic finite automaton $(K, \Sigma, \Delta, s, F)$ where $K = \{p, q, r\}$, $\Sigma = \{a, b, c\}$, $s = p$, $F = \{p\}$ and $\Delta = \{(p, c, q), (q, c, r), (q, a, p), (r, b, q)\}$.

Find a regular expression for the language recognized by this automaton. Your regular expression should include all strings accepted by this automaton and no strings that are not accepted. Try to do it with no more than two stars.

For this homework you may work in groups of up to four people and groups are encouraged to turn in only one paper with everyone's names in the group on it. This will make the work of the grader easier. However, people in different groups may not collaborate.

Those who want to be part of a group and can't find others may meet in the front after class and form groups, if you desire to. You may also send email to the TA and he will assign people to groups.