

Ch_7_Lesson_10_Ex_1

```
clear

C = .2; % initialize constants
L = 0;
R1 = .2;
R2 = 10;

vc(1) = 0; % initialize state

dt = 0.01;
t(1) = 0;

vs=zeros(1,201); % program vs impulse
vs(100) = 100; % width = dt = .01, height = 100, at t = 1

for i=2:201
    vc(i) = vc(i-1) + (vs(i-1)/(R1*C) - vc(i-1)*(1/(R1*C)+1/(R2*C)))*dt;
    t(i) = t(i-1) + dt;
end

plot(t,vc)
```