Double Pendulum Dynamics

1 Single Pendulum

Our single pendulum model will consist of a point mass of mass m connected to a pivot by a massless rod of length l. The angle of the rod with respect to the vertical is defined as θ.

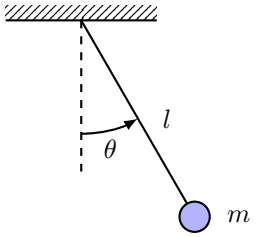

Figure 1: Single Pendulum

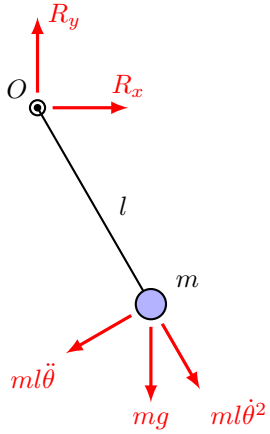

Figure 2: Free Body Diagram of Single Pendulum

2 System Description

The double pendulum consists of two masses m_1 and m_2 attached by rigid massless rods of lengths l_1 and l_2.

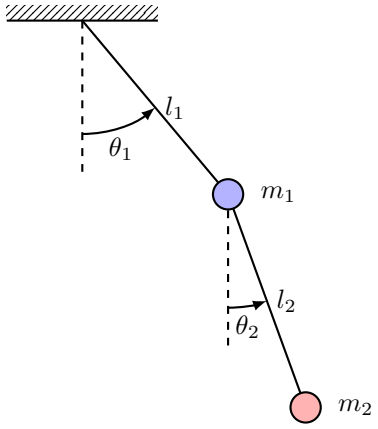

Figure 3: Double Pendulum Diagram showing lengths l_1, l_2, masses m_1, m_2, and angles θ_1, θ_2.