Introduction to Matlab

Introduction

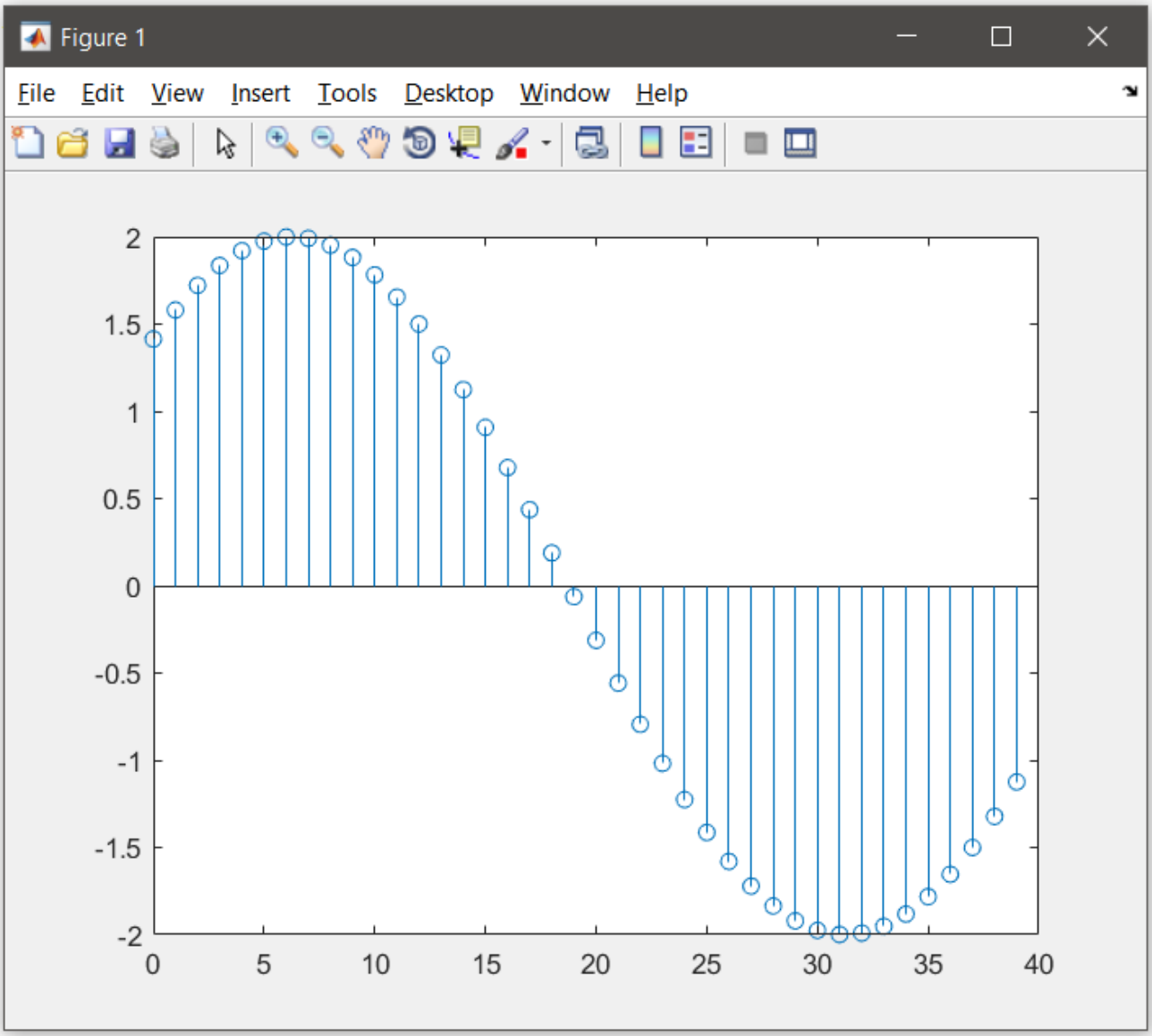
Introduction to MATLAB environment: Command Window, Variables, Constants, Scalars, Matrices and Vectors, Functions, Comments, Command History, Workspace, Editor, Script file etc.

Experiment 1-A

Write a MATLAB program to plot the discrete sine wave with given amplitude, frequency, phase, sampling frequency and length of the sequence. Also observe first alias.

```
clc;
clear all;
close all;
ampl = input('Enter sin Wave amplitude :');
freq  = input('Enter sin Wave Frequency(Hz) :');
phase  = input('Enter sin Wave Phase in radian(ex: pi/2 ):');
sam_freq = input('Enter sin Wave Sampling frequency(samples par sec) :');
length_of_secquence = input('Enter sin Wave length of the sequence :');
f = freq/sam_freq;
n = 0:1:length_of_secquence-1;
y_n = ampl*sin(2*pi*f*n+phase);
% x = phase:2*pi*sam_freq:phase+2*pi*sam_freq*length_of_secquence;
% y = ampl*sin(x);
figure(1);
stem(n,y_n);
```

```
Enter sin Wave amplitude :2
Enter sin Wave Frequency(Hz) :100
Enter sin Wave Phase in radian(ex: pi/2 ):pi/4
Enter sin Wave Sampling frequency(samples par sec) :5000
Enter sin Wave length of the sequence :40
```



Experiment 1-B

Write a MATLAB program for generation of DT unit impulse, step, and ramp sequence for a given initial time, final time and start of sequence.