

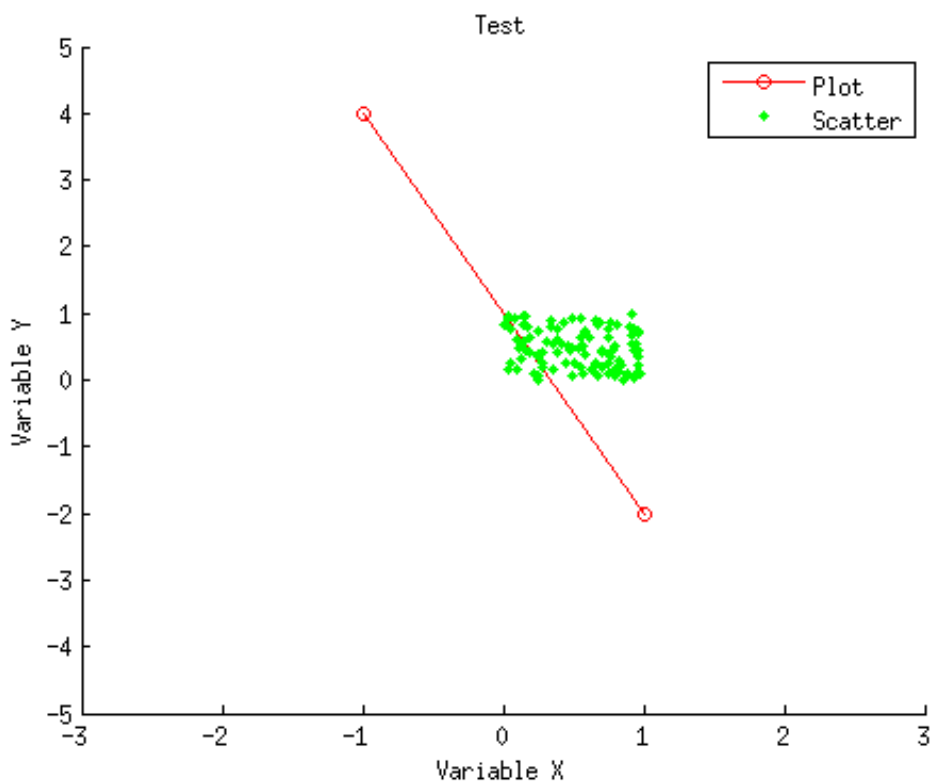
MATLAB Basics II

Contents

- [Examples for "1. Figures and plotting"](#)
- [Examples for "2. Flow control" and "3. Boolean operators"](#)
- [Examples for "7. Function handles, anonymous functions"](#)

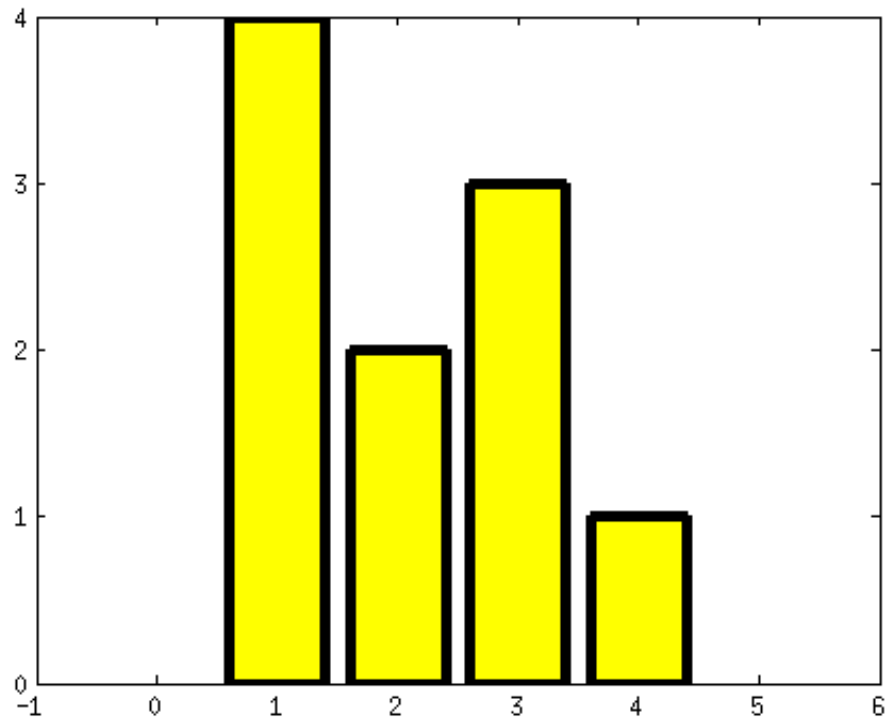
Examples for "1. Figures and plotting"

```
figure;  
hold on;  
h1 = plot([-1 1],[4 -2], 'ro-');  
h2 = scatter(rand(1,100),rand(1,100), 'g. ');  
axis([-3 3 -5 5]);  
xlabel('Variable X');  
ylabel('Variable Y');  
title('Test');  
legend([h1 h2], {'Plot' 'Scatter'});  
print('-dpng', 'test.png');
```

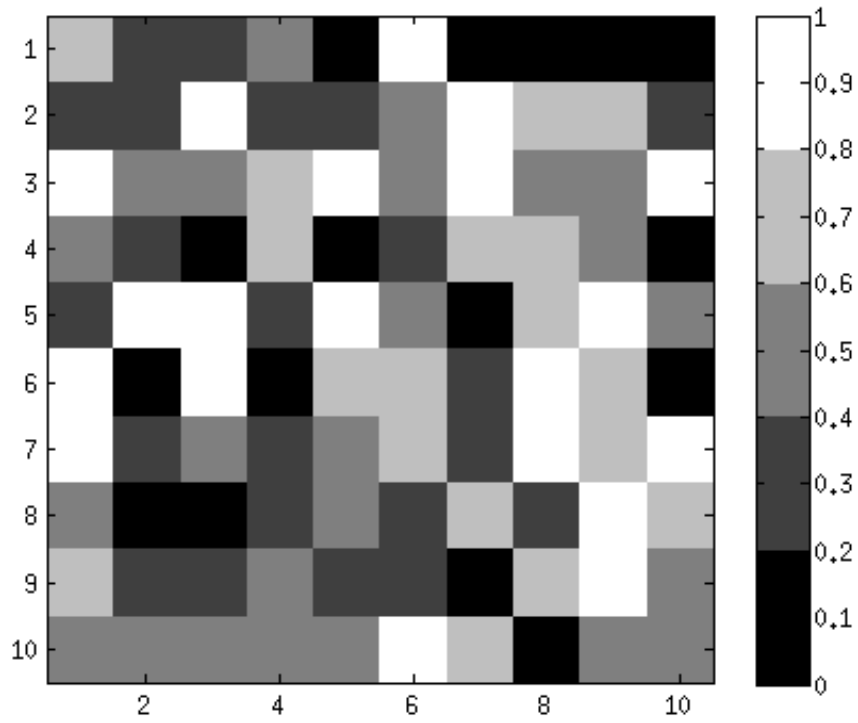


```
figure;  
h1 = bar([4 2 3 1]);  
set(h1, 'FaceColor', 'y', 'LineWidth', 4);  
ax = axis;  
axis([-1 6 ax(3:4)]);  
set(gca, 'XTick', -1:6);
```

```
set(gca, 'YTick', 0:4);  
print('-depsc2', 'test2.eps');
```



```
figure;  
imagesc(rand(10,10),[0 1]);  
axis equal tight;  
colormap(gray(5));  
colorbar;
```



Examples for "2. Flow control" and "3. Boolean operators"

```

a = 2;
if a > 1
    b = 10;
    c = b + 1;
else
    b = 5;
end
b

```

b =

10

```

a = [3 4 5];
if all(a > 0) && length(a)==3
    b = 1;
else
    b = 2;
end
b

```

b =

1

```
cnt = 1;
while cnt < 10
    cnt = cnt * 2;
end
cnt
```

```
cnt =
    16
```

```
cnt = 0;
for x=1:10
    cnt = cnt + x;
end
cnt
```

```
cnt =
    55
```

```
for x=1:10
    if x^2 > 50
        break;
    end
end
x
```

```
x =
    8
```

```
x = 2;
switch x
case 0
    y = x;
case 1
    y = x^2;
case 2
    y = x^3;
end
y
```

y =

8

Examples for "7. Function handles, anonymous functions"

```
a = [1 0];  
b = [3 4];
```

```
fun1 = @mean;  
c = fun1(a) + fun1(b);  
c
```

c =

4

```
fun2 = @(x) sum(x.^2);  
c = fun2(a) + fun2(b);  
c
```

c =

26