Assignment 1:

Plot the following functions for t = -0.1 to 0.1 seconds; (given values are F_c = 10, F_m = 50)

plot the fuctions for following set of A_c and A_m.

1. A_c = 5, A_m = 8
2. A_c = 6, A_m = 6
3. A_c = 8, A_m = 5

fucnctions are:

$$M = A_m \cos\left(2\pi f_m t\right)$$

$$C = A_c \cos\left(2\pi f_c t\right)$$

$$S = \left[A_c + A_m \cos\left(2\pi f_m t\right)\right] \cos\left(2\pi f_c t\right)$$

Code:

```
clc
close all;
Ac = 6; %(5,6,8)
Am = 6; %(8,6,5)
fc = 10;
fm = 50;
t = linspace(-0.1,0.1);
M = Am*cos(2*pi*fm*t);
C= Ac*cos(2*pi*fc*t);
S=(Ac+Am*cos(2*pi*fm*t)).*cos(2*pi*fc*t);
subplot(2,2,1);
plot(t, M);
subplot(2,2,2);
plot(t, C);
subplot(2,2,[3,4]);
plot(t, S);
```

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