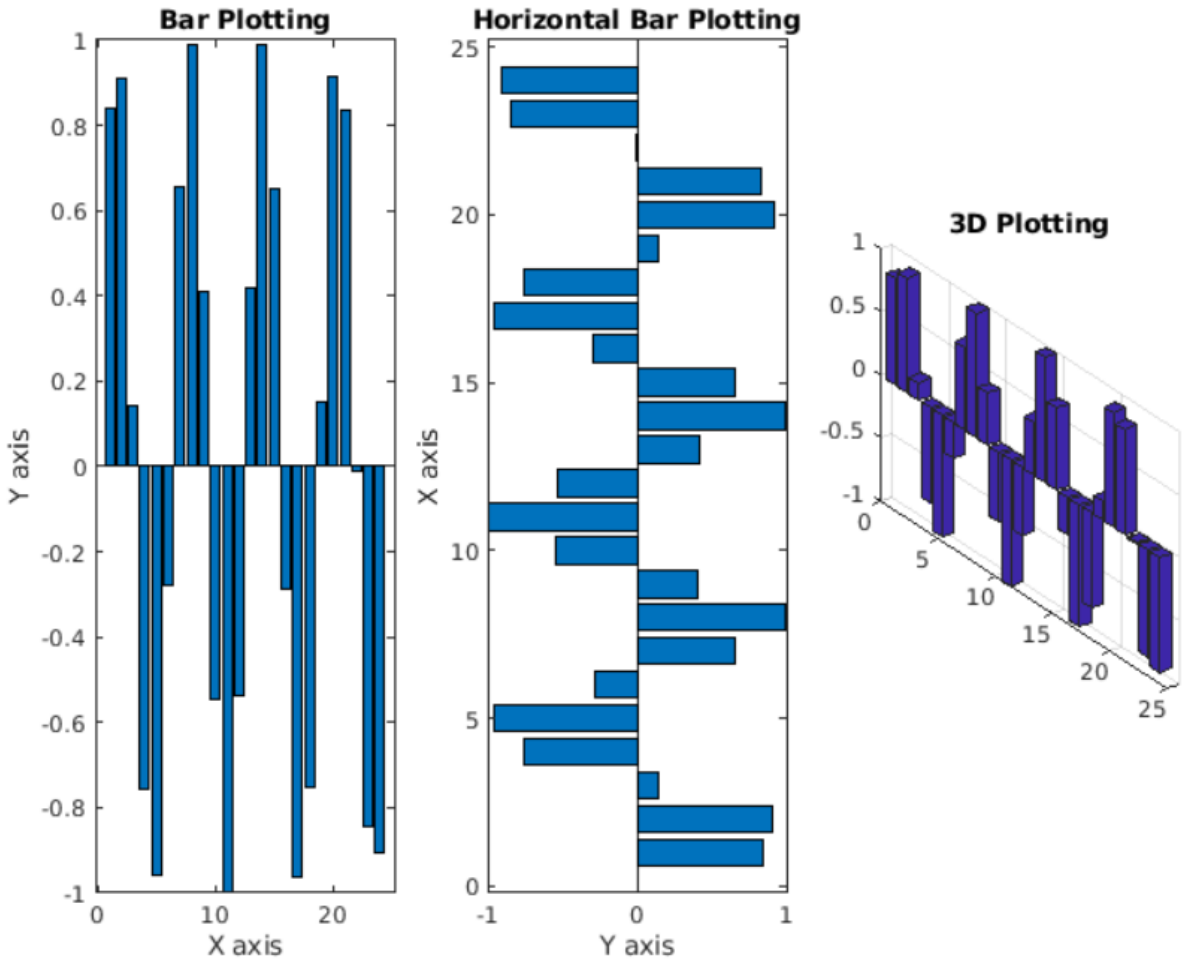
ABHISHEK SHARMA
CS THIRD YEAR ; SECTION : "I" ; ROLL NO.: 01
ENROLLMENT NO.: 12019009001127
IT WORKSHOP : MODULE – MATLAB
DATE : 19.08.2021

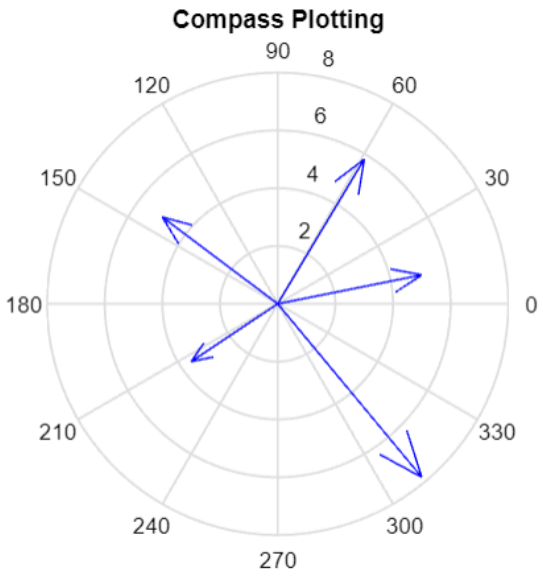
Q1. Create a script to plot the Bar graphs using different values.

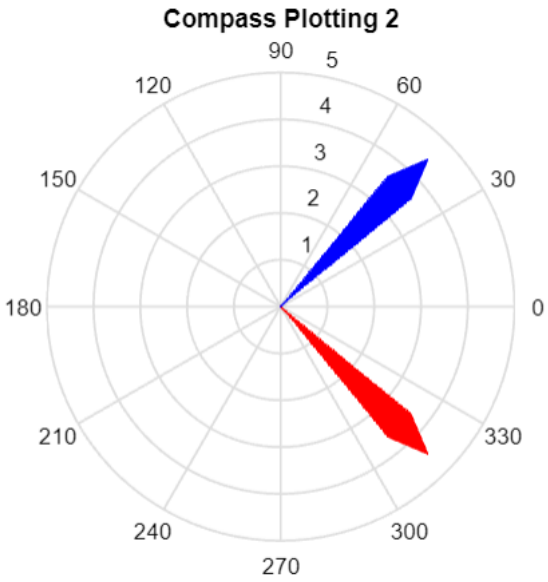
```
subplot (1,3,1)
x=1:24;
y=sin(x);
bar(x,y)
xlabel("X axis");
ylabel("Y axis");
title("Bar Plotting")

subplot (1,3,2);
barh(x,y)
xlabel("Y axis");
ylabel("X axis");
title("Horizontal Bar Plotting")

subplot (1,3,3)
bar3(x,y);
title ("3D Plotting")
```



Q2. Create a script which shows compass plotting.

```
x=linspace(0,pi,50);
y=-x;
y1=x;
compass(x,y,"r");
hold on
compass (x,y1, "b");
hold off;
title("Compass Plotting 2")
%% Another type of compass plotting
x = [3 5 -4 -3 5];
y = [5 1 3 -2 -6];
compass(x,y,"b");
title ("Compass Plotting")
```





Q3. Write a script for finding patterns in a composition of words.

```
str = ["red green red red blue blue green";
    "green red blue green green blue"];
count (str, "red")
% Counting the occurance of the "red" in the given string


str1 = ["greater Kolkata1444","University 404D", "B.Tech CSE12019001127 3d"];
pat=digitsPattern(1);
B=count(str1,pat)
% Finding how many digits are there in the string

pat1 = lettersPattern(1);
C=count(str1,pat1)
% Finding how many letters are there in the string

pat2 = digitsPattern + lettersPattern(1);
D = count(str1,pat2)
% finding the digits and letters in a combined manner where only 1 digit is
% combined with the letter
```

Output :

```
ans =

     3
     1


B =

     4     3    12


C =

    14    11     9


D =

     0     1     1
```

Q4. Pattern checking using TF operation.

```
str = ["India Cricket Olympic","Football India Hockey","Marathon Boxing Olympic"];
pat = ["Cricket","Boxing"];
TF = contains(str,pat)
str(TF)

pat1 = ["India"];
TF1 = contains (str,pat1)
str(TF1)
```

Output :

```
TF =


  1×3 logical array


   1   0   1




ans =


  1×2 string array
```

```
    "India Cricket Olympic"    "Marathon Boxing Olympic"



TF1 =

  1×3 logical array

   1   1   0



ans =

  1×2 string array

    "India Cricket Olympic"    "Football India Hockey"
```

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