

## Ch\_7\_Lesson\_4\_Ex\_1

```
clear
```

```
R = 5;
```

```
C = 1;
```

```
VB = 1.5;
```

```
dt = 2;
```

```
vC(1) = 0; % vC is the capacitor voltage
```

```
t(1) = 0;
```

```
for i=2:11
```

```
    I = (VB - vC(i-1))/R; % current at start of subinterval i-1
```

```
    dVC = I/C; % cap voltage rate of change at start of subinterval i-1
```

```
    vC(i) = vC(i-1) + dVC*dt; % project I over subinterval i-1
```

```
    t(i) = t(i-1) + dt;
```

```
end
```

```
plot(t,vC)
```