

$$= \int_{t_1}^{t_2} dt \left\{ \delta L + \left[\frac{\partial L}{\partial q} - \frac{d}{dt} \frac{\partial L}{\partial \dot{q}} \right] \delta q + \frac{d}{dt} \left[L(q, \dot{q}, t) \delta t + \frac{\partial L}{\partial \dot{q}} \delta q \right] \right\}$$