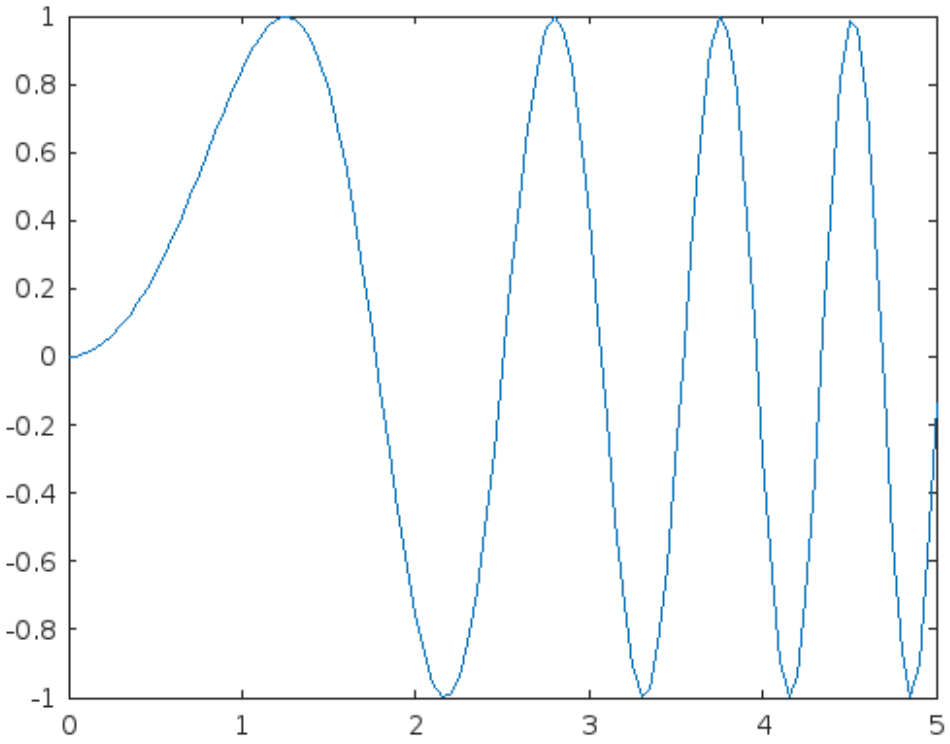
```
% Roll No: 207
% Batch: C3
% Date: 09-03-2023
% Name: Mohanish Khambadkar
% Assignment 3

% 1. Plot a function and create a simple line where x is 0 to 5 with an
 interval of 0.05 and y = sin(x^2).
x=0 : 0.05 : 5;
y=sin(x.*x);
plot(x,y)
```



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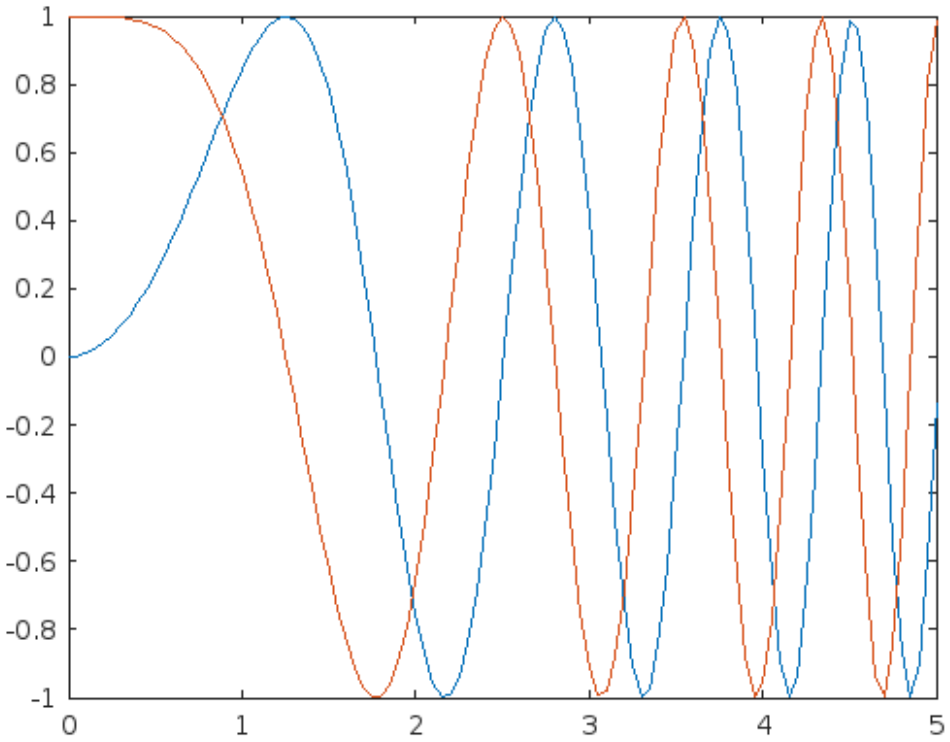
% Assignment 3

% 2.Plot two graphs y1 and y2 vs x where x is 0 to 5 and y1=sin(x1^2) and
 y2=sin(x2^2).
x = 0 : 0.05 : 5;
y1 = sin(x.*x);
y2 = cos(x.*x);
plot(x,y1,x,y2);
```



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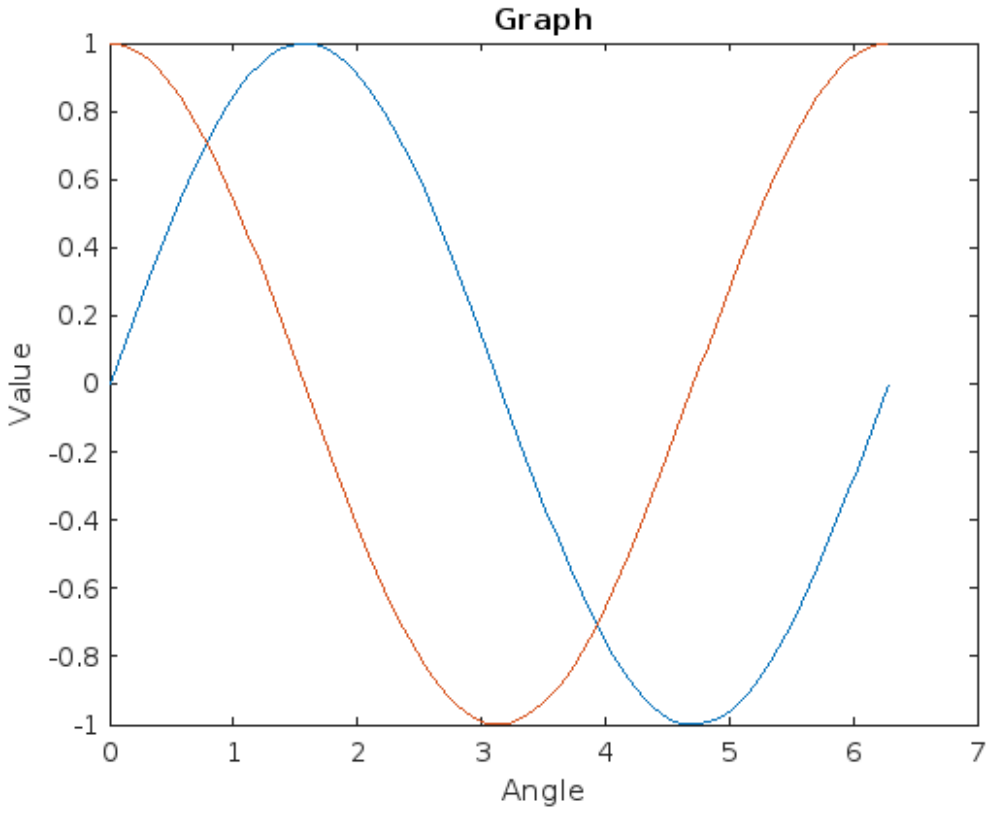
%3. Plot: x=linspace(0, 2*pi, 100), y=sin(x), use hold on, y2=cos(x), hold
 off, write xlabel, ylabel, title.
x = linspace(0, 2*pi, 100);
y1 = sin(x);
plot(x,y1);
hold on;
y2 = cos(x);
plot(x,y2);
hold off;
xlabel("Angle")
ylabel("Value")
title("Graph")
```



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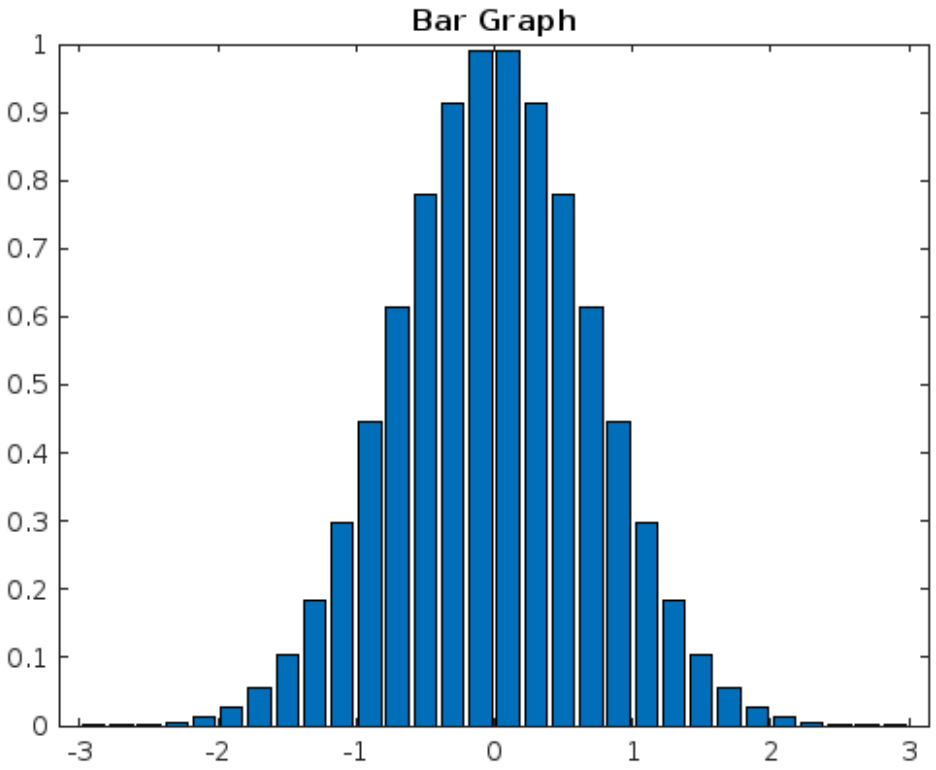
% Bar Graph
% 4. x=-2.9 to 2.9 in interval of 0.2 y=exp(-x.*x). bar(x, y)
x = -2.9 : 0.2 : 2.9;
y = exp(-x.*x);
bar(x,y)
title('Bar Graph')
```



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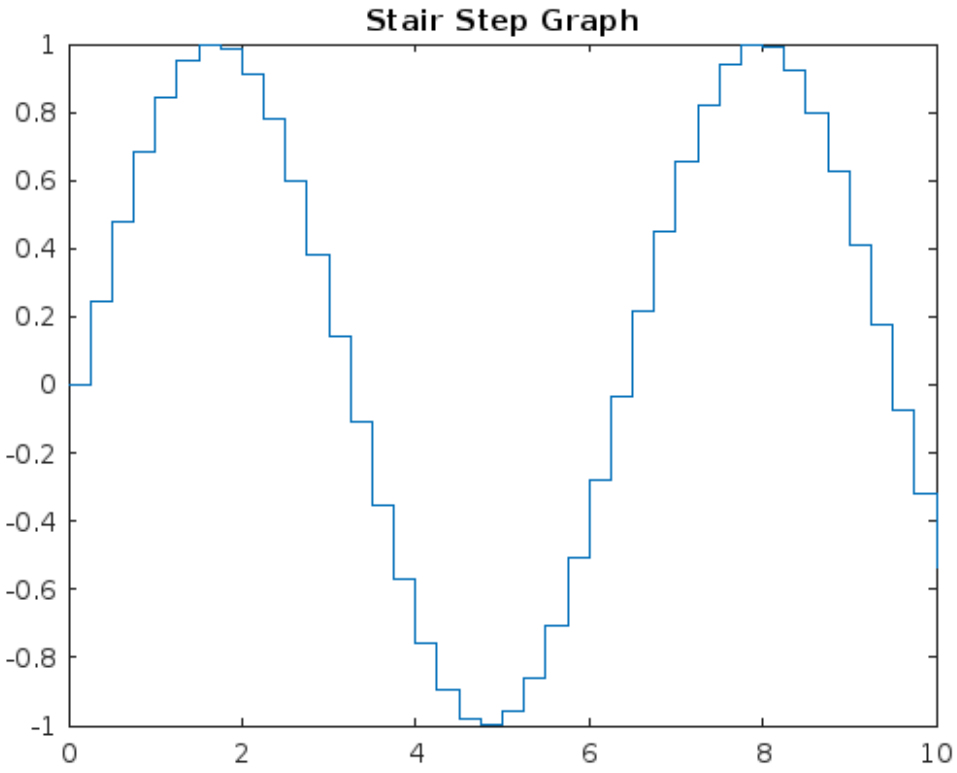
% Stair Steps

% 5.Stair step plot x=0 to 10 with interval of 0.25. y=sin(x), stairs(x,
% y).
x = 0 : 0.25 : 10;
y = sin(x);
stairs (x,y);
title('Stair Step Graph')
```



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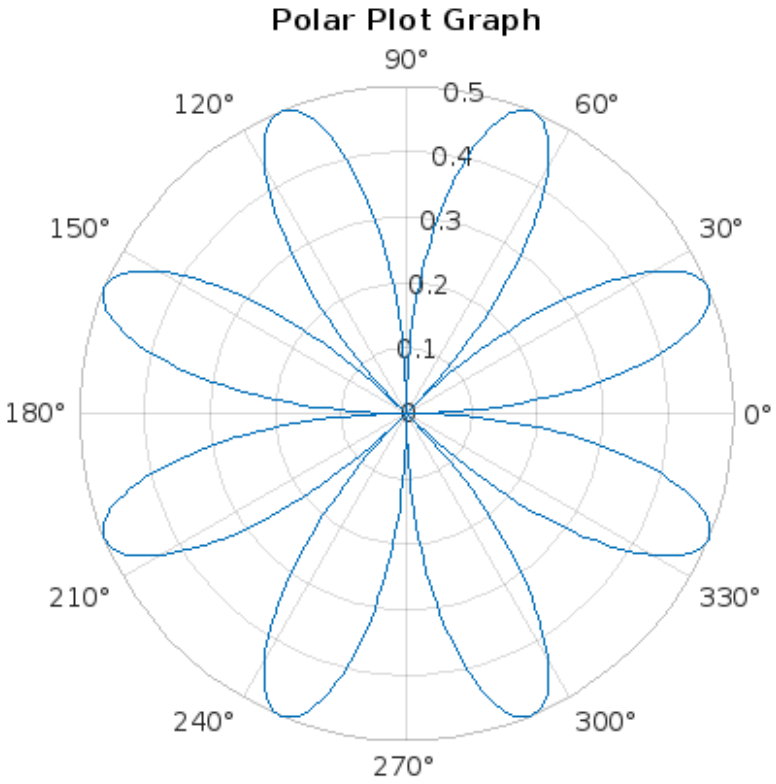
% Assignment 3

% Polar Plot
% 6. Polar plot theta =0 to 2*pi with interval of 0.01
 rho=abs(sin(2*theta).*cos(2*theta)) polarplot(theta, rho).
theta = 0 : 0.01 : 2*pi;
rho = abs(sin(2*theta) .* cos(2*theta));
polarplot(theta,rho);
title('Polar Plot Graph')
```



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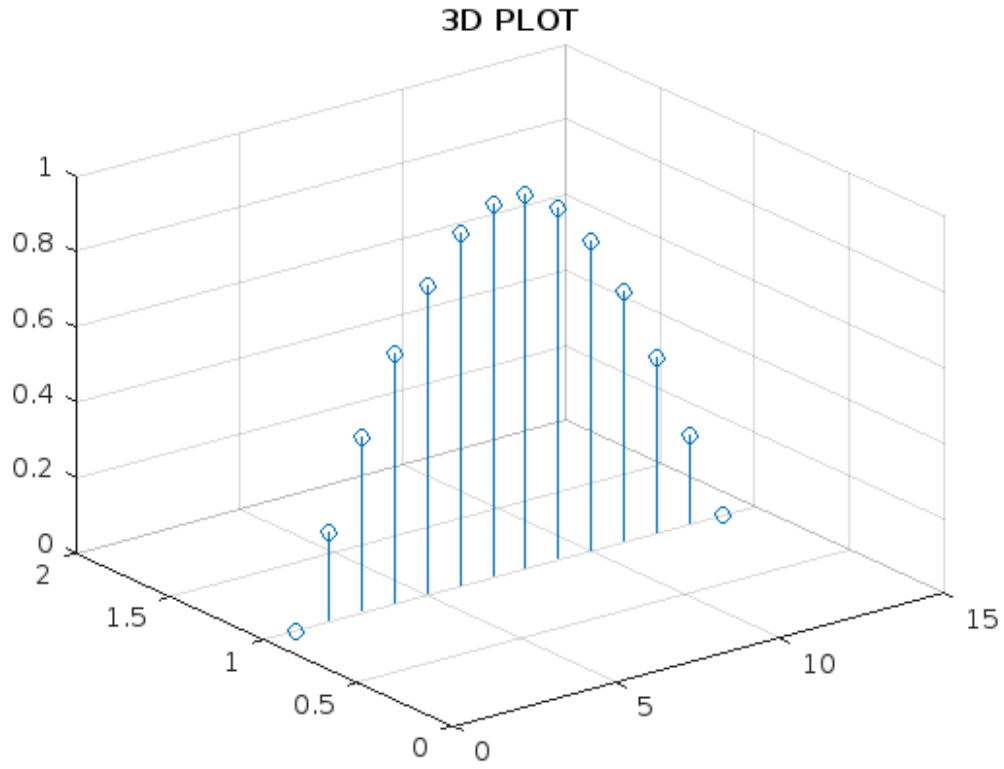
% Assignment 3

% 3D Plot
% 1.Create a 3d plot of cosine values between -pi/2 to pi/2.
% Total number of intervals is 14.

x = linspace(-pi/2, pi/2, 14);
z = cos(x);
stem3(z);
title('3D PLOT')
```



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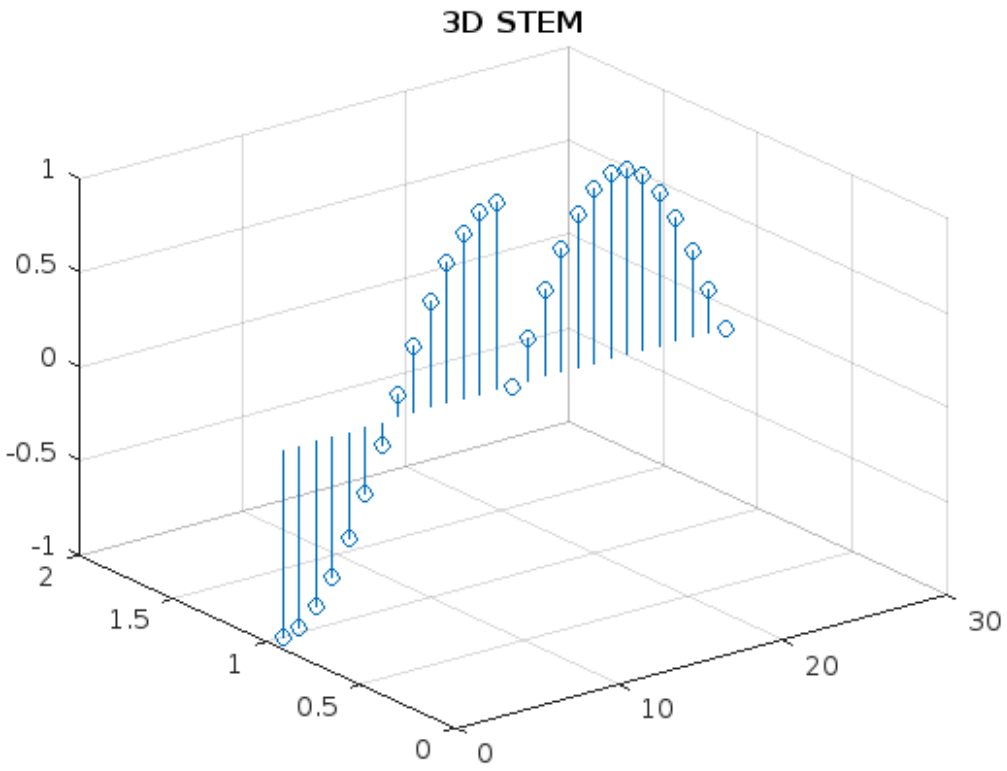
% Assignment 3

% 3D Stem
% 8. Create a 3D Stem of sine and cosine values between -pi/2 to pi/2 which is
 a matrix input.
x = linspace(-pi/2, pi/2, 14);
z = [sin(x) cos(x)];
stem3(z);
title('3D STEM')
```



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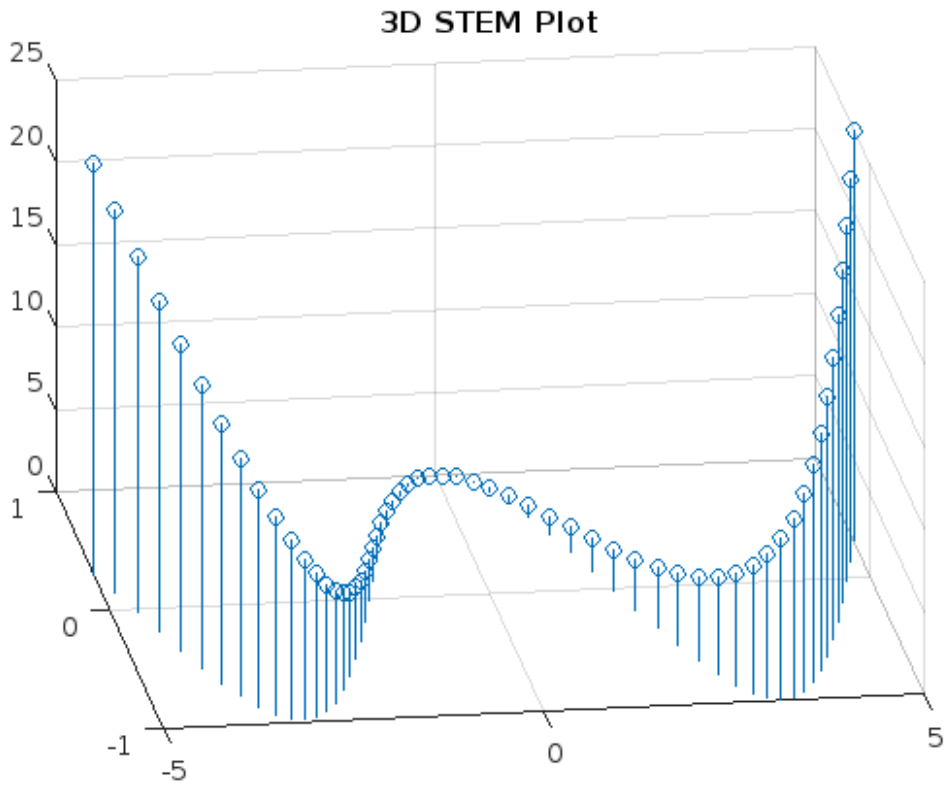
%3. Create a 3D stem plot and specify the stem locating use view in built
%function to adjust the angle of axis in the figure x=-5 to 5 interval 60.
% y = cos(x)
% z = x^2
% stem3(x,y,z)
% view(-8,30)

x = linspace(-5, 5, 60);
y = cos(x);
z = x.^2;
stem3(x,y,z);
view(-8,30);
title('3D STEM Plot')
```



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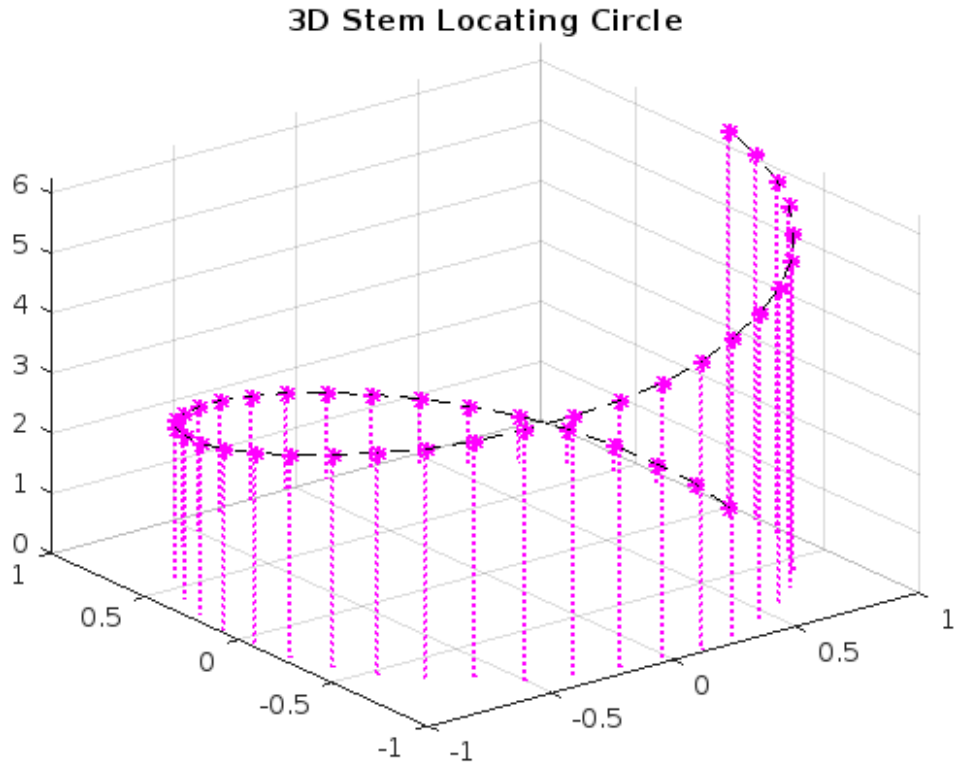
% Assignment 3

%Create 3D stem with specify stem locating circle set the stem to a dotted
%line style the marker sysmbol to start and color is magenta theta 0 2pi.

theta = linspace(0, 2*pi, 40);
y = sin(theta);
x = cos(theta);
z = theta;
stem3 (x, y, z, ':*m', 'LineWidth', 1.5);
hold on;
plot3(x, y, z, 'k--', 'LineWidth', 0.5);
hold off;
view(-37.5, 30);
title('3D Stem Locating Circle')
```



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