Lecture 11

* Drawing in matlab :-

Some special drawing commands

1- plot
2- Determine the type of line for drawing (: , - , --)
3- Determine the color of the drawing (k, r, g, b, y, w)
(k: black, r: red, g: green, b: blue, y: yellow, w: white)
4- Some signs used on the drawing when determine points on the drawing (o, +, x, ...)
5- The address of the axis for (X, Y), as follows:
Xlabel ('comment') — تعليق
Ylabel ('comment')
6- Title of the drawing as follows
title ('comment')
7- The subplot command is to draw a set of figures on one window ; as follows

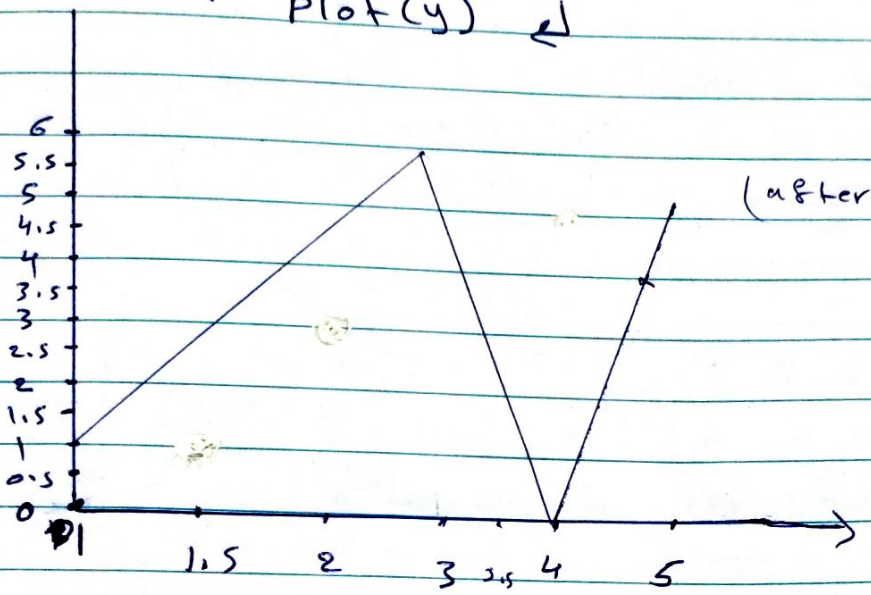
subplot (m, n, K)
(No. Rows) ↓ ↓ ↳ (No. figures)
(No. columns)

EXC If y=(1 3 5 0 4); draw the variable (y) in the matlab.

Application:

>> y=[1 3 5 0 4]; ↵ + shift

plot(y) ↵

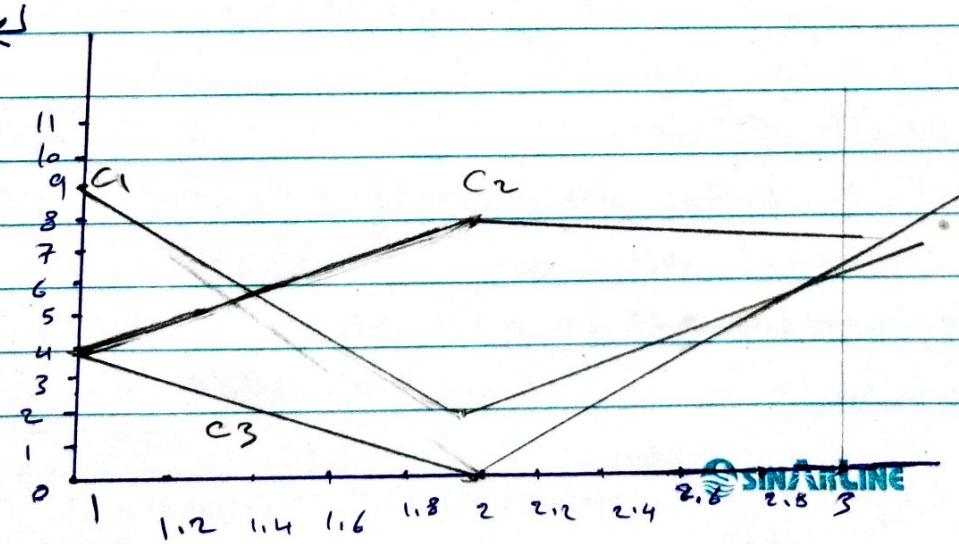


EX2 Draw the matrix (A) in matlab.

$$(A) = \begin{matrix} & C_1 & C_2 & C_3 \\ \end{matrix} \begin{bmatrix} 9 & 4 & 4 \\ 2 & 8 & 0 \\ 6 & 7 & 8 \end{bmatrix}$$

>> A=[9 4 4; 2 8 0; 6 7 8]; ↵ + shift

plot(A) ↵



Ex3 If you have

x	y
0	3
0.3	1
0.5	7
1.1	0
2.5	9

Draw (x, y) and also write on the x-axis (x-values) and on the y-axis (Y-values), and the title of the drawing (plot (x, y)).

Sol

```
>> X = [0 ; 0.3 ; 0.5 ; 1.1 ; 2.5] ; ↵ +Shift
   y = [3 ; 1 ; 7 ; 0 ; 9] ; ↵ +shift
   plot (x, y) ;          ↵ +shift
   Xlabel ('x-values') ; ↵ +shift
   ylabel ('Y-values') ; ↵ +shift
   title ('plot (x,y)') ; ↵
```

Ex4: If you have

x	y	z
5	-2	0
3	1	7
6	2	8
8	4	5
2	7	9

Find:

Draw (x, y, z) and also write on the x-axis (variable-x), on the y-axis (variable-y), and the z-axis (variable-z) and the title of the drawing (plot (x,y,z)), and the type of line of the drawing (--) and the red color of the drawing.

30)

```
>> x = [5; 3; 6; 8; 2];          ↵ + shift
   y = [-2; 1; 2; 4; 7];          =
   z = [0; 7; 8; 5; 9];           =
   plot3(x, y, z, '--r');         =
   title('plot (x, y, z)');       =
   xlabel('variable x');          =
   ylabel('variable y');          =
   zlabel('variable z');          ↵
```

Ex]g

t	z
0	0
0.5	1
1	2
1.5	1
2	3

Final

the same is required for the example above