Week 2 Quiz

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In [1]:

```
# initialize with import pandas as pd
import pandas as pd

# set plots to print in notebook: %matplotlib inline
%matplotlib inline
```

In [2]:

```
# use pandas to read in 'country_electricity_by_region.csv' with index_col = 'country_code' using .read_csv()
df = pd.read_csv('../data/country_electricity_by_region.csv', index_col='country_code')
```

In [3]:

```
# print out dataframe info using .info()
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Index: 217 entries, ABW to ZWE
Data columns (total 14 columns):
short_name                             217 non-null object
region                                 217 non-null object
income_group                           217 non-null object
access_to_electricity                  217 non-null float64
gdp                                    193 non-null float64
population_density                     215 non-null float64
population_total                       216 non-null float64
unemployment                           113 non-null float64
region_europe                          217 non-null int64
region_latin_america_and_caribbean     217 non-null int64
region_middle_east_and_north_africa    217 non-null int64
region_north_america                   217 non-null int64
region_south_asia                      217 non-null int64
region_subsaharan_africa               217 non-null int64
dtypes: float64(5), int64(6), object(3)
memory usage: 25.4+ KB
```

In [4]:
```
# print out the row with index label 'USA' using .loc[]
df.loc['USA']
```

Out[4]:
```
short_name                             United States
region                                 North America
income_group                             High income
access_to_electricity                            100
gdp                                      1.61775e+13
population_density                           34.8255
population_total                         3.18563e+08
unemployment                                    6.17
region_europe                                      0
region_latin_america_and_caribbean                 0
region_middle_east_and_north_africa                0
region_north_america                               1
region_south_asia                                  0
region_subsaharan_africa                           0
Name: USA, dtype: object
```

In [5]:
```
# print out the column with label 'region' using .loc[]
df.loc[:,'region']
```

Out[5]:
```
country_code
ABW     Latin America & Caribbean
AFG                    South Asia
AGO            Sub-Saharan Africa
ALB         Europe & Central Asia
AND         Europe & Central Asia
                  ...
XKX         Europe & Central Asia
YEM    Middle East & North Africa
ZAF            Sub-Saharan Africa
ZMB            Sub-Saharan Africa
ZWE            Sub-Saharan Africa
Name: region, Length: 217, dtype: object
```

In [6]:
```
# print out the rows with label 'SWE' and 'CAN' and column with label
'region' using .loc[]
df.loc[['SWE','CAN'],'region']
```

Out[6]:
```
country_code
SWE    Europe & Central Asia
CAN            North America
Name: region, dtype: object
```

In [7]:

```
# print out the first 5 rows and first 3 columns using iloc[]
df.iloc[:5,:3]
```

Out[7]:

	short_name	region	income_group
country_code			
ABW	Aruba	Latin America & Caribbean	High income
AFG	Afghanistan	South Asia	Low income
AGO	Angola	Sub-Saharan Africa	Lower middle income
ALB	Albania	Europe & Central Asia	Upper middle income
AND	Andorra	Europe & Central Asia	High income

In [8]:

```
# print out the last 5 rows of the 'gdp' column using .iloc[] and .loc[]
df.iloc[-5:].loc[:,'gdp']
```

Out[8]:

```
country_code
XKX    6.565321e+09
YEM    2.890029e+10
ZAF    4.130233e+11
ZMB    2.531884e+10
ZWE    1.437213e+10
Name: gdp, dtype: float64
```

In [9]:

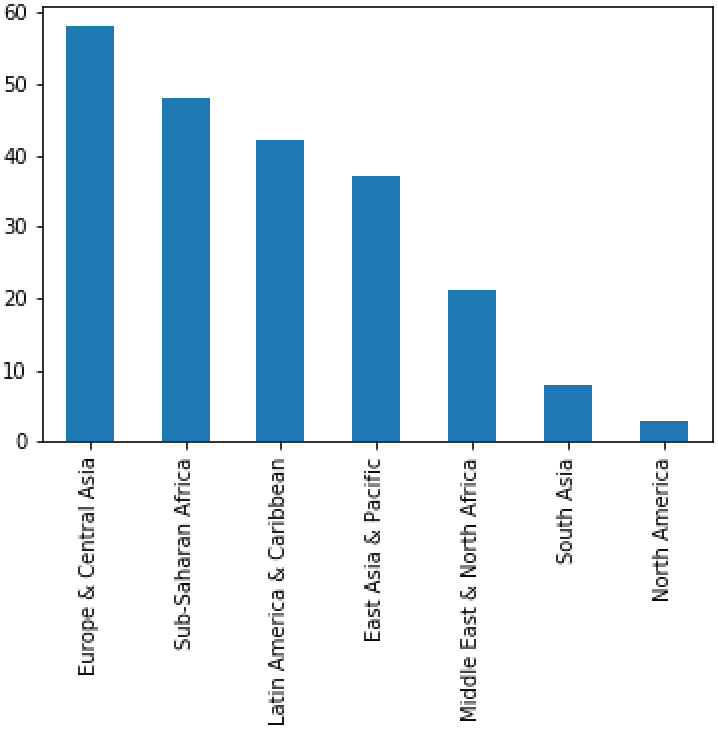
```
# print out the summary stats for columns 'gdp' and 'unemployment'
#    for all rows with region == 'Europe & Central Asia'
#    using .loc[] and describe()
df.loc[df.region == 'Europe & Central Asia',['gdp','unemployment']].describe()
```

Out[9]:

	gdp	unemployment
count	5.100000e+01	48.000000
mean	4.307250e+11	11.044625
std	7.865990e+11	7.444054
min	2.287264e+09	0.492000
25%	2.028514e+10	6.045000
50%	6.314945e+10	8.825000
75%	4.324500e+11	13.357500
max	3.634080e+12	35.150002

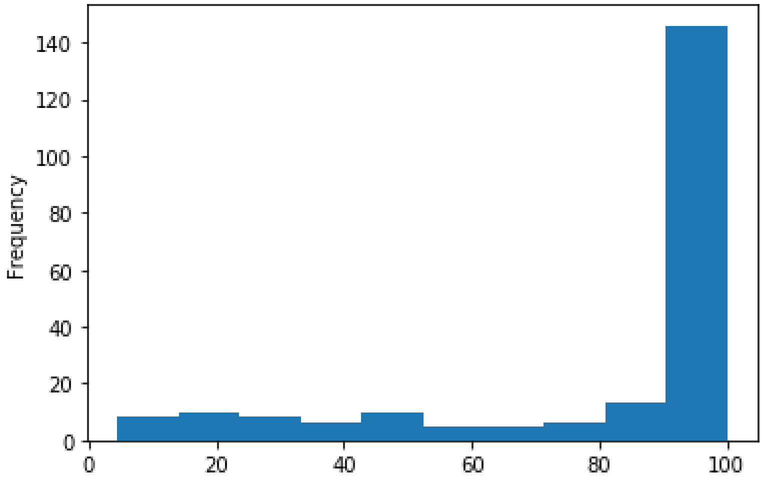
In [10]:

```
# create a bar chart of counts by 'region' using .value_counts() and .plot.bar()
df.loc[:,'region'].value_counts().plot.bar();
```



In [11]:

```
# print out a distribution plot of 'access_to_electricity' using plot.hist()
df.access_to_electricity.plot.hist();
```



In [12]:

```
# when completed,
#   make sure you've replaced [Name] and [UNI] in the first cell and filename
#   use Print Preview, Print-> Save to pdf
#   and post pdf to GradeScope
```