

**\*\*\* 'NewTask' Scenario:**

\*Initial Cube configuration:  $(x, y, \theta) = (1.5, 0.5, 0)$

\*final cube configuration:  $(x, y, \theta) = (1.5, -1.25, -\pi/3)$

\*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  $2.5\pi$  rad/sec for both wheels and joints.