LC3: Exercicis previs bloc 3

Exercici 1

```matlab
function smith

    freq=1:10000:2e9;
    z0=50;
    r=25;
    c=10e-12;
    l=10e-9;
    w=2*3.1415*freq;

    % R-C paralel
    zin=1./((1./r)+(j*w*c));
    pin=(zin-z0)./(zin+z0);
    p=smithchart(pin)
    set (p,'LineWidth',3);
    hold on;

    % R-L paralel
    zin=1./((1./r)+1./(j*w*l));
    pin=(zin-z0)./(zin+z0);
    p=smithchart(pin)
    set (p,'LineWidth',3);
    hold on;

    % L-C paralel
    zin=1./((1./(j*w*l))+(j*w*c));
    pin=(zin-z0)./(zin+z0);
    p=smithchart(pin)
    set (p,'LineWidth',3);
    hold on;

    % R-C serie
    zin=r+1./(j*w*c);
    pin=(zin-z0)./(zin+z0);
    p=smithchart(pin)
    set (p,'LineWidth',3);
    hold on;

    % L-R serie
    zin=r+j*w*l;
    pin=(zin-z0)./(zin+z0);
    p=smithchart(pin)
    set (p,'LineWidth',3);
    hold on;

    % L-C serie
    zin=1./(j*w*c)+j*w*l;
    pin=(zin-z0)./(zin+z0);
    p=smithchart(pin)
    set (p,'LineWidth',3);
    hold on;

end
```