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Assignment #3 – DCSP Report

Agent i is responsible for i -queens position. I considered a position of queen in a row as a variable and domain as width of a row. I used 2 different types of constraints. First type is position of other agents and the second type is closed positions in the row received by using backtracking.

All agents were joined to one neighborhood, because each agent influence to each other. I used agent's id to describe his priority. Agent with $id = 0$ has the highest priority. Agents with higher priority send their positions to agents with less priority to set constraints. When agent with less priority cannot find valid position, (satisfy constraints) it sends nogood message to the agent with lowest priority among agents with higher priority.

In my case agent finds successful solution with the lowest priority when it satisfy all constraints of all other agents. Otherwise, when the agent with the highest priority cannot find position, which satisfies constraints, received from nogood message.