DATASOURCE 1 - Web Scraping using Beautifulsoup

What is Beautiful Soup

Beautiful Soup is a Python library for pulling data out of HTML and XML files. It works with your favorite parser to provide idiomatic ways of navigating, searching, and modifying the parse tree. It commonly saves programmers hours or days of work.

In [4]:

```
#importing libraries for Web Sccraping
import requests
import pandas as pd
from bs4 import BeautifulSoup
```

The following website has been used to scrape data https://weather.com/weather/monthly/ (https://weather.com/weather/monthly/)

In [5]:

```
#Fetching the tags from website
p = requests.get("https://weather.com/weather/monthly/l/759d072e4df373e59d3
q = p.content
print(q)
```

```
b'<!doctype html>\n<html lang="en-US" itemScope itemType="http://schema.o
rg/Organization" prefix="fb: http://ogp.me/ns/fb# (http://ogp.me/ns/fb#)
 og: http://ogp.me/ns# (http://ogp.me/ns#) article: http://ogp.me/ns/arti
cle# (http://ogp.me/ns/article#) book: http://ogp.me/ns/book# (http://og
p.me/ns/book#) profile: http://ogp.me/ns/profile# (http://ogp.me/ns/profi
le#) video: http://ogp.me/ns/video# (http://ogp.me/ns/video#) product: ht
tp://ogp.me/ns/product#" (http://ogp.me/ns/product#") dir="ltr" data-devi
ce-class="desktop" data-connection-speed="4g"><head itemScope itemType="h
ttp://schema.org/WebSite"><meta charSet="utf-8"><meta name="viewport" con
tent="width=device-width, initial-scale=1, maximum-scale=1, user-scalable
=0, viewport-fit=cover"><script charSet="UTF-8">window.loadNewRelic=fals
e;(function(){var rNumber=Math.random();if(rNumber>=0.95){window.loadNewR
elic=true;}if(window.loadNewRelic){window.NREUM||(NREUM={}),__nr_require=
function(t,e,n){function r(n){if(!e[n]){var o=e[n]={exports:{}};t[n][0].c
all(o.exports,function(e){var o=t[n][1][e];return r(o||e)},o,o.exports)}r
eturn e[n].exports}if("function"==typeof __nr_require)return __nr_requir
e;for(var o=0;o<n.length;o++)r(n[o]);return r}({1:[function(t,e,n){functi
on r(t){try{c.console&&console.log(t)}catch(e){}}var o,i=t("ee"),a=t(20),
c={};try{o=localStorage.getItem("__nr_flags").split(","),console&&"functi
```

In [6]:

```
#Parsing HTML content using Beautifulsoup and displaying it in a more reada
soup=BeautifulSoup(q,"html.parser")
print(soup.prettify())
```

```
<!DOCTYPE doctype html>
<html data-connection-speed="4g" data-device-class="desktop" dir="ltr" it
emscope="" itemtype="http://schema.org/Organization" lang="en-US" prefix
="fb: http://ogp.me/ns/fb# (http://ogp.me/ns/fb#) og: http://ogp.me/ns#
 (http://ogp.me/ns#) article: http://ogp.me/ns/article# (http://ogp.me/n
s/article#) book: http://ogp.me/ns/book# (http://ogp.me/ns/book#) profil
e: http://ogp.me/ns/profile# (http://ogp.me/ns/profile#) video: http://og
p.me/ns/video# (http://ogp.me/ns/video#) product: http://ogp.me/ns/produc
t#"> (http://ogp.me/ns/product#">)
 <head itemscope="" itemtype="http://schema.org/WebSite">
  <meta charset="utf-8"/>
  <meta content="width=device-width, initial-scale=1, maximum-scale=1, us
er-scalable=0, viewport-fit=cover" name="viewport"/>
  <script charset="UTF-8">
   window.loadNewRelic=false;(function(){var rNumber=Math.random();if(rNu
mber>=0.95){window.loadNewRelic=true;}if(window.loadNewRelic){window.NREU
M||(NREUM={}),__nr_require=function(t,e,n){function r(n){if(!e[n]){var o=
e[n]={exports:{}};t[n][0].call(o.exports,function(e){var o=t[n][1][e];ret
urn r(o||e)},o,o.exports)}return e[n].exports}if("function"==typeof __nr_
```

In [7]:

```
#Fetching and printing selected Location and Date details
name = soup.find("div",{"id":"main-PageTitle-4337b557-ccef-42aa-af8c-0b0793
selected_date = soup.find("div", {"class" : "selected-month"}).find('option
print (name)
print (selected_date)
```

```
Worcester, MA Monthly Weather
Feb 2020
```

```
In [8]: #Fetching and printing the complete details of the month
        all = soup.find_all("div", {"class":["dayCell opaque","dayCell", "futureDay
        print(len(all))
        print(all)
```

```
35
[<div class="dayCell opaque" classname="dayCell opaque"><div class="dat
e">26</div><icon class="icon icon-svg icon-svg-light icon-cloudy icon-26"
classname="icon icon-svg icon-svg-light icon-cloudy icon-26"><svg class
="svg-cloudy" viewbox="0 0 200 200" xmlns="http://www.w3.org/2000/svg" xm
lns:xlink="http://www.w3.org/1999/xlink"><use class="svg-cloud" xlink:hre
f="#svg-symbol-cloud"></use></svg></icon><div class="temps"><div class="t
emp hi"><span class="">42<sup>°</sup></span></div><div class="temp low"><
span class="">33<sup>°</sup></span></div></div><span class="icon icon-fon
t iconset-astro icon-phase-2" classname="icon icon-font iconset-astro ico
n-phase-2"></span></div>, <div class="dayCell opaque" classname="dayCell
opaque"><div class="date">27</div><icon class="icon icon-svg icon-svg-lig
ht icon-cloudy icon-26" classname="icon icon-svg icon-svg-light icon-clou
dy icon-26"><svg class="svg-cloudy" viewbox="0 0 200 200" xmlns="http://w
ww.w3.org/2000/svg" xmlns:xlink="http://www.w3.org/1999/xlink"><use class
="svg-cloud" xlink:href="#svg-symbol-cloud"></use></svg></icon><div class
="temps"><div class="temp hi"><span class="">39<sup>°</sup></span></div><
div class="temp low"><span class="">32<sup>°</sup></span></div></div><spa
n class="icon icon-font iconset-astro icon-phase-3" classname="icon icon-
```

Printing location, date, highest and lowest temperature data of the current month

In [9]:

```
#Iterating and printing location, date and temperatures of current month.
dates = []
hightemp = []
high = []

for items in all[6:]:
    dates.append(items.find("div", {"class":"date"}).text)

for items in all[6:23]:
    hightemp.append(items.find("div", {"class":"temp hi"}).text[0:2])

for items in all[23:]:
    high.append(items.find("div", {"class":"hi"}).text[0:2])


hightemp.extend(high)


dataframe1 = pd.DataFrame({'Location' : name, 'Month and Year' : selected_d
dataframe1
```

Out[9]:

	Location	Month and Year	Date	Temperature
0	Worcester, MA Monthly Weather	Feb 2020	1	34
1	Worcester, MA Monthly Weather	Feb 2020	2	38
2	Worcester, MA Monthly Weather	Feb 2020	3	--
3	Worcester, MA Monthly Weather	Feb 2020	4	48
4	Worcester, MA Monthly Weather	Feb 2020	5	37
5	Worcester, MA Monthly Weather	Feb 2020	6	41
6	Worcester, MA Monthly Weather	Feb 2020	7	42
7	Worcester, MA Monthly Weather	Feb 2020	8	31
8	Worcester, MA Monthly Weather	Feb 2020	9	39
9	Worcester, MA Monthly Weather	Feb 2020	10	43
10	Worcester, MA Monthly Weather	Feb 2020	11	42
11	Worcester, MA Monthly Weather	Feb 2020	12	39
12	Worcester, MA Monthly Weather	Feb 2020	13	44
13	Worcester, MA Monthly Weather	Feb 2020	14	39
14	Worcester, MA Monthly Weather	Feb 2020	15	40
15	Worcester, MA Monthly Weather	Feb 2020	16	36
16	Worcester, MA Monthly Weather	Feb 2020	17	36
17	Worcester, MA Monthly Weather	Feb 2020	18	35
18	Worcester, MA Monthly Weather	Feb 2020	19	36
19	Worcester, MA Monthly Weather	Feb 2020	20	36
20	Worcester, MA Monthly Weather	Feb 2020	21	36
21	Worcester, MA Monthly Weather	Feb 2020	22	36

	Location	Month and Year	Date	Temperature
22	Worcester, MA Monthly Weather	Feb 2020	23	36
23	Worcester, MA Monthly Weather	Feb 2020	24	37
24	Worcester, MA Monthly Weather	Feb 2020	25	37
25	Worcester, MA Monthly Weather	Feb 2020	26	37
26	Worcester, MA Monthly Weather	Feb 2020	27	38
27	Worcester, MA Monthly Weather	Feb 2020	28	38
28	Worcester, MA Monthly Weather	Feb 2020	29	38

Datasource2 - Using API

What is an API:

API stands for Application Programming Interface, and it lets developers integrate any two parts of an application or any different applications together. It consists of various elements such as functions, protocols, and tools that allow developers to build applications. A common goal of all types of APIs is to accelerate the development of applications by providing a part of its functionality out-of-the-box, so developers do not have to implement it themselves.

Importing libraries

In [10]:

```
import requests
import pandas as pd
import json
import os
```

Importing the dataset using API

In [11]:

```
api_key = '843ab6f5ecd476e8de046cede696dc3e'
```

Downloading the weather forecast of a particular location

The API allows you to look up the weather anywhere on the globe, returning:

Current weather conditions, Minute-by-minute forecasts out to one hour, Hour-by-hour and day-by-day forecasts out to seven days, and Hour-by-hour and day-by-day observations

In [12]:

```
#initiate two empty list for storing the data
rawJsonData = []
dailyDetails = []
details = []
JsonData = 'https://api.darksky.net/forecast/'+ api_key +'/42.3601,-71.0589
```

The link below consists of the dataset

```
In [13]: # Merged the link and the API key
         print(JsonData)
```

```
https://api.darksky.net/forecast/843ab6f5ecd476e8de046cede696dc3e/42.360
1,-71.0589 (https://api.darksky.net/forecast/843ab6f5ecd476e8de046cede696
dc3e/42.3601,-71.0589)
```

Printing the data in json format

```
In [14]: rawJsonData = requests.get(JsonData)
         rawJsonData.json()
```

```
Out[14]: {'latitude': 42.3601,
          'longitude': -71.0589,
          'timezone': 'America/New_York',
          'currently': {'time': 1580771939,
           'summary': 'Clear',
           'icon': 'clear-night',
           'nearestStormDistance': 12,
           'nearestStormBearing': 14,
           'precipIntensity': 0,
           'precipProbability': 0,
           'temperature': 42.53,
           'apparentTemperature': 37.78,
           'dewPoint': 30.6,
           'humidity': 0.62,
           'pressure': 1011.9,
           'windSpeed': 7.79,
           'windGust': 18.38,
           'windBearing': 239,
           'cloudCover': 0.24,
           'uvIndex': 0
```

Printing the day-by-day forecast of the coming week in json

In [15]:
```
#Printing forecast for the next week
dailyDetails = rawJsonData.json()['daily']
dailyDetails
```

Out[15]:

```
{'summary': 'Mixed precipitation on Thursday through next Monday.',
 'icon': 'sleet',
 'data': [{'time': 1580706000,
   'summary': 'Clear throughout the day.',
   'icon': 'clear-day',
   'sunriseTime': 1580731020,
   'sunsetTime': 1580767260,
   'moonPhase': 0.31,
   'precipIntensity': 0.0006,
   'precipIntensityMax': 0.0023,
   'precipIntensityMaxTime': 1580788920,
   'precipProbability': 0.13,
   'precipType': 'snow',
   'precipAccumulation': 0.04,
   'temperatureHigh': 47.43,
   'temperatureHighTime': 1580749440,
   'temperatureLow': 35.07,
   'temperatureLowTime': 1580813040,
   'apparentTemperatureHigh': 42.72,
```

Printing the forecast summary of each day of the following week along with the dates

In [16]:
```
#Iterating over the forecast of the week and printing the weather summary f
from datetime import datetime
d = {}
for i in dailyDetails['data']:
    d = int(i['time']), i['summary']
    print(datetime.fromtimestamp(d[0]).strftime('%Y-%m-%d'), d[1])
```

```
2020-02-03 Clear throughout the day.
2020-02-04 Overcast throughout the day.
2020-02-05 Mostly cloudy throughout the day.
2020-02-06 Light rain throughout the day.
2020-02-07 Light rain in the morning.
2020-02-08 Clear throughout the day.
2020-02-09 Possible light snow overnight.
2020-02-10 Overcast throughout the day.
```

Retreiving the data from json

In [17]:

```
#Fetching hourly weather forecast for the next 2 days with only the details
details = rawJsonData.json()['hourly']
selectedcolumns = ['time', 'temperature', 'humidity',
    'pressure', 'dewPoint', 'windSpeed', 'visibility','summary'  ]
dataframe2 = pd.DataFrame(details['data'], columns=selectedcolumns)
dataframe2['time']= dataframe2['time'].apply(lambda x: datetime.fromtimesta
dataframe2
```

Out[17]:

	time	temperature	humidity	pressure	dewPoint	windSpeed	visibility	summary
0	2020-02-03 18:00:00	43.03	0.61	1011.7	30.65	8.10	10	Clear
1	2020-02-03 19:00:00	41.57	0.64	1012.1	30.45	7.30	10	Clear
2	2020-02-03 20:00:00	40.27	0.68	1012.6	30.59	7.07	10	Clear
3	2020-02-03 21:00:00	39.35	0.71	1012.5	30.62	6.83	10	Clear
4	2020-02-03 22:00:00	38.83	0.71	1012.9	30.38	6.41	10	Clear
5	2020-02-03 23:00:00	37.95	0.74	1012.9	30.39	5.38	10	Clear
6	2020-02-04 00:00:00	36.86	0.78	1012.3	30.49	4.11	10	Clear

In [18]:

```
#Fetching daily weather forecast for the next 7 days with only the details
selectedcolumns = ['time', 'temperatureHigh', 'temperatureLow', 'humidity',
    'pressure', 'dewPoint', 'windSpeed', 'visibility', 'precipType','summar
dataframe3 = pd.DataFrame(dailyDetails['data'], columns=selectedcolumns)
dataframe3['time']= dataframe3['time'].apply(lambda x: datetime.fromtimesta
dataframe3
```

Out[18]:

	time	temperatureHigh	temperatureLow	humidity	pressure	dewPoint	windSpeed	visibility	pr
0	2020-02-03	47.43	35.07	0.68	1007.6	28.04	6.56	10.000	
1	2020-02-04	45.14	34.42	0.81	1009.5	34.14	4.03	10.000	
2	2020-02-05	35.91	27.71	0.58	1017.3	19.94	8.67	10.000	
3	2020-02-06	40.78	39.29	0.88	1009.0	32.12	7.64	3.897	
4	2020-02-07	44.19	22.25	0.83	992.4	35.68	11.25	9.107	
5	2020-02-08	31.35	20.77	0.46	1023.2	7.62	10.29	10.000	
6	2020-02-09	34.06	29.70	0.84	1031.3	23.82	4.98	5.113	
7	2020-02-10	42.93	31.55	0.91	1023.7	32.83	8.06	10.000	

Finding the missing values

In [19]:
```
# checking missing, NaN data in the dataframe through API
dataframe2.isnull().any()
```

Out[19]:
```
time           False
temperature    False
humidity       False
pressure       False
dewPoint       False
windSpeed      False
visibility     False
summary        False
dtype: bool
```

In [20]:
```
# checking missing, NaN data in the dataframe through API for another dataf
dataframe3.isnull().any()
```

Out[20]:
```
time               False
temperatureHigh    False
temperatureLow     False
humidity           False
pressure           False
dewPoint           False
windSpeed          False
visibility         False
precipType         False
summary            False
dtype: bool
```

Checking shape of the data

In [21]:
```
dataframe2.shape
```

Out[21]:
```
(49, 8)
```

In [22]:
```
dataframe3.shape
```

Out[22]:
```
(8, 10)
```

Checking the entities present in the database

In [23]:
```
dataframe2.columns
```

Out[23]:
```
Index(['time', 'temperature', 'humidity', 'pressure', 'dewPoint', 'windSp
eed',
       'visibility', 'summary'],
      dtype='object')
```

In [24]:

```
dataframe3.columns
```

Out[24]:

```
Index(['time', 'temperatureHigh', 'temperatureLow', 'humidity', 'pressur
e',
       'dewPoint', 'windSpeed', 'visibility', 'precipType', 'summary'],
      dtype='object')
```

Checking the information of the data - data type and total number of records in each column

In [25]:

```
dataframe2.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 49 entries, 0 to 48
Data columns (total 8 columns):
time           49 non-null datetime64[ns]
temperature    49 non-null float64
humidity       49 non-null float64
pressure       49 non-null float64
dewPoint       49 non-null float64
windSpeed      49 non-null float64
visibility     49 non-null int64
summary        49 non-null object
dtypes: datetime64[ns](1), float64(5), int64(1), object(1)
memory usage: 3.2+ KB
```

In [26]:

```
dataframe3.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 8 entries, 0 to 7
Data columns (total 10 columns):
time               8 non-null datetime64[ns]
temperatureHigh    8 non-null float64
temperatureLow     8 non-null float64
humidity           8 non-null float64
pressure           8 non-null float64
dewPoint           8 non-null float64
windSpeed          8 non-null float64
visibility         8 non-null float64
precipType         8 non-null object
summary            8 non-null object
dtypes: datetime64[ns](1), float64(7), object(2)
memory usage: 768.0+ bytes
```

Saving data to a csv file

In [27]:

```
dataframe2.to_csv('data.csv', index=False)
```

DATASOURCE 3 - Using Raw Data

In [28]:

```
#Reading data from csv file
dataframe4 = pd.read_csv("weatherdata.csv")
```

Displaying the output

In [29]:

```
dataframe4.head()
```

Out[29]:

	Location	Month and Year	Date	Temperature	Humidity	Precipitation
0	Worcester, MA	Jan-19	1	41.09	90	0.0
1	Worcester, MA	Jan-19	2	38.75	88	0.1
2	Worcester, MA	Jan-19	3	31.50	85	0.0
3	Worcester, MA	Jan-19	4	32.41	93	0.0
4	Worcester, MA	Jan-19	5	35.44	85	0.0

Checking the information of the data - data type and total number of records in each column

In [30]:

```
dataframe4.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 396 entries, 0 to 395
Data columns (total 6 columns):
Location          396 non-null object
Month and Year    396 non-null object
Date              396 non-null int64
Temperature       396 non-null float64
Humidity          396 non-null int64
Precipitation     396 non-null float64
dtypes: float64(2), int64(2), object(2)
memory usage: 18.7+ KB
```

Checking the total null values in the column using sum() function

In [31]:

```
dataframe4.isnull().sum()
```

Out[31]:

```
Location          0
Month and Year    0
Date              0
Temperature       0
Humidity          0
Precipitation     0
dtype: int64
```

Checking the shape of the data

```
In [32]: dataframe4.shape
```

```
Out[32]: (396, 6)
```

Checking the columnns

```
In [33]: dataframe4.columns
```

```
Out[33]: Index(['Location', 'Month and Year', 'Date', 'Temperature', 'Humidity ',
                'Precipitation'],
               dtype='object')
```

CONCEPTUAL MODEL

Combining the two datasets

```
In [34]: #Dataframes appended to get the current month forecast added to data from c
         dataframe_combined = dataframe4.append(dataframe1, ignore_index = True, sor
         dataframe_combined
```

Out[34]:

	Date	Humidity	Location	Month and Year	Precipitation	Temperature
0	1	90.0	Worcester, MA	Jan-19	0.0	41.09
1	2	88.0	Worcester, MA	Jan-19	0.1	38.75
2	3	85.0	Worcester, MA	Jan-19	0.0	31.5
3	4	93.0	Worcester, MA	Jan-19	0.0	32.41
4	5	85.0	Worcester, MA	Jan-19	0.0	35.44
...	...	...	...	...	...	...
420	25	NaN	Worcester, MA Monthly Weather	Feb 2020	NaN	37
421	26	NaN	Worcester, MA Monthly Weather	Feb 2020	NaN	37
422	27	NaN	Worcester, MA Monthly Weather	Feb 2020	NaN	38
423	28	NaN	Worcester, MA Monthly Weather	Feb 2020	NaN	38
424	29	NaN	Worcester, MA Monthly Weather	Feb 2020	NaN	38

425 rows × 6 columns

Auditing the data

Checking the information of the data - data type and total number of records in each column

In [35]:

```
dataframe_combined.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 425 entries, 0 to 424
Data columns (total 6 columns):
Date                  425 non-null object
Humidity              396 non-null float64
Location              425 non-null object
Month and Year        425 non-null object
Precipitation         396 non-null float64
Temperature           425 non-null object
dtypes: float64(2), object(4)
memory usage: 20.0+ KB
```

Checking the total null values in the column using sum() function

In [36]:

```
dataframe_combined.isnull().sum()
```

Out[36]:

```
Date               0
Humidity          29
Location           0
Month and Year     0
Precipitation     29
Temperature        0
dtype: int64
```

Checking the shape of the data

In [37]:

```
dataframe_combined.shape
```

Out[37]:

```
(425, 6)
```

Checking the columns of the data

In [38]:

```
dataframe_combined.columns
```

Out[38]:

```
Index(['Date', 'Humidity ', 'Location', 'Month and Year', 'Precipitatio
n',
       'Temperature'],
      dtype='object')
```

Using Visualization techniques to understand the data better

In [56]:

```
# import pandas and matplotlib
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

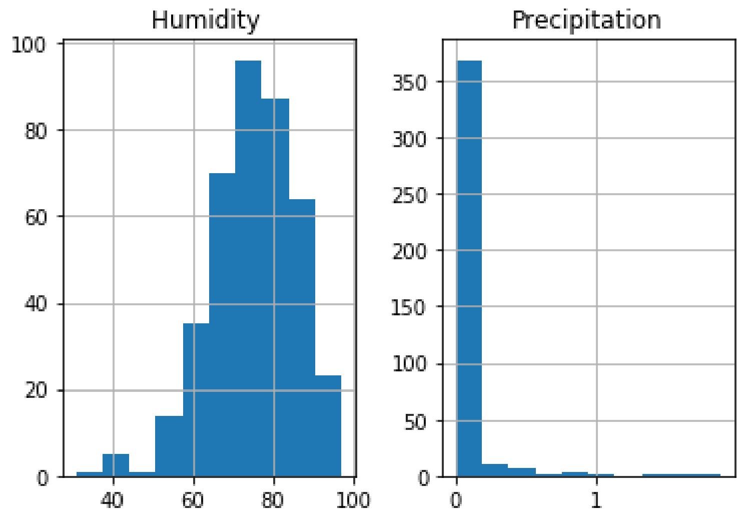
Variations throughout the data

In [75]:

```
#Humidity and Precipitation
dataframe_combined.hist()
```

Out[75]:

```
array([[<matplotlib.axes._subplots.AxesSubplot object at 0x1a213efd90>,
        <matplotlib.axes._subplots.AxesSubplot object at 0x1a213ef050>]],
      dtype=object)
```

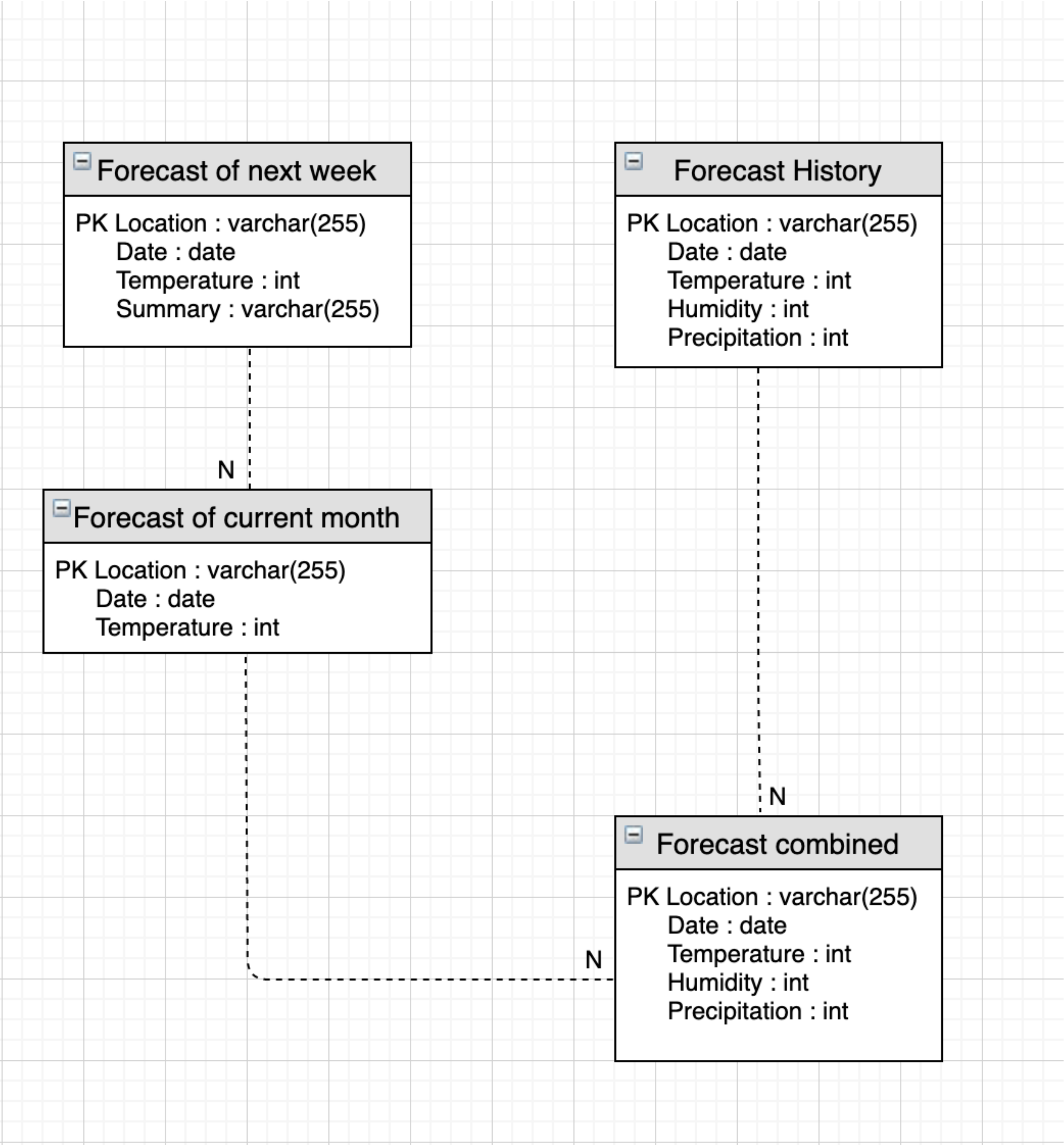


ER MODEL

In [62]:

```
from IPython.display import Image
Image("/Users/shashank/Pers/NEU 2nd Sem/DMDD/assignment1/Images/ERD.png")
```

Out[62]:



Forecast of next week

PK Location : varchar(255)
Date : date
Temperature : int
Summary : varchar(255)

Forecast History

PK Location : varchar(255)
Date : date
Temperature : int
Humidity : int
Precipitation : int

Forecast of current month

PK Location : varchar(255)
Date : date
Temperature : int

Forecast combined

PK Location : varchar(255)
Date : date
Temperature : int
Humidity : int
Precipitation : int

The above figure shows us an entity-relationship model of three different tables from the following: forecast data of next week forecast retrieved using API, forecast data of current month retrieved through web scraping and forecast history retrieved from csv file. We can infer that Location acts as a primary key which means all the data is related based on the location. In conclusion, merging three tables would result in a table which defines a combined data set of weather forecast, which is known as a conceptual database schema.

AUDIT VALIDITY/ACCURACY

By using few commands, most of the unwanted null values were deleted from the above rows and columns which gives a report on valid and accuarate data.

AUDIT COMPLETNESS

In real world, when weather forecast is requested from a particular customer, various fields like temperature, humidity, precipitation will be displayed based on their location. Similarly, when weather forecast is requested for a particular location, it can be accessed from the above data. This can be extended by including all the cities in the world and also many other fields like windspeed, sunrise, sunset etc.

AUDIT CONSISTENCY/UNIFORMITY

The datasets which have been used in this assignment show a uniform relationship between each of the dataset since they are linked to each other by a common attribute.

REPORT

fies used : weatherdata.csv files genearted: data.csv Data was reformatted to fit into a conceptual model. Data was gathered from the following sources Web API, Web scraping, Raw file and are merged together to fit into a conceptual model.

Code used: Step 1. Extraction of Data 3 main methods were used for the extraction of data: 1.Using the API: Here, the API key and requests library was used to access the website using the URL and API
key ('843ab6f5ecd476e8de046cede696dc3e') json to convert the file into json format pandas to create data frames from the raw data 2.Using the website to scrape the data Here, the data was extracted from the site directly using the libraries requests, BeautifulSoup, pandas. requests to access the website using the URL (https://weather.com/weather/monthly/

(https://weather.com/weather/monthly/)) BeautifulSoup to scrape the contents of the website find() and find_all() methods were used to retrieve the desired content. pandas to create data frames from the raw data. 3.By loading the csv file: Here, the data was extracted from a csv file on the system using the library pandas pandas was used to a read the csv file and load it into data frames read_csv method was used to read .csv file

Step 2. Cleaning and Auditing Data To gain knowledge about the dataset various methods like isnull, any, shape, columns, info were used.

CONCLUSION

Primary focus of this assignment is to learn how to get the data from different sources, cleaning of data, checking null values present in the data, data munging and to reformat the data to fit a conceptual database model.

CONTRIBUTION

Your contribution towards project. How much code did you write and how much you took from other site or some other source.

I contributed By Own: 20%
By External source: 50%
Provided by the professor : 30%

CITATIONS

Sources from where you have gained knowledge or used codes, data. It may include Web links, github links, code taken from somewhere etc.

https://weather.com/weather/monthly/ (https://weather.com/weather/monthly/)
https://www.crummy.com/software/BeautifulSoup/bs4/doc/
(https://www.crummy.com/software/BeautifulSoup/bs4/doc/)
https://pandas.pydata.org/pandas-docs/version/0.15/tutorials.html
(https://pandas.pydata.org/pandas-docs/version/0.15/tutorials.html)
https://www.geeksforgeeks.org/python-pandas-dataframe-append/
(https://www.geeksforgeeks.org/python-pandas-dataframe-append/)
https://stackoverflow.com/questions/748491/how-do-i-create-a-datetime-in-python-from-milliseconds (https://stackoverflow.com/questions/748491/how-do-i-create-a-datetime-in-python-from-milliseconds) https://www.geeksforgeeks.org/data-visualization-different-charts-python/
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