```
clear all
close all
syms R1 R2 C Ep  s E t
netlist={'V1 1 0 Ep'
    'R1 1 2 R1'
    'R2 2 3 R2'
    'C1 3 0 C'};
[X name]=fspice(netlist)
```

```
** fspice 2.43  ** (c) Frederic Martinez
X =
```

$$\begin{pmatrix} \mathrm{Ep} \\ \frac{\mathrm{Ep}\,(C\,R_2\,s+1)}{C\,R_1\,s+C\,R_2\,s+1} \\ \frac{\mathrm{Ep}}{C\,R_1\,s+C\,R_2\,s+1} \\ -\frac{C\,\mathrm{Ep}\,s}{C\,R_1\,s+C\,R_2\,s+1} \end{pmatrix}$$

```
name = 1×4 cell
'V(1)'      'V(2)'      'V(3)'      'I(V1)'
```

```
Ep=E/s %TL de e(t)
```

```
Ep =
```

$$\frac{\mathrm{E}}{s}$$

```
S=subs(X(2)) %TL de s(t)
```

```
S =
```

$$\frac{\mathrm{E}\,(C\,R_2\,s+1)}{s\,(C\,R_1\,s+C\,R_2\,s+1)}$$

```
I=-subs(X(4)) % TL de i(t)
```

```
I =
```

$$\frac{C\,\mathrm{E}}{C\,R_1\,s+C\,R_2\,s+1}$$

```
s=simplify(ilaplace(S)); %s(t)=TL inverse de S
pretty(s)
```

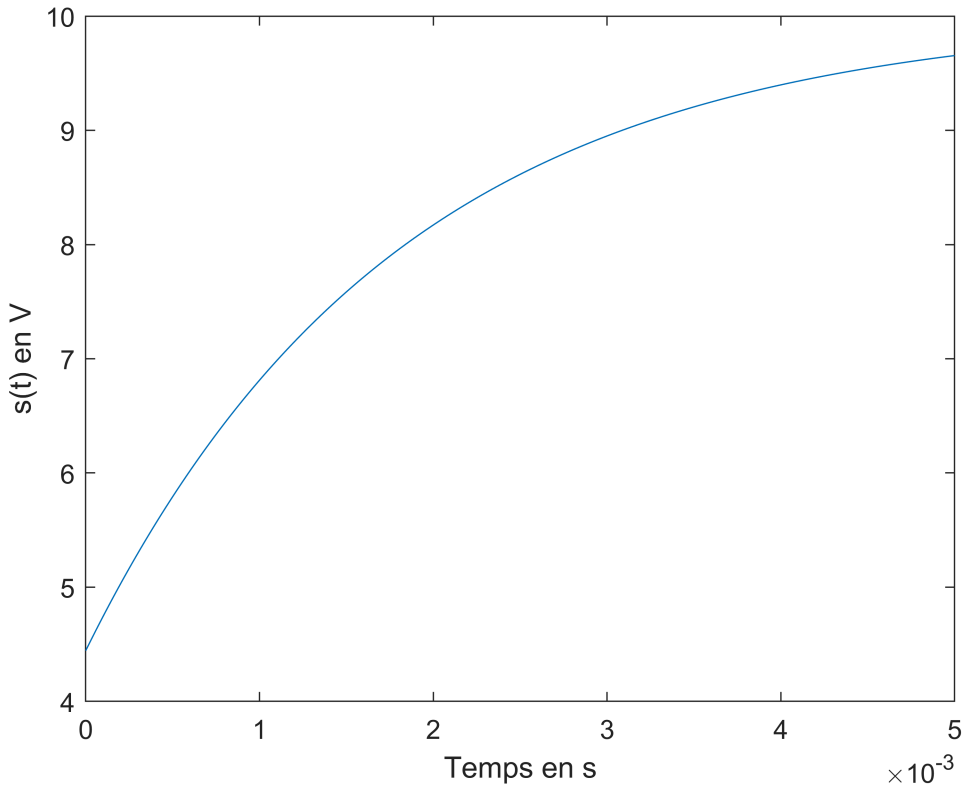
```
            /       t      \
    E R1 exp| - ----------- |
            \   C (R1 + R2) /
E - -------------------------
             R1 + R2
```

```
i=simplify(ilaplace(I)); %i(t)=TL inverse de I
pretty(i)
```

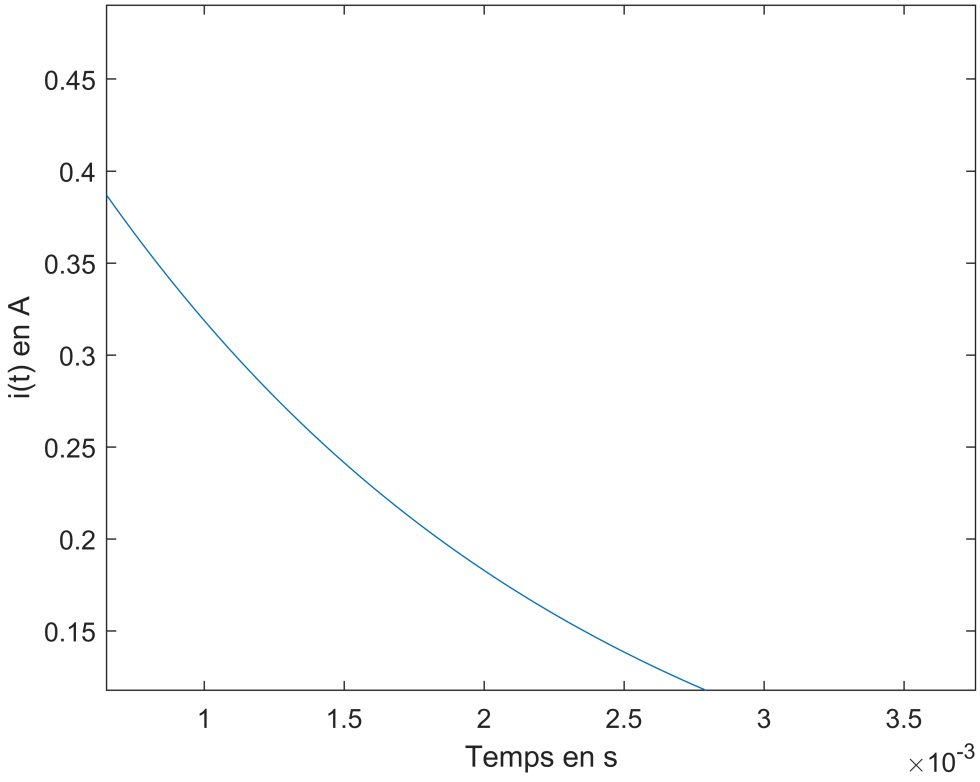
```
    /       t      \
E exp| - ----------- |
```

```
     \   C (R1 + R2) /
----------------------
       R1 + R2
```

```
% Tracé des courbes
R1=10; R2=8; C=100e-6;E=10;
t=linspace(0,5e-3,500);
s=double(subs(s));
plot(t,s)
xlabel('Temps en s')
ylabel('s(t) en V')
```




```
figure
i=double(subs(i));
plot(t,i)
xlabel('Temps en s')
ylabel('i(t) en A')
```


0.45
0.4
0.35
0.3
0.25
0.2
0.15
i(t) en A
1
1.5
2
2.5
3
3.5
Temps en s
×10-3