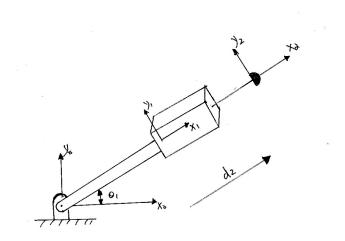
SSY156-Question 2

February 21, 2019

Problem 2

A robot arm is shown in the figure below. The mass of link 1 is m_1 , and the center of mass is located a distance l_1 from joint 1. The mass of link 2 m_2 is located a distance l_2 from joint 2. The inertia matrix of each link should be considered diagonal.



Question a

Derive the equations of motion using the Euler-Lagrange method.

Question b

Consider the inertia matrix B(q). How does the generalized forces change if d_2 increases?