```
clear variables
  close all
fc = input('carrier frequency')
    fm = 4 %Hz
    Ac = 1;
    Am = 1;
    Ta = 1/fc; %period for carrier
    Tc = 1/fm;
    N = 200;
    t0 = -2;
    t1 = 2;
    t = t0:(t1-t0)/(N-1):t1;
    m = Am*cos(2*pi*fm*t);
    S = Ac*cos(2*pi*fc*t);
subplot(2,2,1),plot(t,S,'linewidth',2,'color','r')
title('message signal')
xlabel('Time')
ylabel('Amplitude')
subplot(2,2,2),plot(t,m,'linewidth',2,'color','b')
title('carrier signal')
 xlabel('Time')
 ylabel('Amplitude')
legend('S(t)','M(t)')
a= title('Carrier and Message Signals');
set(a,'fontsize',14);
a= xlabel('t [-2\pi 2\pi]');
set(a,'fontsize',20);
a = ylabel('y');
set(a,'fontsize',20);
a = zlabel('z');
set(a,'fontsize',20);
grid
grid minor
```