```
You should consider upgrading via the '/usr/local/opt/python@3.9/bin/python3.9 -m pip in
stall --upgrade pip' command.
Note: you may need to restart the kernel to use updated packages.
Requirement already satisfied: numpy in /usr/local/lib/python3.9/site-packages (1.19.5)
WARNING: You are using pip version 20.3.3; however, version 21.0 is available.
You should consider upgrading via the '/usr/local/opt/python@3.9/bin/python3.9 -m pip in
stall --upgrade pip' command.
Note: you may need to restart the kernel to use updated packages.
Requirement already satisfied: matplotlib in /usr/local/lib/python3.9/site-packages (3.3
.3)
Requirement already satisfied: python-dateutil>=2.1 in /usr/local/lib/python3.9/site-pac
kages (from matplotlib) (2.8.1)
Requirement already satisfied: pillow>=6.2.0 in /usr/local/lib/python3.9/site-packages (
from matplotlib) (8.1.0)
Requirement already satisfied: pyparsing!=2.0.4,!=2.1.2,!=2.1.6,>=2.0.3 in /usr/local/li
b/python3.9/site-packages (from matplotlib) (2.4.7)
Requirement already satisfied: numpy>=1.15 in /usr/local/lib/python3.9/site-packages (fr
om matplotlib) (1.19.5)
Requirement already satisfied: kiwisolver>=1.0.1 in /usr/local/lib/python3.9/site-packag
es (from matplotlib) (1.3.1)
Requirement already satisfied: cycler>=0.10 in /usr/local/lib/python3.9/site-packages (f
rom matplotlib) (0.10.0)
Requirement already satisfied: six in /usr/local/lib/python3.9/site-packages (from cycle
r>=0.10->matplotlib) (1.15.0)
WARNING: You are using pip version 20.3.3; however, version 21.0 is available.
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stall --upgrade pip' command.
Note: you may need to restart the kernel to use updated packages.
```

Above: do not include unhelpful output like this

Below: importing the following modules

In [3]:
```
import pandas as pd
import numpy as np
import statsmodels.api as sm
from statsmodels.graphics.api import abline_plot
import matplotlib.pyplot as plt
import calendar
```

read in data and get month, day of week, and day from date

In [4]:
```
df = pd.read_csv('bike.csv', header=0, infer_datetime_format=True, parse_dates=[0], index_
ds = df.index.to_series()
df['MONTH'] = ds.dt.month
df['DAY_OF_WEEK'] = ds.dt.dayofweek
```