```
clear
K = 1;                  % initialize constants
M = 1;

n = 10;
dt = 1;

p(1) = 1;                % initial position
v(1) = 0;                % initial velocity
t(1) = 0;                % initial time

for i = 2:n+1
 a = -(K/M)*p(i-1);            % compute acceleration, i.e. v', at start of
subinterval i-1
 v(i) = v(i - 1) + a*dt;       % compute velocity at start of subinterval i
 p(i) = p(i - 1) + v(i-1)*dt;  % compute position at start of subinterval i
 t(i) = t(i - 1) + dt;         % time at start of subinterval i
end

plot(t, p)     % plot the box position
```