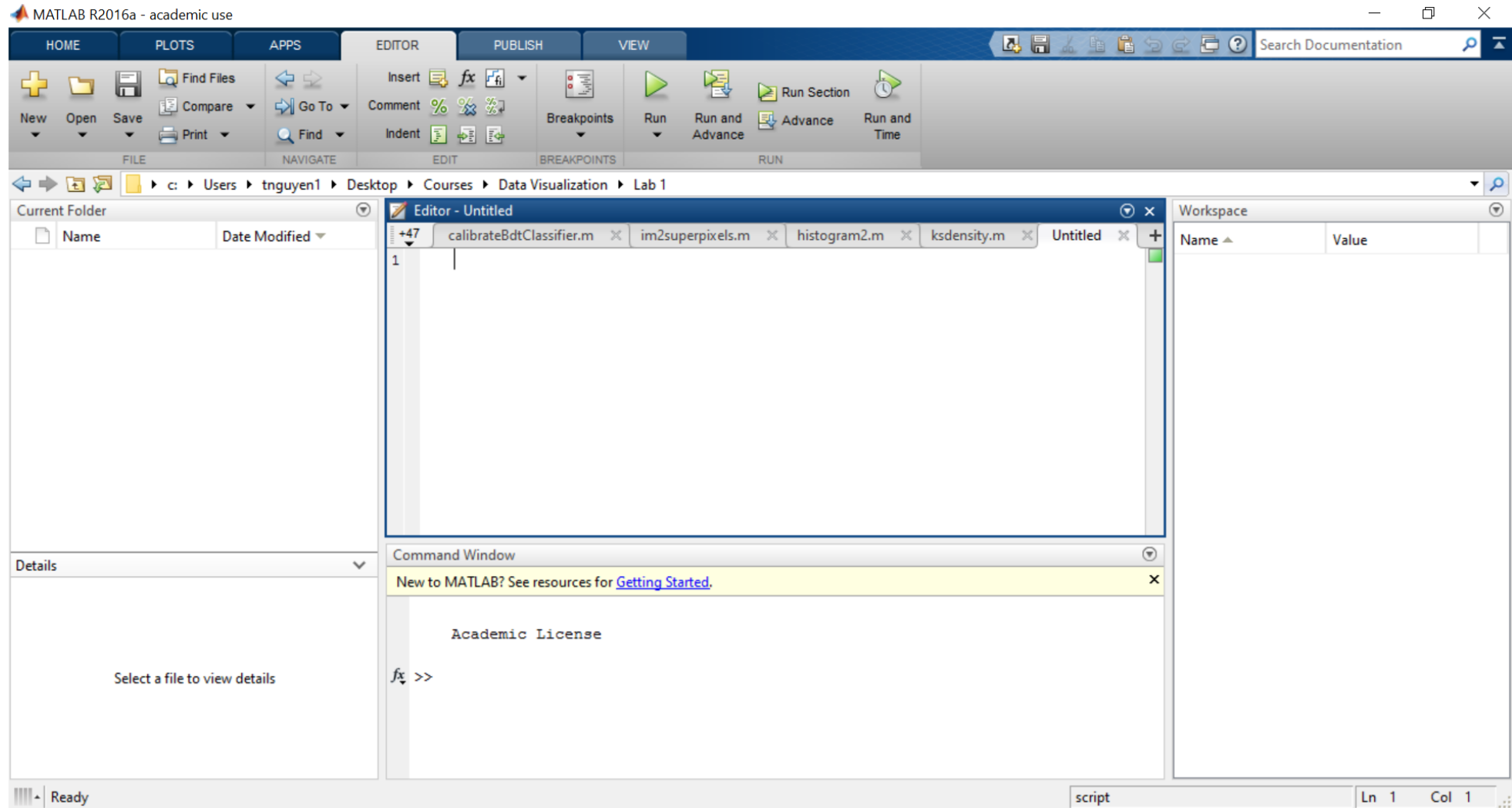# Lab 5

CPS 563 – Data Visualization

Dr. Tam Nguyen

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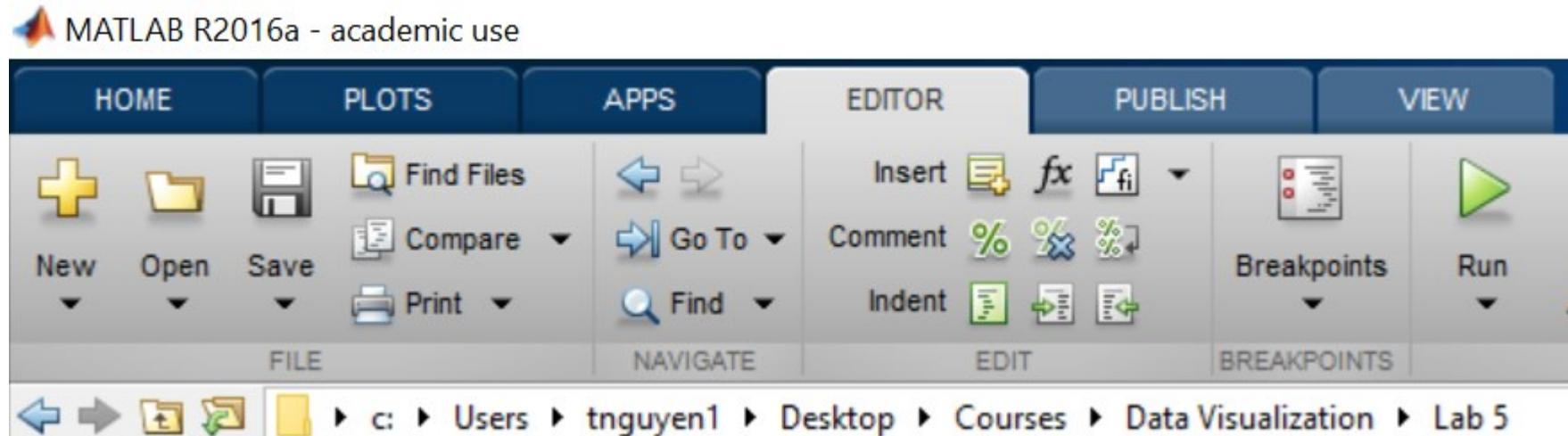
Outline

- Practice with parallel coordinates
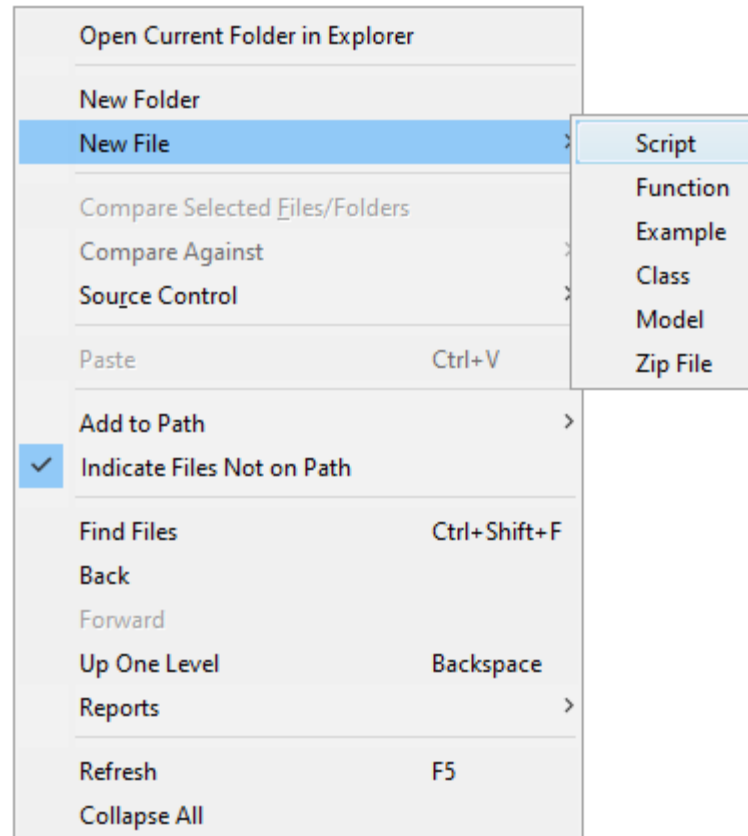
Start MATLAB

Create Lab 5 folder

Create new script file: Lab5.m

Lab5.m

close all;
clear all;
clc;

Generate random data

```
npoints=10;
ndims = 4;
data = zeros(ndims, npoints);

for i = 1:npoints
    for j = 1:ndims
        data(j,i) = randn;
    end
end
```

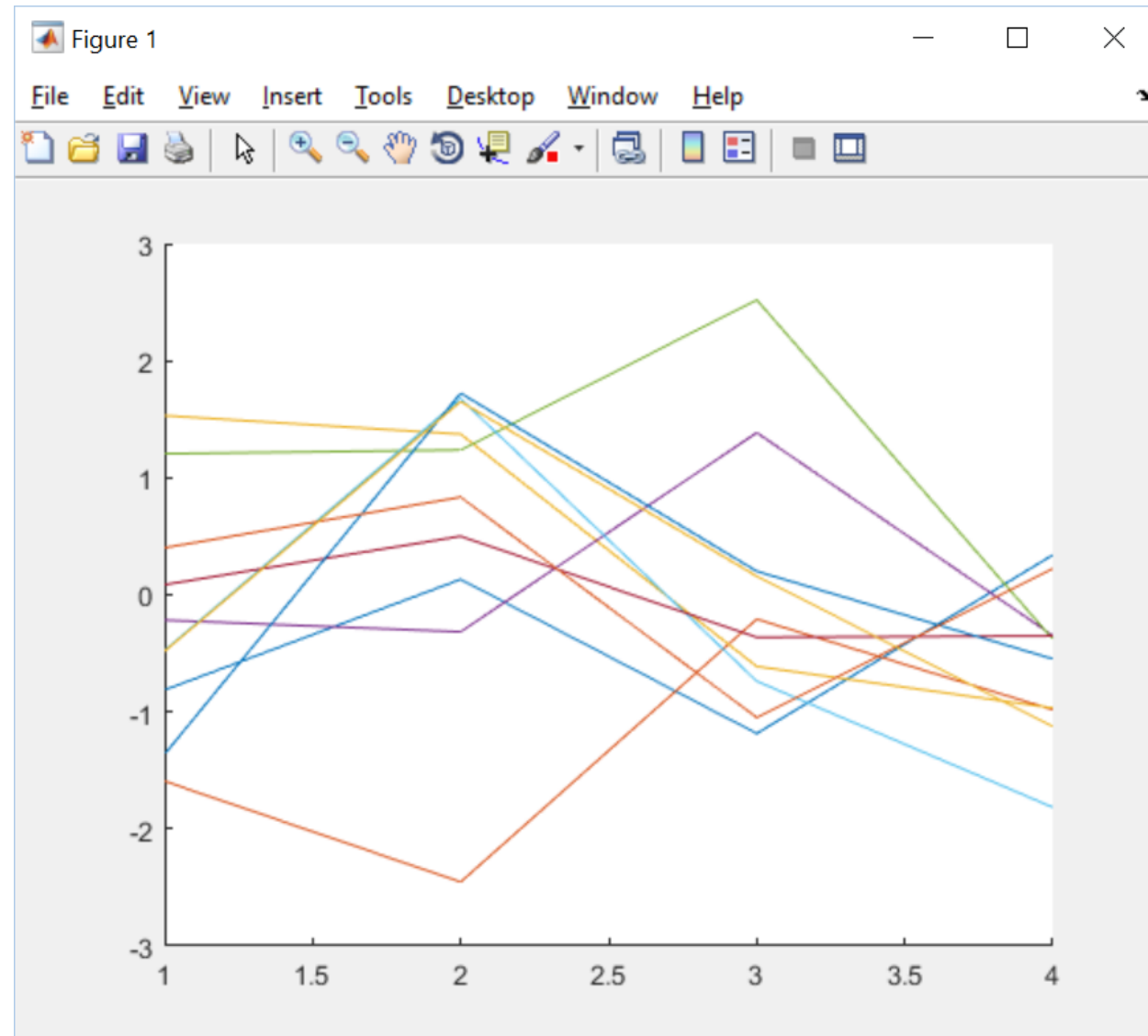# Plot data points

```
hold on
for i = 1:npoints
    plot(data(:,i));
end
hold off
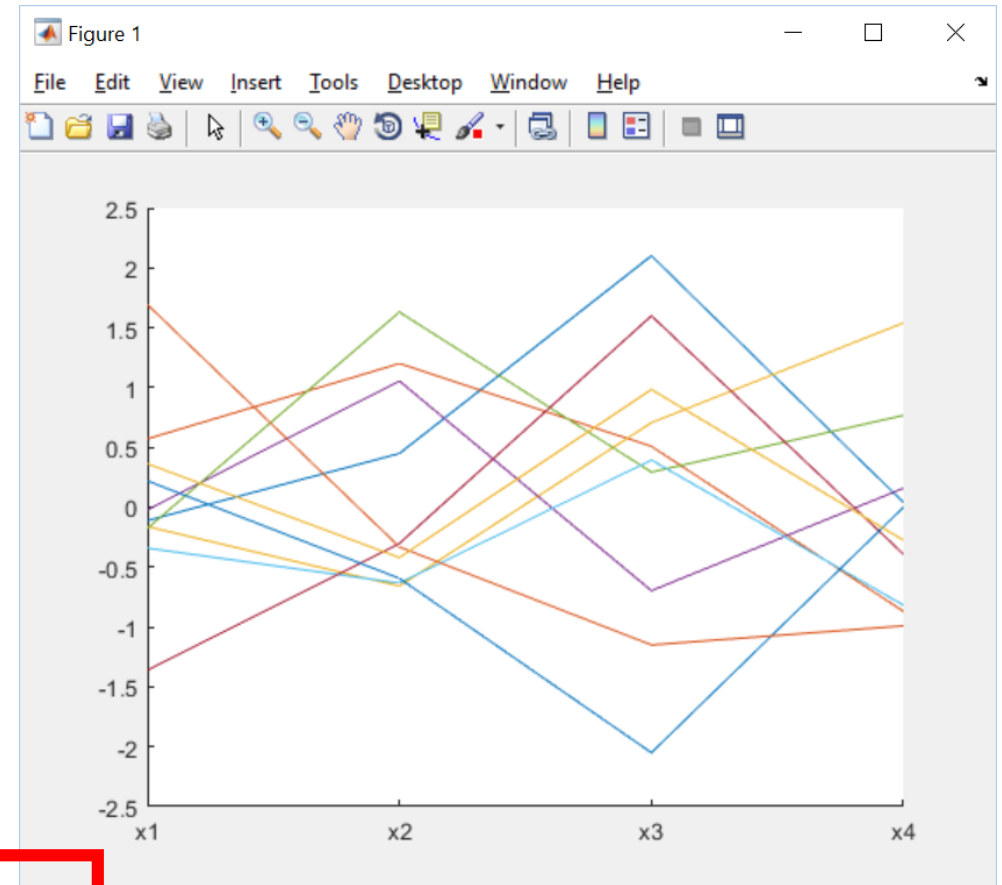```

# Run Lab5.m

# Update the labels

hold on

for i = 1:npoints

   plot(data(:,i));

end

hold off

% set(gca, 'xtick',[1 2 3 4]);

set(gca, 'xticklabel', {'x1', 'x2','x3', 'x4'});
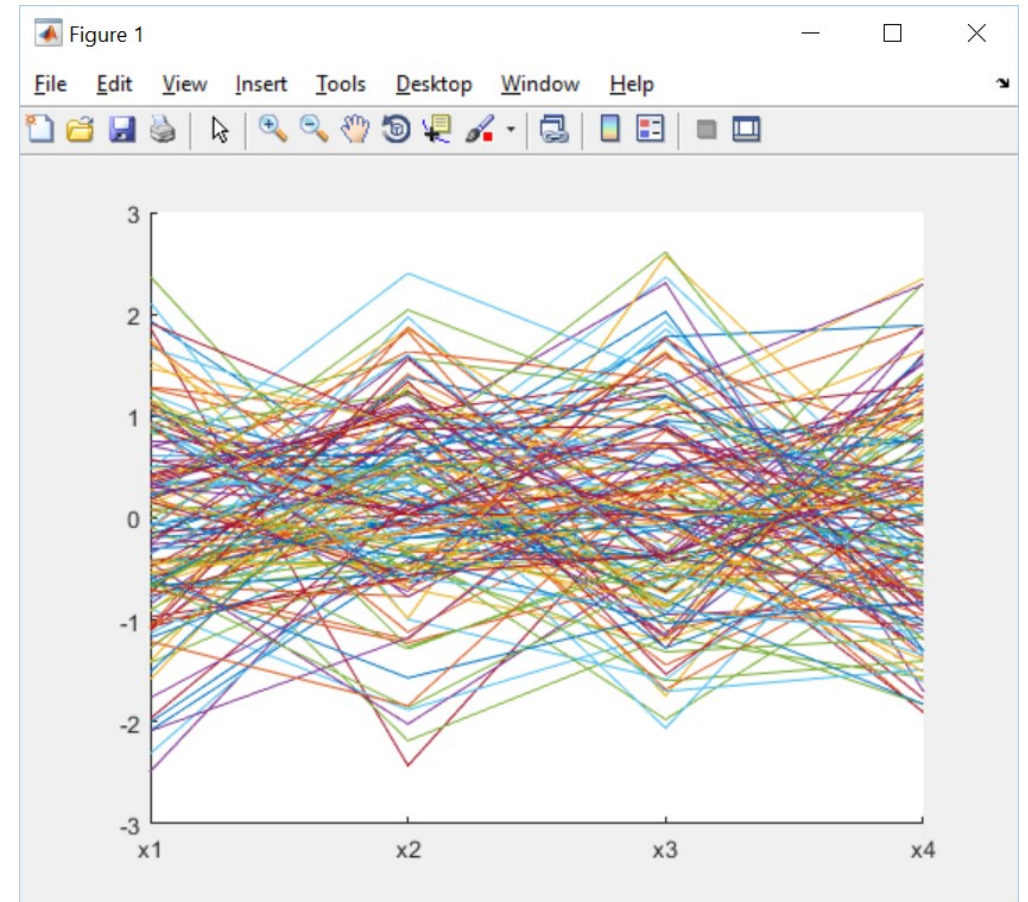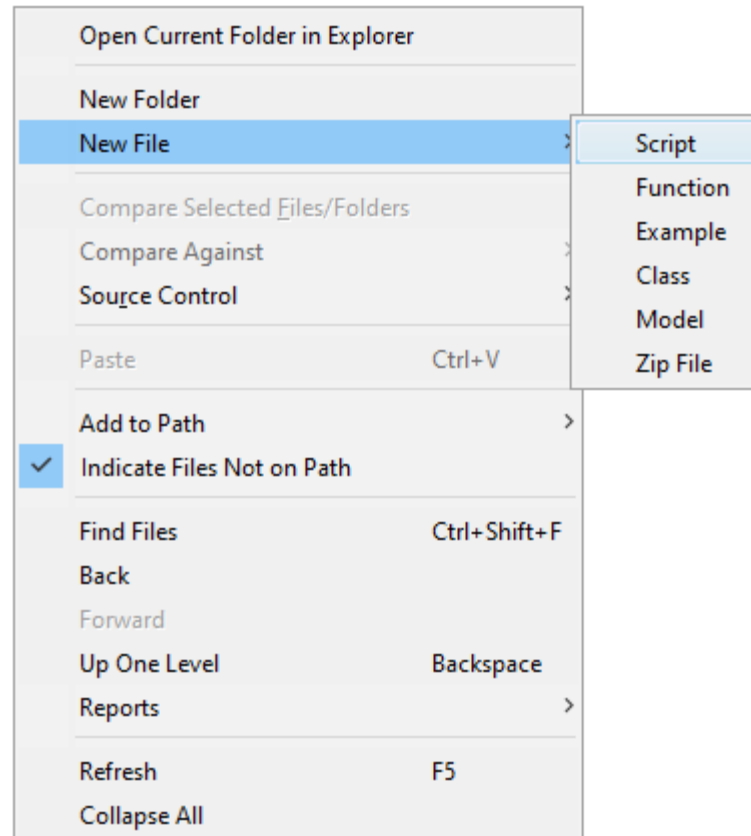
# Increase the number of data points

clear all;

close all;

clc;

npoints=150;

ndims = 4;

data = zeros(ndims, npoints);

# Create new script: Lab5b.m
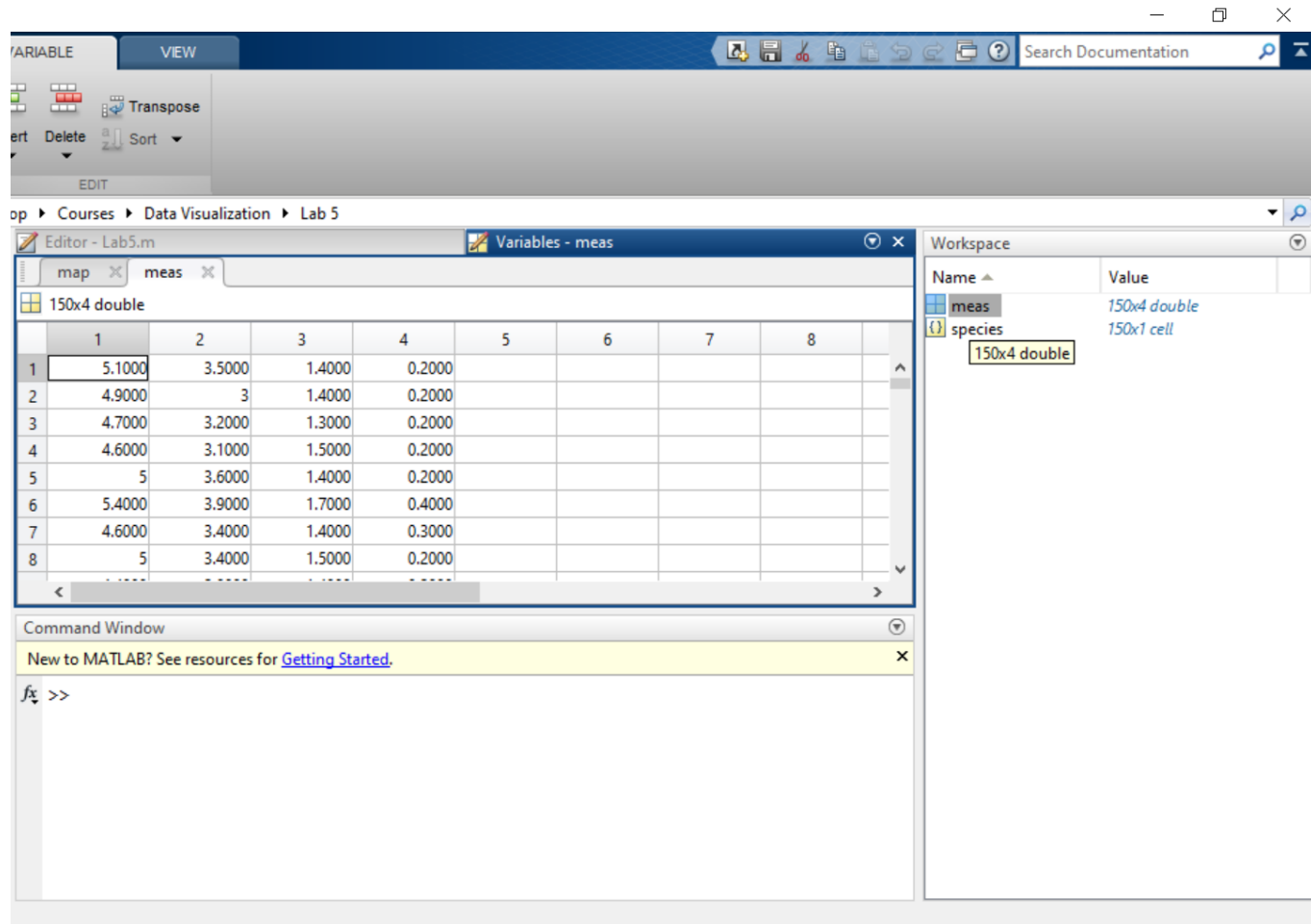
# Lab5b.m

```
close all;
clear all;
clc;
```

Load Iris dataset

close all;

clear all;

clc;

load fisheriris;

Examine the data

Set the labels

load fisheriris;

labels = {'Sepal Length','Sepal Width','Petal Length','Petal Width'};
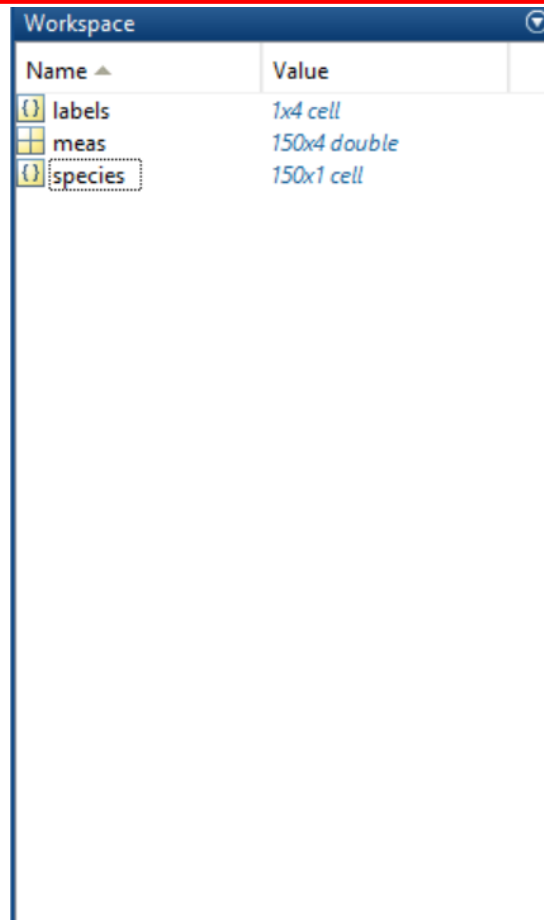
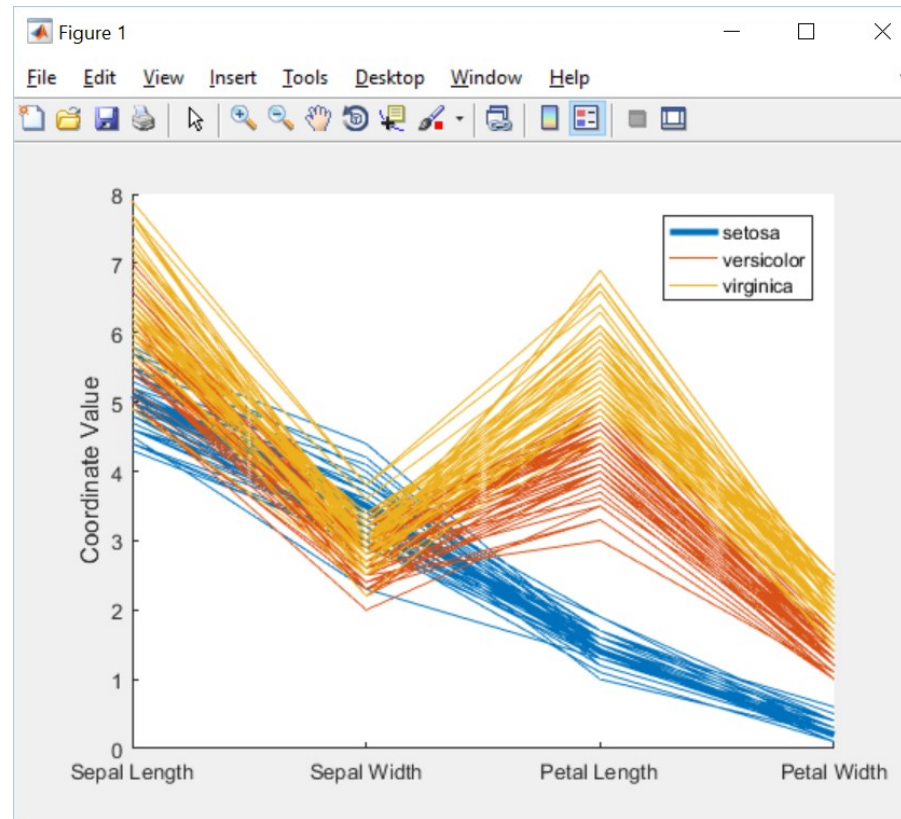| Workspace		
Name ▲	Value	
{} labels	1x4 cell	
⊞ meas	150x4 double	
{} species	150x1 cell	

Parallel Coordinates

labels = {'Sepal Length','Sepal Width','Petal Length','Petal Width'};

parallelcoords(meas,'Group',species,'Labels',labels);
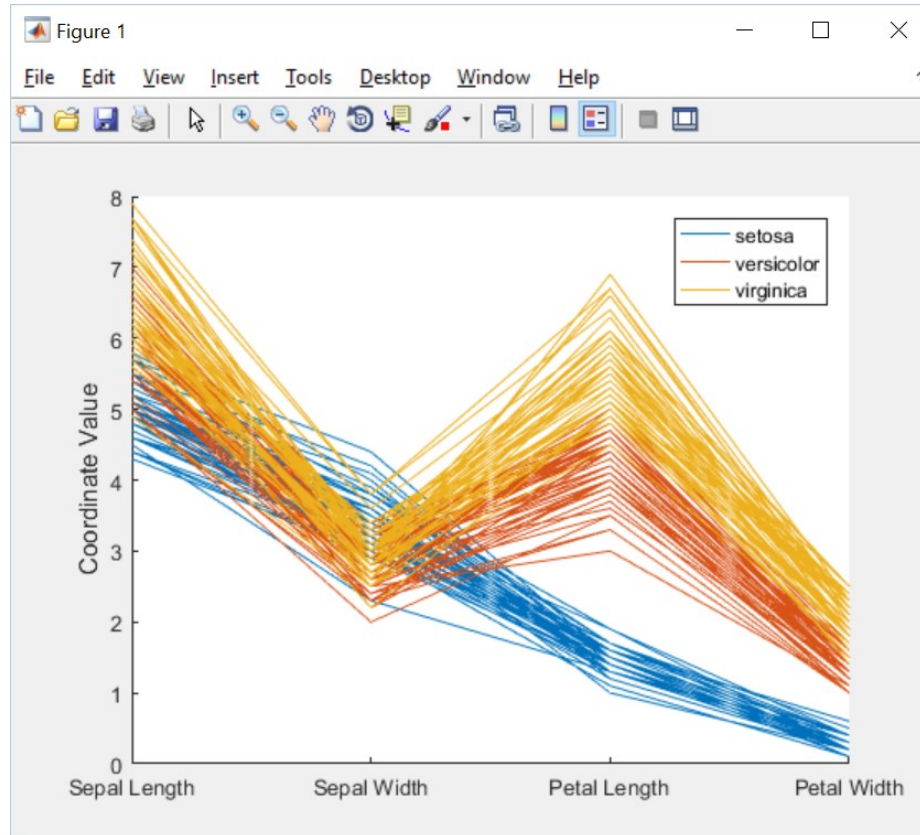
Update the line width
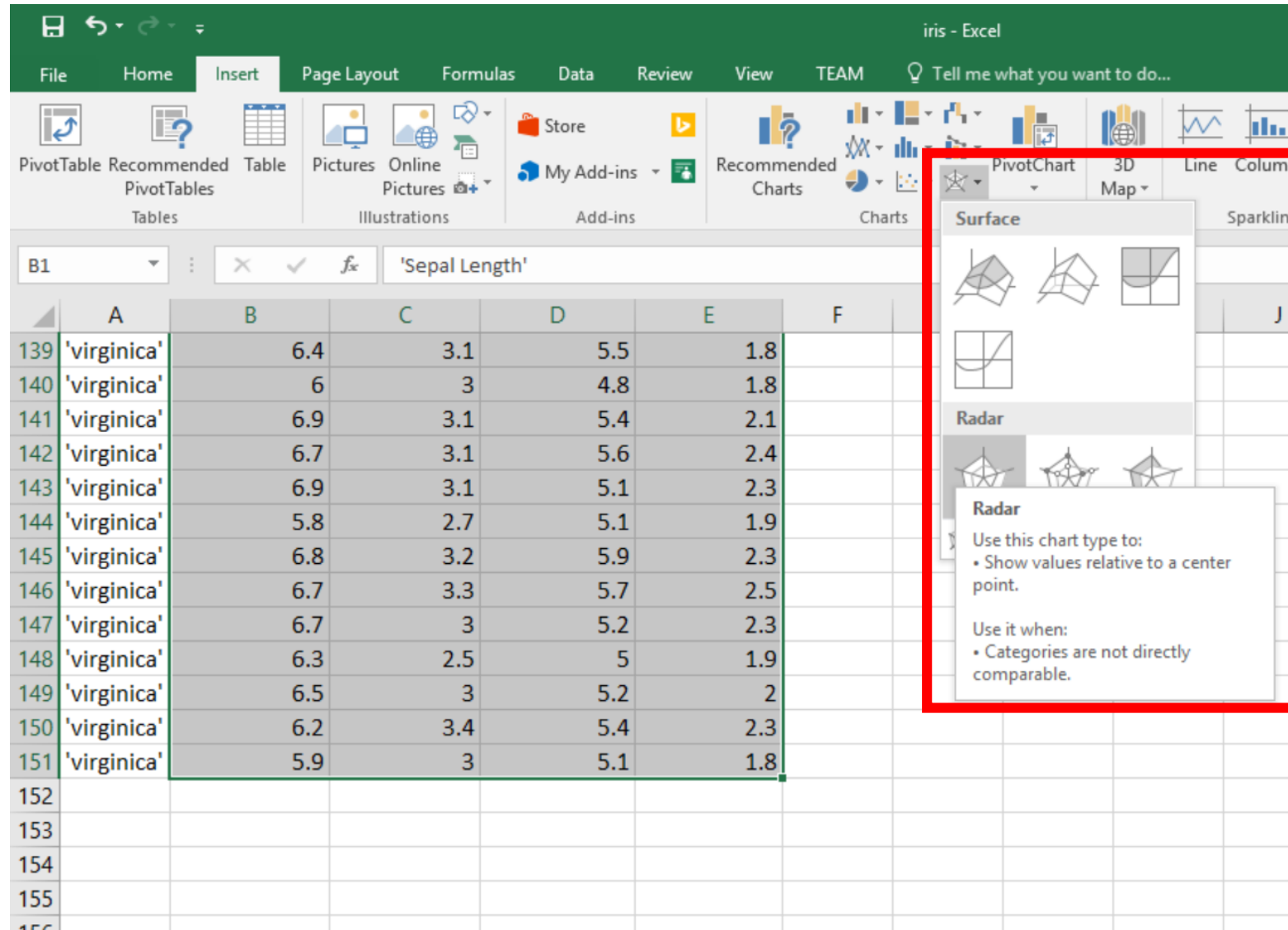
h = parallelcoords(meas,'Group',species,'Labels',labels);

h(1).LineWidth = 3;

Copy data from MATLAB to Excel
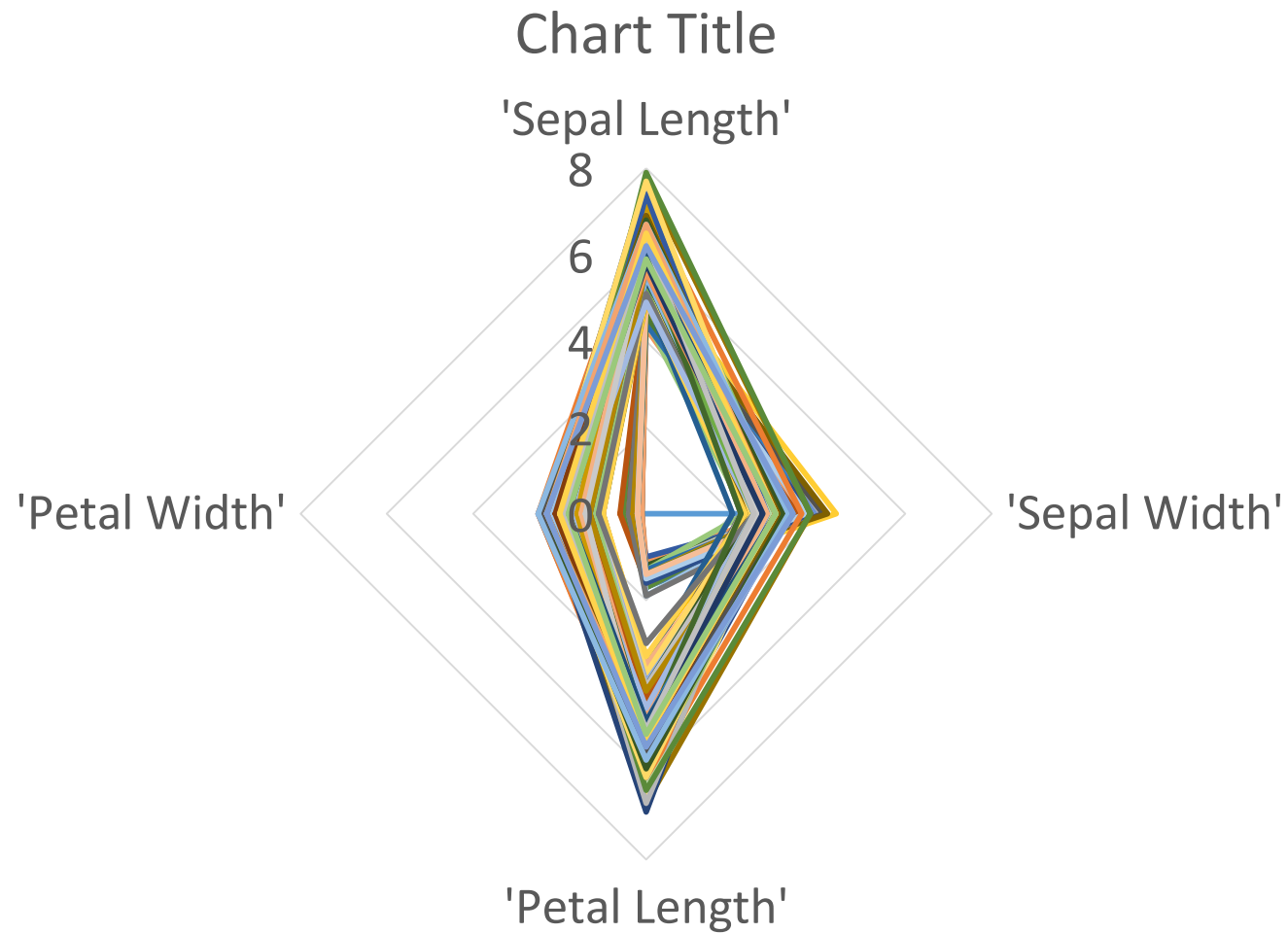

19

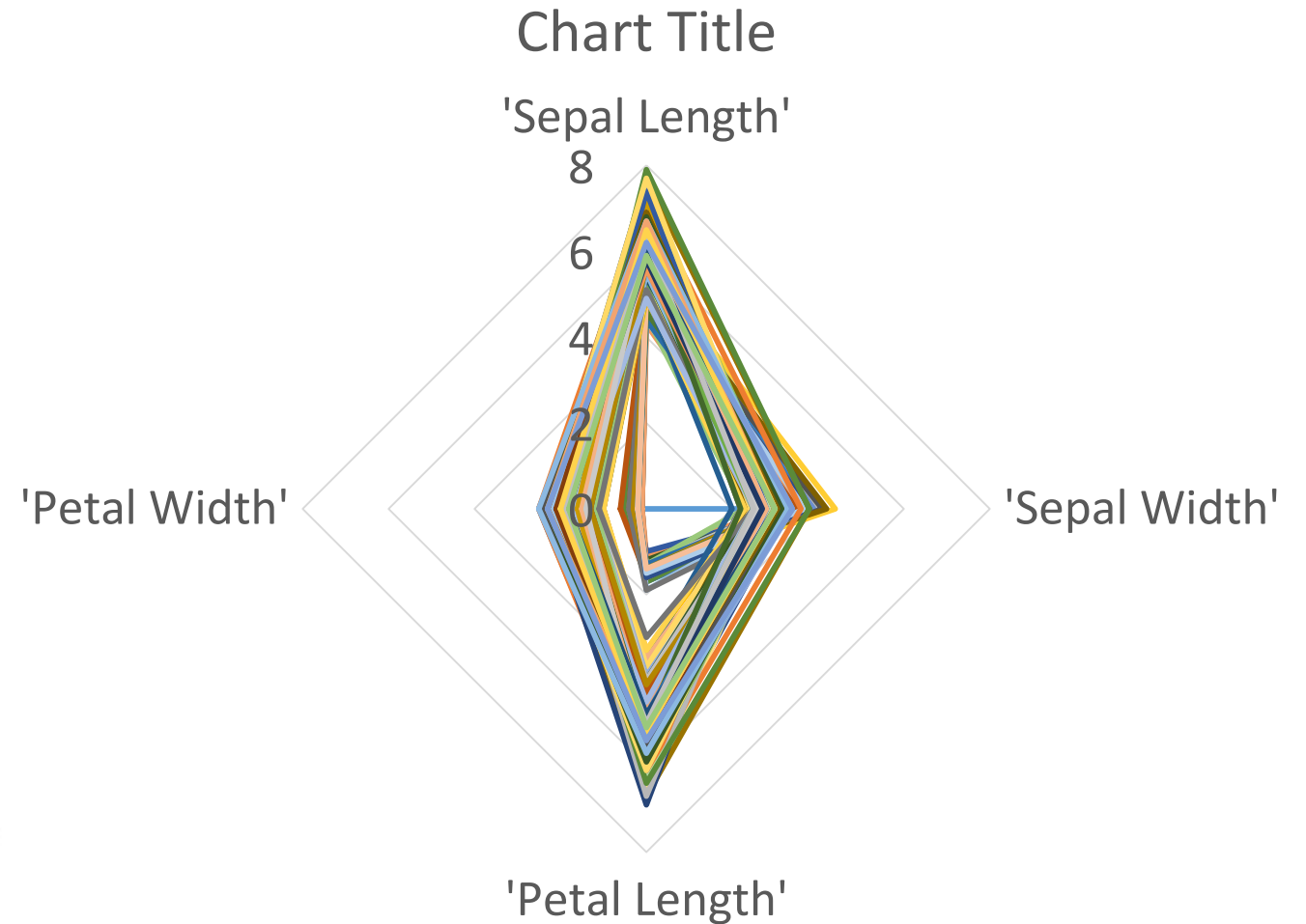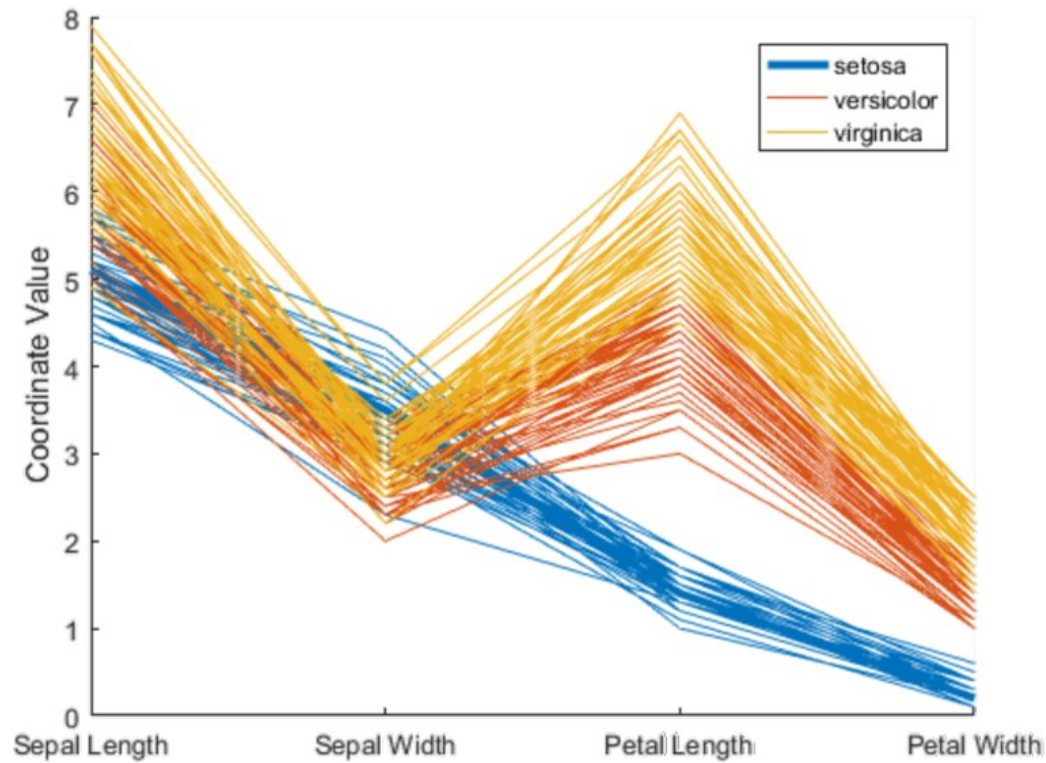# Select data and choose graph

Radar Chart

Switch Row/Column
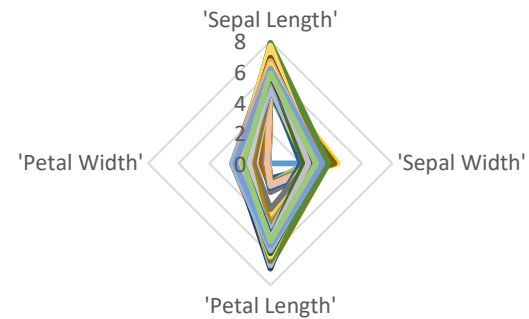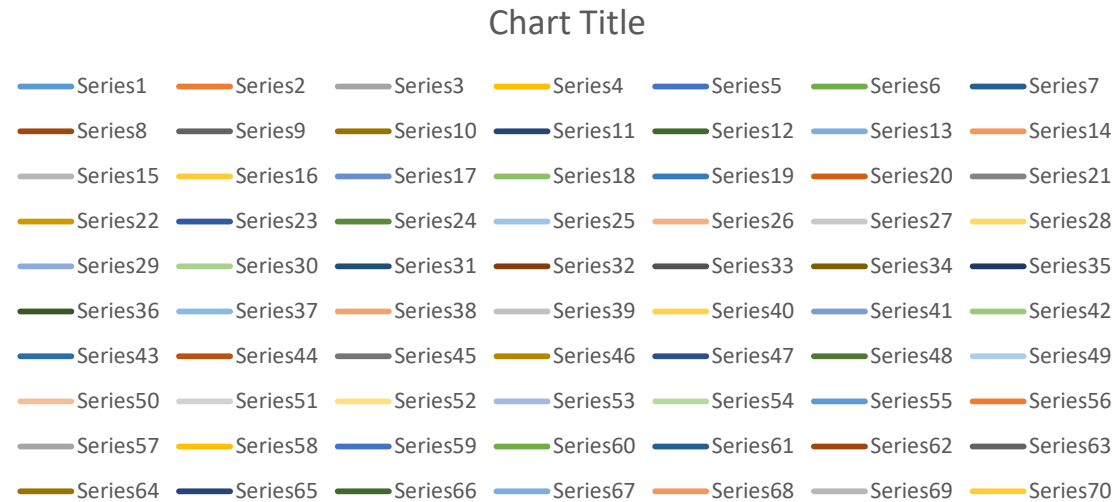
Delete legend

Parallel Coordinates vs. Radar Chart

Q&A