## 1

## HW3

Consider a two-link robot system which is shown in the example of Chapter 4.5 in textbook. Some parameters of the system are defined as: link mass  $m_1 = 3$ ,  $m_2 = 2$  (kg) and link length  $l_1 = l_2 = 2$  (m).

Please follow the design procedure in Chapter 4.5 in textbook to finish the design of observer and controller by Matlab.

In your report, a well designed controller gain and observer gain should be attached. Moreover, please show the state trajectories and estimated state trajectories.