Python for Data Visualization

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Basic Graphs with Pandas

**Practice Exercises**

1. Given a dataframe with columns for year and population of a country, plot a simple line showing how population changes over time.

Solution:  
df.plot(kind='line', x='year', y='population')

1. Given a dataframe with columns for year and population of multiple countries, plot "country\_A" and "country\_B" on the same graph.

Solution:  
df.plot(x='year', y=['country\_A', 'country\_B'])

1. Given a dataframe with the columns `region` and `average\_income`, plot the data as a vertical bar chart.

Solution:  
df.plot(kind='bar', x='region', y='average\_income')

1. Given a dataframe with one column of products and another column with sales numbers, plot product sales as a horizontal bar chart, sorted by sales.

Solution:  
df = df.sort\_values('sales')  
df.plot(kind='barh', x='product', y='sales')

1. Given a dataframe with columns for individual's ages and yearly income, plot a scatter plot showing the relationship between age and income.

Solution:  
df.plot(kind='scatter', x='age', y='income')

1. Given a dataframe that include student test scores in columns for each subject Math, Science and English, plot the test scores using a boxplot.

Solution:  
df.plot(kind='box')

1. How would the solution for Q6 differ if the subjects were in rows and the students in columns, but you wanted to create the same plot as above?

Solution

df.T.plot(kind='box')