

### \*\*\* 'Overshoot' Scenario:

\*Initial Cube configuration:  $(x, y, \theta) = (1, 0, 0)$

\*final cube configuration:  $(x, y, \theta) = (0, -1, -\pi/2)$

\*Initial youbot config:

Chassis Phi	Chassis x	Chassis y	J1	J2	J3	J4	J5	W1	W2	W3	W4	gripper state
0.7	-0.3	0	0	0	0	0	0	0	0	0	0	0

\*Controller type: Feedforward + PI

\*Gains  $K_p = 170$ ,  $K_i = 10$

\*Speed Limit was set to  $2.5\pi$  rad/sec for both wheels and joints.