

# Using pandas Dataframes With Excel

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## lesson\_4\_2\_1

pandas and Excel

- pandas can read and write to Excel
- pandas uses openpyxl, install `conda install openpyxl xlrd`
- [pandas.to\\_excel\(\) documentation](#)
- [pandas.read\\_excel\(\) documentation](#)

**Read tips.xlsx as a dataframe**

```
import pandas as pd

tips_df = pd.read_excel('tips.xlsx', index_col=0)

tips_df.head()
```

**Create a separate df for each meal type**

```
breakfast_df = tips_df[tips_df.meal_type=='Breakfast']
lunch_df = tips_df[tips_df.meal_type=='Lunch']
dinner_df = tips_df[tips_df.meal_type=='Dinner']
```

**Use pd.to\_excel() to create an Excel workbook with the breakfast data**

```
breakfast_df.to_excel("breakfast_tips.xlsx")
```

**Test the file is created and has data**

```
breakfast_tips_df = pd.read_excel('breakfast_tips.xlsx', index_col=0)

breakfast_tips_df.head()
```

**Write Excel file meal\_type\_tips.xlsx with a worksheet for each meal type and one for the original data**

**NOTE:** *It is advised to keep a copy of the original data. So, I suggest you always save to a new file.*

To write to separate worksheets we will use ExcelWriter with `.to_excel()`.

```
with pd.ExcelWriter('meal_type_tips.xlsx') as writer:
    breakfast_df.to_excel(writer, sheet_name='breakfast')
    lunch_df.to_excel(writer, sheet_name='lunch')
    dinner_df.to_excel(writer, sheet_name='dinner')
    tips_df.to_excel(writer, sheet_name='tips_orig')
```

To read all sheets in as an ordered\_dict:

```
meal_type_tips_df = pd.read_excel('meal_type_tips.xlsx', sheet_name=None)

meal_type_tips_df.keys()
```

```
meal_type_tips_df['breakfast']
```

To read each sheet into a dataframe separately use argument `sheet_name`.

```
breakfast_tips_df = pd.read_excel('meal_type_tips.xlsx',
    sheet_name='breakfast')

breakfast_tips_df.head()
```