Expt.No. 1

Title: 2D Plots for Cartesian and Polar curves

In this experiment we deal with the 2D plotting of polar and Cartesian curves. The range for x can be given, the function can be defined and plot gives the desired curve. Further labels for the axes as well as title can be given. Even multiple curves can be plotted on the same system. The same can be done for polar curves.

1] Creating 2D simple cartesian plots

```
%Example 1:
clear
clc
x=[1 4 7 8 9 0];
y=[3 4 6 7 9 1];
plot(x,y)
%Example 2 :
clear
clc
x=0:pi/100:2*pi;
y=cos(x);
plot(x,y)
```

MATLAB enables you to add axis labels and titles. For example, using the graph from the previous example, add an x- and y-axis labels.

```
%Example3:
clear
clc
x=0:pi/100:2*pi;
y=sin(x);
plot(x,y)
xlabel('x=0:2*pi')
ylabel('sin(x)')
title('plot the sine graph')
```

```
%Creating 2D simple Polar plots:
%Example 1:
clear
clc
theta = 0:0.01:2*pi;
rho = sin(2*theta).*cos(2*theta);
polarplot(theta,rho)


%Example 2:
clear
clc
theta = linspace(0,6*pi);
rho1 = theta/10;
polarplot(theta,rho1)
rho2 = theta/12;
hold on
polarplot(theta,rho2,'--')
hold off
```