Topics for the first CS4810 midterm exam

September 12, 2019

- Reduction of one problem to another

- Diagonalization

- Nondeterminism

- Interweaving

- Finite automata

- Nondeterministic finite automata

- Conversion nfa to fa

- Sets accepted by finite automata are called regular sets

- Not all sets are regular

- Class of regular sets closed under complement.

- Epsilon moves, multiple start states, restricting to one final state.

- Regular expressions

- The class of sets denoted by regular expressions is the class of set defined by finite automata.

- Closure properties of class of regular sets

- Machine constructions

- Homomorphisms and inverse homomorphisms

- Operations like shuffle

- Minimizing states in fa.

- Pumping lemma for regular sets

- Decision procedures