

***** 'Best' 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 $K_p = 3$, $K_i = 1$

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