```python
bead = sphere(pos=vector(0,0,0), radius=0.1, color=color.red)

bead.m = 0
bead.q = 0
bead.v = vector(0,1,0)

g = vector(0,9.81,0)
E = vector(0,0,0)

Fg = -bead.m*g
FE = vector(0,0,0)

Fnet = Fg + FE

bead.a = Fnet/bead.m

t = 0
tf = 10
dt = 0.01

while t < tf:
    rate(100)

    bead.pos = bead.pos + bead.v*dt
    bead.v = bead.v + bead.a*dt

    t = t + dt
```