# Lesson 11

Grab data from multiple excel files and merge them into a single dataframe.

In [1]:
```
import pandas as pd
import os
import sys
%matplotlib inline
```

In [2]:
```
print 'Python version ' + sys.version
print 'Pandas version: ' + pd.__version__
```

```
Python version 2.7.5 |Anaconda 2.1.0 (64-bit)| (default, Jul  1 2013, 1
Pandas version: 0.15.2
```

# Create 3 excel files

In [3]:
```
# Create DataFrame
d = {'Channel':[1], 'Number':[255]}
df = pd.DataFrame(d)
df
```

Out[3]:

| | Channel | Number |
|---|---|---|
| **0** | 1 | 255 |

In [4]:
```
# Export to Excel

df.to_excel('test1.xlsx', sheet_name = 'test1', index = False)
df.to_excel('test2.xlsx', sheet_name = 'test2', index = False)
df.to_excel('test3.xlsx', sheet_name = 'test3', index = False)
print 'Done'
```

```
Done
```

# Place all three Excel files into a DataFrame

Get a list of file names but make sure there are no other excel files present in the folder.

In [5]:
```
# List to hold file names
FileNames = []

# Your path will be different, please modify the path below.
os.chdir(r"C:\Users\david\notebooks\pandas")

# Find any file that ends with ".xlsx"
for files in os.listdir("."):
    if files.endswith(".xlsx"):
        FileNames.append(files)

FileNames
```

Out[5]:
```
['test1.xlsx', 'test2.xlsx', 'test3.xlsx']
```

Create a function to process all of the excel files.

In [6]:
```
def GetFile(fnombre):

    # Path to excel file
    # Your path will be different, please modify the path below.
    location = r'C:\Users\david\notebooks\pandas\\' + fnombre

    # Parse the excel file
    # 0 = first sheet
    df = pd.read_excel(location, 0)

    # Tag record to file name
    df['File'] = fnombre

    # Make the "File" column the index of the df
    return df.set_index(['File'])
```

Go through each file name, create a dataframe, and add it to a list.

i.e.
df_list = [df, df, df]

In [7]:
```
# Create a list of dataframes
df_list = [GetFile(fname) for fname in FileNames]
df_list
```

Out[7]:
```
[            Channel  Number
 File
 test1.xlsx        1     255,             Channel  Number
 File
 test2.xlsx        1     255,             Channel  Number
 File
 test3.xlsx        1     255]
```

In [8]:
```
# Combine all of the dataframes into one
big_df = pd.concat(df_list)
big_df
```

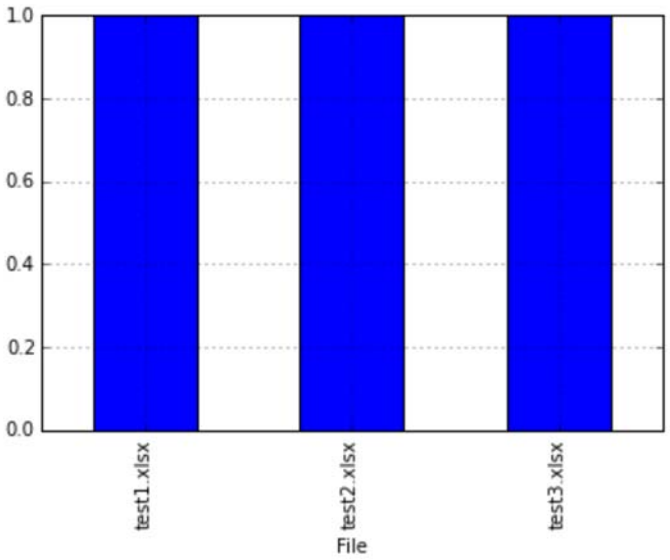
Out[8]:

| | Channel | Number |
|---|---|---|
| **File** | | |
| **test1.xlsx** | 1 | 255 |
| **test2.xlsx** | 1 | 255 |
| **test3.xlsx** | 1 | 255 |

In [9]:
```
big_df.dtypes
```

Out[9]:
```
Channel    int64
Number     int64
dtype: object
```

In [10]:
```
# Plot it!
big_df['Channel'].plot(kind='bar');
```

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