```
% Imports the data on health workforce density by country and year per
 1000
Workforce = readtable('Pdata.csv');%%changed to WF rather than T
WF= table2cell(Workforce);


years=cell2mat(WF(:,2));
x2001=find(years==2001);
x2005=find(years==2005);
x2009=find(years==2009);
x2013=find(years==2013);

dp1=cell2mat(WF(x2001,3));
dp5=cell2mat(WF(x2005,3));
dp9=cell2mat(WF(x2009,3));
dp13=cell2mat(WF(x2013,3));
```

Warning: Variable names were modified to make them valid MATLAB identifiers.

```
dp=[dp1',dp5',dp9',dp13'];%%%%make a matrix with all the data points
 and years then histogram
hist(dp)%hist of all the data

nbins = 1:.5:8;
figure;
[n1,x1]=hist(dp1,nbins)

[n2,x2]=hist(dp5,nbins)
[n3,x3]=hist(dp9,nbins)
[n4,x4]=hist(dp13,nbins)

h1=bar(x1,n1,'hist')
hold on
h2=bar(x2,x2,'hist')
h3=bar(x3,n3,'hist')
h4=bar(x4,n4,'hist')


set(h2,'facecolor','red')
set(h3,'facecolor','green')
set(h4,'facecolor','yellow')

legend('2001','2005','2009','2013')
title('Density of Physcians by Year')
ylabel('Number of Countries')
xlabel('Density of Physicians per 1000')


%%code from http://www.mathworks.com/matlabcentral/answers/101869-can-
hist-take-parameters-such-as-facecolor-and-edgecolor

%%%Plot unsure about axes
```

```
figure;
plot(dp1,'.')
hold on
plot(dp5,'o')
plot(dp9,'x')
plot(dp13,'+')


legend('2001','2005','2009','2013')
title('Density of Physcians by Year')
ylabel('Number of Countries')
xlabel('Density of Physicians per 1000')
%%%%HIV Prevalence

HIV = readtable('HIV.xls');
H=table2cell(HIV);
Hall=H(2:117,2:5);%%Values of 1st 50 countries in list
Hall=str2double(Hall);

figure;
nbins = 1:.5:8;
hist(Hall,nbins)
legend ('2013','2009','2005','2001')
title 'HIV Prevalence'
xlabel 'Prevalence'
ylabel 'Number of Countries'



%%%%% Workforce vs Prevalence

%Scatter Plot
WF1= WF(x2001,1);%country names for workforce 2001
WF5=WF(x2005,1)
WF9=WF(x2009,1)
WF13=WF(x2013,1)

h1=[.1,.1,.8,.6,27.7,.1,.1,.4,.4,.1,.6,.5,.1,25.5,.3,1.8,1.4,.1,.6,.3]'
h5=[0.1, 0.1, 0.8, 25.4, 5.1, 5.2, 0.3, 0.5, 0.1, 2.4, 0.1, 0.6, 2.6,
 1.3, 1.5, 0.9, 0.4, 0.1, 0.1 0.2, 0.8, 0.1, 3.8, 0.1, 0.6, 0.5, 0.1,
 0.3, 0.1, 6.2, 0.4, 13.7]'
h9=[0.1,2.0,0.1, 0.1,  0.1,0.3,1.6,23.6, 0.5, 0.9,4.8,4.9,0.3,
 0.5,0.1, 0.1,0.2,0.4,  0.1, 1.6,0.1, 0.2,1.6, 0.6,3.9,1.,0.3,
 0.3,6.,0.2,0.1,12.5,0.1, 1.1,0.2,0.1,0.1,0.7,0.2, 3.6,
 0.1, 0.6,0.4,3.1, 0.1,0.4,0.1,26.8, 1.2,0.1,0.1, 0.2, 0.4,
 0.1,13.2,16.5,0.1]'
h13=[0.1, 0.2, 0.2, 0.5, 0.2, 0.3, 6.0, 0.2, 0.2, 0.6, 0.6, 19.1, 0.4,
 0.3, 0.8, 0.3, 0.2, 0.4]'



scatter(dp1,h1,'filled')
hold on
scatter(dp5,h5,'filled')
```

```
scatter(dp9,h9,'filled')
scatter(dp13,h13,'filled')

xlabel('Physician Prevalence')
ylabel('HIV Prevalence')
title('Physician vs HIV Prevalence')
```

```
n1 =

  Columns 1 through 13

    11     3     2     1     0     1     0     1     0     0     1
 0     0

  Columns 14 through 15

     0     0


x1 =

  Columns 1 through 7

    1.0000    1.5000    2.0000    2.5000    3.0000    3.5000    4.0000

  Columns 8 through 14

    4.5000    5.0000    5.5000    6.0000    6.5000    7.0000    7.5000

  Column 15

    8.0000


n2 =

  Columns 1 through 13

    23     4     2     1     0     0     0     1     0     0     0
 1     0

  Columns 14 through 15

     0     0


x2 =

  Columns 1 through 7

    1.0000    1.5000    2.0000    2.5000    3.0000    3.5000    4.0000

  Columns 8 through 14
```

```
    4.5000    5.0000    5.5000    6.0000    6.5000    7.0000    7.5000

  Column 15

    8.0000

n3 =

  Columns 1 through 13

    37     4     2     6     2     2     1     0     2     0     0
 1     0

  Columns 14 through 15

     0     0

x3 =

  Columns 1 through 7

    1.0000    1.5000    2.0000    2.5000    3.0000    3.5000    4.0000

  Columns 8 through 14

    4.5000    5.0000    5.5000    6.0000    6.5000    7.0000    7.5000

  Column 15

    8.0000

n4 =

  Columns 1 through 13

     6     1     2     2     2     2     1     1     1     0     0
 0     0

  Columns 14 through 15

     0     0

x4 =

  Columns 1 through 7

    1.0000    1.5000    2.0000    2.5000    3.0000    3.5000    4.0000

  Columns 8 through 14
```

```
    4.5000    5.0000    5.5000    6.0000    6.5000    7.0000    7.5000

  Column 15

    8.0000


h1 =

  Patch with properties:

    FaceColor: 'flat'
    FaceAlpha: 1
    EdgeColor: [0.1500 0.1500 0.1500]
    LineStyle: '-'
        Faces: [15x4 double]
     Vertices: [76x2 double]

  Use GET to show all properties


h2 =

  Patch with properties:

    FaceColor: 'flat'
    FaceAlpha: 1
    EdgeColor: [0.1500 0.1500 0.1500]
    LineStyle: '-'
        Faces: [15x4 double]
     Vertices: [76x2 double]

  Use GET to show all properties


h3 =

  Patch with properties:

    FaceColor: 'flat'
    FaceAlpha: 1
    EdgeColor: [0.1500 0.1500 0.1500]
    LineStyle: '-'
        Faces: [15x4 double]
     Vertices: [76x2 double]

  Use GET to show all properties


h4 =

  Patch with properties:
```

```
    FaceColor: 'flat'
    FaceAlpha: 1
    EdgeColor: [0.1500 0.1500 0.1500]
    LineStyle: '-'
        Faces: [15x4 double]
     Vertices: [76x2 double]

  Use GET to show all properties

Warning: Variable names were modified to make them valid MATLAB
 identifiers.

WF5 =

    'Algeria'
    'Bangladesh'
    'Barbados'
    'Botswana'
    'Cote d'Ivoire'
    'Cameroon'
    'Chile'
    'Colombia'
    'Cuba'
    'Djibouti'
    'Egypt'
    'El Salvador'
    'Ethiopia'
    'Gambia'
    'Guinea'
    'Honduras'
    'India'
    'Iran (Islamic Republic of)'
    'Lao People's Democratic Republic'
    'Mexico'
    'Myanmar'
    'Nicaragua'
    'Nigeria'
    'Pakistan'
    'Panama'
    'Spain'
    'Sri Lanka'
    'Tajikistan'
    'Tunisia'
    'Uganda'
    'Viet Nam'
    'Zambia'


WF9 =

    'Albania'
    'Angola'
    'Armenia'
    'Australia'
```

```
'Azerbaijan'
'Belarus'
'Belize'
'Botswana'
'Cabo Verde'
'Cambodia'
'Cameroon'
'Central African Republic'
'Chile'
'Colombia'
'Cuba'
'Cyprus'
'Denmark'
'Ecuador'
'Egypt'
'Ethiopia'
'Fiji'
'Georgia'
'Ghana'
'Guatemala'
'Guinea-Bissau'
'Guyana'
'India'
'Indonesia'
'Kenya'
'Kyrgyzstan'
'Lao People's Democratic Republic'
'Malawi'
'Maldives'
'Mali'
'Mexico'
'Mongolia'
'Morocco'
'Myanmar'
'Nauru'
'Nicaragua'
'Nigeria'
'Pakistan'
'Panama'
'Peru'
'Rwanda'
'Serbia'
'Spain'
'Sri Lanka'
'Swaziland'
'Thailand'
'The former Yugoslav republic of Macedonia'
'Tunisia'
'Uzbekistan'
'Viet Nam'
'Yemen'
'Zambia'
'Zimbabwe'
```

```
WF13 =

    'Albania'
    'Armenia'
    'Azerbaijan'
    'Belarus'
    'Costa Rica'
    'Georgia'
    'Kenya'
    'Kyrgyzstan'
    'Nicaragua'
    'Panama'
    'Republic of Moldova'
    'South Africa'
    'Spain'
    'Tajikistan'
    'Ukraine'
    'United Kingdom of Great Britain and Northern Ireland'
    'Uzbekistan'
    'Viet Nam'


h1 =

    0.1000
    0.1000
    0.8000
    0.6000
   27.7000
    0.1000
    0.1000
    0.4000
    0.4000
    0.1000
    0.6000
    0.5000
    0.1000
   25.5000
    0.3000
    1.8000
    1.4000
    0.1000
    0.6000
    0.3000


h5 =

    0.1000
    0.1000
    0.8000
   25.4000
    5.1000
```

```
    5.2000
    0.3000
    0.5000
    0.1000
    2.4000
    0.1000
    0.6000
    2.6000
    1.3000
    1.5000
    0.9000
    0.4000
    0.1000
    0.1000
    0.2000
    0.8000
    0.1000
    3.8000
    0.1000
    0.6000
    0.5000
    0.1000
    0.3000
    0.1000
    6.2000
    0.4000
   13.7000

h9 =

    0.1000
    2.0000
    0.1000
    0.1000
    0.1000
    0.3000
    1.6000
   23.6000
    0.5000
    0.9000
    4.8000
    4.9000
    0.3000
    0.5000
    0.1000
    0.1000
    0.2000
    0.4000
    0.1000
    1.6000
    0.1000
    0.2000
    1.6000
```

```
    0.6000
    3.9000
    1.0000
    0.3000
    0.3000
    6.0000
    0.2000
    0.1000
   12.5000
    0.1000
    1.1000
    0.2000
    0.1000
    0.1000
    0.7000
    0.2000
    3.6000
    0.1000
    0.6000
    0.4000
    3.1000
    0.1000
    0.4000
    0.1000
   26.8000
    1.2000
    0.1000
    0.1000
    0.2000
    0.4000
    0.1000
   13.2000
   16.5000
    0.1000


h13 =

    0.1000
    0.2000
    0.2000
    0.5000
    0.2000
    0.3000
    6.0000
    0.2000
    0.2000
    0.6000
    0.6000
   19.1000
    0.4000
    0.3000
    0.8000
    0.3000
```

```
0.2000
0.4000
```

Published with MATLAB® R2015b