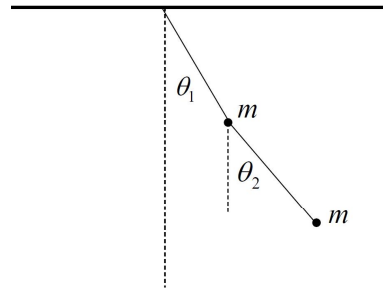


3. (Double Pendulum)

A double pendulum consists of two massless rigid rods of length L to which two identical masses m are attached (see diagram).



- What are the characteristic frequencies of this pendulum for small-angle oscillations around equilibrium?
- What are the normal coordinates for this system?
- Describe the motion corresponding to each of the normal modes of vibration.