TITLE: Generate a time-sampled version of a Frequency Modulated Signal and plot the same on a Graph.

PROBLEM STATEMENT:

Assume sinusoidal carrier and message signals. Take user Inputs for suitable values of Carrier Amplitude, Carrier Frequency, Baseband Message amplitude, Baseband Message Frequency, and Sensitivity. Save the Samples of the three signals to a file using File Operations and then plot the same using GNUPLOT or MATLAB for visual appreciation. (Keep the sampling Frequency, 100 times the Carrier Frequency, and plot 1000 samples for this assignment.)

BRIFE THEORY & BACKGROUND:

Frequency Modulation (FM) is a widely used technique in telecommunications and broadcasting for transmitting information through varying the frequency of a carrier signal. Frequency Modulation involves varying the frequency of a carrier wave in accordance with the amplitude of a modulating signal. Unlike amplitude modulation (AM), where the amplitude of the carrier wave is modulated, FM varies the frequency while keeping the amplitude constant.