# CSE 488 Final Exam

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## I. Question (Robot Control)

Which control architecture will you use in the following situations (reactive, deliberative, hybrid)? Why?

- Programming a chess playing robot.
- Programming a wall following robot.
- Programming a football playing robot.

## II. Question (Behavior Based Systems)

Show the stimulus-response and finite state acceptor diagrams of the goalie in a football match.

## III. Question (Behavior Based Systems)

How is the subsumption architecture implemented in Lego Mindstorms? Explain.

## IV. Question (Localization)

Let say you have three beacons located in the points $B_1$(10, 10), $B_2$(-2, 7), $B_3$(-3, -8). The robot's distances from the beacons are 10, 5, 13 respectively. Find the position of the robot.

## V. Question (Path Planning)

Why is the configuration space different from the workspace? Explain.