

Homework 13

Due: 2014.1.14 midnight

Problem 1 When we constructed a Boolean formula that was satisfiable if and only if there was a valid computation of a polynomial time bounded nondeterministic Turing machine, we used the variables $C(I, j, t)$, $S(k, t)$, and $H(i, t)$. Using these variables write a Boolean formula that is satisfiable if and only if the change in state, head location, and modification of the tape cell scanned is allowed by some move of the Turing machine.

Problem 2 Convert the Boolean formula $x + yz$ to conjunctive normal form.