

CS 6901 Capstone Exam Data Structures Spring 2013: Choose any 2 problems.

CS 6901 Capstone Exam Theory Spring 2013: Choose any 2 problems.

1. Give a state diagram for a pushdown automaton that recognizes the following context-free language over $\Sigma = \{a, b, c\}$:

$$\{a^x b^y c^z : x + y = z \text{ and } x, y, z \geq 1\}$$

2. Prove that the set