APIExample

October 7, 2024

1 Working with APIs

```
[2]: import numpy as np
import pandas as pd
import requests #for working with apis
```

Example 1

Example using ExchangeRate-API: https://www.exchangerate-api.com/docs/standard-requests

```
[3]: url = "https://api.exchangerate-api.com/v4/latest/USD" #a GET request is 

⇔implicitly generated 

df = pd.read_json(url) 

df
```

```
[3]:
                                  provider \
         https://www.exchangerate-api.com
     AFN
         https://www.exchangerate-api.com
         https://www.exchangerate-api.com
     ALL
     AMD
         https://www.exchangerate-api.com
     ANG
         https://www.exchangerate-api.com
    XPF
         https://www.exchangerate-api.com
     YER https://www.exchangerate-api.com
     ZAR https://www.exchangerate-api.com
         https://www.exchangerate-api.com
     ZMW
     ZWL
         https://www.exchangerate-api.com
                               WARNING_UPGRADE_TO_V6 \
    AED
         https://www.exchangerate-api.com/docs/free
         https://www.exchangerate-api.com/docs/free
         https://www.exchangerate-api.com/docs/free
     ALL
     AMD
         https://www.exchangerate-api.com/docs/free
         https://www.exchangerate-api.com/docs/free
     ANG
     XPF
         https://www.exchangerate-api.com/docs/free
         https://www.exchangerate-api.com/docs/free
     YER
```

https://www.exchangerate-api.com/docs/free

```
https://www.exchangerate-api.com/docs/free
ZMW
     https://www.exchangerate-api.com/docs/free
ZWL
                                       terms base
                                                         date
AED
     https://www.exchangerate-api.com/terms
                                               USD 2024-06-04
AFN
     https://www.exchangerate-api.com/terms
                                               USD 2024-06-04
     https://www.exchangerate-api.com/terms
ALL
                                               USD 2024-06-04
AMD
     https://www.exchangerate-api.com/terms
                                               USD 2024-06-04
     https://www.exchangerate-api.com/terms
ANG
                                               USD 2024-06-04
XPF
     https://www.exchangerate-api.com/terms
                                               USD 2024-06-04
     https://www.exchangerate-api.com/terms
YER
                                               USD 2024-06-04
ZAR
     https://www.exchangerate-api.com/terms
                                               USD 2024-06-04
ZMW
     https://www.exchangerate-api.com/terms
                                               USD 2024-06-04
     https://www.exchangerate-api.com/terms
ZWL
                                               USD 2024-06-04
     time_last_updated
                          rates
AED
            1717459202
                           3.67
AFN
            1717459202
                          71.29
ALL
            1717459202
                          92.78
AMD
            1717459202
                         387.71
ANG
            1717459202
                           1.79
. .
XPF
            1717459202
                         109.63
YER
            1717459202
                         250.14
ZAR
            1717459202
                          18.54
            1717459202
ZMW
                          26.00
ZWL
            1717459202
                          13.31
```

Code Explanation:

[162 rows x 7 columns]

df = pd.read_json(url): - This line of code utilizes the Pandas library to read JSON data from the URL specified in the url variable. - pd is an alias for the Pandas library, which is a popular Python library used for data manipulation and analysis. - read_json() is a Pandas function that reads JSON data from a specified source (in this case, the provided URL). - The JSON data obtained from the API contains information about exchange rates for various currencies relative to USD.

How It Works:

The URL "https://api.exchangerate-api.com/v4/latest/USD" is a resource that returns exchange rate data in JSON format when accessed.

pd.read_json(url) sends an HTTP GET request to the URL, retrieves the JSON response containing exchange rate data, and parses it into a Pandas DataFrame.

```
[]: df.drop(['provider','WARNING_UPGRADE_TO_V6','terms'], axis=1)
```

Here's a breakdown of what this code does: .drop(): used to drop specified labels (rows or columns) from the DataFrame.

['provider', 'WARNING_UPGRADE_TO_V6', 'terms']: column labels that to remove from the DataFrame.

axis=1: When axis=1, it means that the operation will be performed along columns.

Example 2

Explore these first https://www.weather.gov/documentation/services-web-api

Need to find the "office" for Syracuse (SU area) https://api.weather.gov/points/43.0481,-76.1474

```
[1]: import requests
url = "https://api.weather.gov/gridpoints/BGM/51,98/forecast"
df = pd.read_json(url)
df
#This will throw an error because the json data from the URL cannot be

structured by pandas without your guidance
```

```
NameError Traceback (most recent call last)

Cell In[1], line 3

1 import requests
2 url = "https://api.weather.gov/gridpoints/BGM/51,98/forecast"

----> 3 df = pd.read_json(url)
4 df
5 #This will throw an error because the json data from the URL cannot be_____
structured by pandas without your guidance

NameError: name 'pd' is not defined
```

```
[4]: # Just like in the the forecast file example (in JSON), we can't get the JSON

data right into a pandas dataframe

url = "https://api.weather.gov/gridpoints/BGM/51,98/forecast"

response = requests.get(url)

print(response.status_code)
```

200

[5]: data = response.json() #convert the response to json that python can understand print(data)

```
{'@context': ['https://geojson.org/geojson-ld/geojson-context.jsonld',
{'@version': '1.1', 'wx': 'https://api.weather.gov/ontology#', 'geo':
'http://www.opengis.net/ont/geosparql#', 'unit':
'http://codes.wmo.int/common/unit/', '@vocab':
'https://api.weather.gov/ontology#'}], 'type': 'Feature', 'geometry': {'type':
'Polygon', 'coordinates': [[[-76.2013097, 43.0381354], [-76.2054039,
```

```
43.016687000000005], [-76.17606919999999, 43.013692000000006],
[-76.17196879999999, 43.03514020000001], [-76.2013097, 43.0381354]]]
'properties': {'updated': '2024-06-04T18:47:06+00:00', 'units': 'us',
'forecastGenerator': 'BaselineForecastGenerator', 'generatedAt':
'2024-06-04T21:16:56+00:00', 'updateTime': '2024-06-04T18:47:06+00:00',
'validTimes': '2024-06-04T12:00:00+00:00/P8DT2H', 'elevation': {'unitCode':
'wmoUnit:m', 'value': 167.9448}, 'periods': [{'number': 1, 'name': 'This
Afternoon', 'startTime': '2024-06-04T17:00:00-04:00', 'endTime':
'2024-06-04T18:00:00-04:00', 'isDaytime': True, 'temperature': 88,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': None}, 'dewpoint': {'unitCode':
'wmoUnit:degC', 'value': 16.6666666666668}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 45}, 'windSpeed': '5 mph', 'windDirection': 'S',
'icon': 'https://api.weather.gov/icons/land/day/bkn?size=medium',
'shortForecast': 'Partly Sunny', 'detailedForecast': 'Partly sunny, with a high
near 88. South wind around 5 mph.'}, {'number': 2, 'name': 'Tonight',
'startTime': '2024-06-04T18:00:00-04:00', 'endTime':
'2024-06-05T06:00:00-04:00', 'isDaytime': False, 'temperature': 68,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': None}, 'dewpoint': {'unitCode':
'wmoUnit:degC', 'value': 17.777777777778}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 68}, 'windSpeed': '3 to 7 mph', 'windDirection':
'SE', 'icon': 'https://api.weather.gov/icons/land/night/sct?size=medium',
'shortForecast': 'Partly Cloudy', 'detailedForecast': 'Partly cloudy, with a low
around 68. Southeast wind 3 to 7 mph.'}, {'number': 3, 'name': 'Wednesday',
'startTime': '2024-06-05T06:00:00-04:00', 'endTime':
'2024-06-05T18:00:00-04:00', 'isDaytime': True, 'temperature': 87,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': 20}, 'dewpoint': {'unitCode':
'wmoUnit:degC', 'value': 18.333333333333333}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 68}, 'windSpeed': '7 to 10 mph', 'windDirection':
'https://api.weather.gov/icons/land/day/sct/tsra hi,20?size=medium',
'shortForecast': 'Mostly Sunny then Slight Chance Showers And Thunderstorms',
'detailedForecast': 'A slight chance of showers and thunderstorms after 3pm.
Mostly sunny, with a high near 87. South wind 7 to 10 mph. Chance of
precipitation is 20%.'}, {'number': 4, 'name': 'Wednesday Night', 'startTime':
'2024-06-05T18:00:00-04:00', 'endTime': '2024-06-06T06:00:00-04:00',
'isDaytime': False, 'temperature': 69, 'temperatureUnit': 'F',
'temperatureTrend': None, 'probabilityOfPrecipitation': {'unitCode':
'wmoUnit:percent', 'value': 80}, 'dewpoint': {'unitCode': 'wmoUnit:degC',
'value': 18.333333333333333}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 81}, 'windSpeed': '10 mph', 'windDirection': 'S',
'icon': 'https://api.weather.gov/icons/land/night/tsra,50/tsra,80?size=medium',
'shortForecast': 'Showers And Thunderstorms', 'detailedForecast': 'Showers and
thunderstorms. Mostly cloudy, with a low around 69. South wind around 10 mph.
Chance of precipitation is 80%. New rainfall amounts less than a tenth of an
inch possible.'}, {'number': 5, 'name': 'Thursday', 'startTime':
```

```
'2024-06-06T06:00:00-04:00', 'endTime': '2024-06-06T18:00:00-04:00',
'isDaytime': True, 'temperature': 81, 'temperatureUnit': 'F',
'temperatureTrend': None, 'probabilityOfPrecipitation': {'unitCode':
'wmoUnit:percent', 'value': 70}, 'dewpoint': {'unitCode': 'wmoUnit:degC',
'value': 19.44444444444443}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 87}, 'windSpeed': '10 mph', 'windDirection': 'SW',
'https://api.weather.gov/icons/land/day/tsra hi,70/tsra hi,60?size=medium',
'shortForecast': 'Showers And Thunderstorms Likely', 'detailedForecast':
'Showers and thunderstorms likely. Partly sunny, with a high near 81. Southwest
wind around 10 mph. Chance of precipitation is 70%.'}, {'number': 6, 'name':
'Thursday Night', 'startTime': '2024-06-06T18:00:00-04:00', 'endTime':
'2024-06-07T06:00:00-04:00', 'isDaytime': False, 'temperature': 60,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': 50}, 'dewpoint': {'unitCode':
'wmoUnit:degC', 'value': 16.1111111111111}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 81}, 'windSpeed': '7 mph', 'windDirection': 'W',
'icon':
'https://api.weather.gov/icons/land/night/tsra_hi,50/tsra_hi,20?size=medium',
'shortForecast': 'Chance Showers And Thunderstorms then Slight Chance Showers
And Thunderstorms', 'detailedForecast': 'A chance of showers and thunderstorms
before 8pm, then a slight chance of showers and thunderstorms between 8pm and
2am. Partly cloudy, with a low around 60. Chance of precipitation is 50%.'},
{'number': 7, 'name': 'Friday', 'startTime': '2024-06-07T06:00:00-04:00',
'endTime': '2024-06-07T18:00:00-04:00', 'isDaytime': True, 'temperature': 73,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': 70}, 'dewpoint': {'unitCode':
'wmoUnit:degC', 'value': 14.4444444444445}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 81}, 'windSpeed': '8 mph', 'windDirection': 'W',
'icon':
'https://api.weather.gov/icons/land/day/rain_showers,50/tsra_hi,70?size=medium',
'shortForecast': 'Showers And Thunderstorms Likely', 'detailedForecast': 'A
chance of rain showers between 8am and 2pm, then showers and thunderstorms
likely. Mostly sunny, with a high near 73. Chance of precipitation is 70%.'},
{'number': 8, 'name': 'Friday Night', 'startTime': '2024-06-07T18:00:00-04:00',
'endTime': '2024-06-08T06:00:00-04:00', 'isDaytime': False, 'temperature': 56,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': 70}, 'dewpoint': {'unitCode':
'wmoUnit:percent', 'value': 90}, 'windSpeed': '7 mph', 'windDirection': 'W',
'icon':
'https://api.weather.gov/icons/land/night/tsra_sct,70/tsra_sct,40?size=medium',
'shortForecast': 'Showers And Thunderstorms Likely then Chance Showers And
Thunderstorms', 'detailedForecast': 'Showers and thunderstorms likely before
8pm, then a chance of showers and thunderstorms. Mostly cloudy, with a low
around 56. Chance of precipitation is 70%.'}, {'number': 9, 'name': 'Saturday',
'startTime': '2024-06-08T06:00:00-04:00', 'endTime':
'2024-06-08T18:00:00-04:00', 'isDaytime': True, 'temperature': 68,
```

```
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': 70}, 'dewpoint': {'unitCode':
'wmoUnit:degC', 'value': 12.7777777777779}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 83}, 'windSpeed': '8 mph', 'windDirection': 'SW',
'icon':
'https://api.weather.gov/icons/land/day/tsra sct,60/tsra sct,70?size=medium',
'shortForecast': 'Showers And Thunderstorms Likely', 'detailedForecast': 'A
chance of rain showers before 8am, then showers and thunderstorms likely. Partly
sunny, with a high near 68. Chance of precipitation is 70%.'}, {'number': 10,
'name': 'Saturday Night', 'startTime': '2024-06-08T18:00:00-04:00', 'endTime':
'2024-06-09T06:00:00-04:00', 'isDaytime': False, 'temperature': 55,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': 70}, 'dewpoint': {'unitCode':
'wmoUnit:degC', 'value': 12.2222222222221}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 90}, 'windSpeed': '8 mph', 'windDirection': 'SW',
'icon':
'https://api.weather.gov/icons/land/night/tsra_sct,70/tsra_sct,40?size=medium',
'shortForecast': 'Showers And Thunderstorms Likely then Chance Showers And
Thunderstorms', 'detailedForecast': 'Showers and thunderstorms likely before
8pm, then a chance of showers and thunderstorms between 8pm and 2am, then a
chance of showers and thunderstorms. Mostly cloudy, with a low around 55. Chance
of precipitation is 70%.'}, {'number': 11, 'name': 'Sunday', 'startTime':
'2024-06-09T06:00:00-04:00', 'endTime': '2024-06-09T18:00:00-04:00',
'isDaytime': True, 'temperature': 70, 'temperatureUnit': 'F',
'temperatureTrend': None, 'probabilityOfPrecipitation': {'unitCode':
'wmoUnit:percent', 'value': 70}, 'dewpoint': {'unitCode': 'wmoUnit:degC',
'wmoUnit:percent', 'value': 86}, 'windSpeed': '10 mph', 'windDirection': 'W',
'https://api.weather.gov/icons/land/day/tsra_hi,60/tsra_hi,70?size=medium',
'shortForecast': 'Showers And Thunderstorms Likely', 'detailedForecast':
'Showers and thunderstorms likely. Partly sunny, with a high near 70. Chance of
precipitation is 70%.'}, {'number': 12, 'name': 'Sunday Night', 'startTime':
'2024-06-09T18:00:00-04:00', 'endTime': '2024-06-10T06:00:00-04:00',
'isDaytime': False, 'temperature': 55, 'temperatureUnit': 'F',
'temperatureTrend': None, 'probabilityOfPrecipitation': {'unitCode':
'wmoUnit:percent', 'value': 70}, 'dewpoint': {'unitCode': 'wmoUnit:degC',
'value': 12.7777777777779}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 86}, 'windSpeed': '7 mph', 'windDirection': 'SW',
'https://api.weather.gov/icons/land/night/tsra_hi,70/tsra_hi,30?size=medium',
'shortForecast': 'Showers And Thunderstorms Likely then Chance Showers And
Thunderstorms', 'detailedForecast': 'Showers and thunderstorms likely before
8pm, then a chance of showers and thunderstorms. Mostly cloudy, with a low
around 55. Chance of precipitation is 70%.'}, {'number': 13, 'name': 'Monday',
'startTime': '2024-06-10T06:00:00-04:00', 'endTime':
'2024-06-10T18:00:00-04:00', 'isDaytime': True, 'temperature': 70,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
```

```
'wmoUnit:degC', 'value': 13.88888888888889}, 'relativeHumidity': {'unitCode':
    'wmoUnit:percent', 'value': 86}, 'windSpeed': '8 mph', 'windDirection': 'W',
    'icon':
    'https://api.weather.gov/icons/land/day/rain showers,40/tsra hi,50?size=medium',
    'shortForecast': 'Chance Rain Showers', 'detailedForecast': 'A chance of rain
    showers before 2pm, then a chance of showers and thunderstorms. Partly sunny,
    with a high near 70. Chance of precipitation is 50%.'}, {'number': 14, 'name':
    'Monday Night', 'startTime': '2024-06-10T18:00:00-04:00', 'endTime':
    '2024-06-11T06:00:00-04:00', 'isDaytime': False, 'temperature': 55,
    'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
    {'unitCode': 'wmoUnit:percent', 'value': 50}, 'dewpoint': {'unitCode':
    'wmoUnit:degC', 'value': 13.8888888888889}, 'relativeHumidity': {'unitCode':
    'wmoUnit:percent', 'value': 90}, 'windSpeed': '3 to 7 mph', 'windDirection':
    'W', 'icon':
    'https://api.weather.gov/icons/land/night/tsra_hi,50/tsra_hi,30?size=medium',
    'shortForecast': 'Chance Showers And Thunderstorms', 'detailedForecast': 'A
    chance of showers and thunderstorms. Partly cloudy, with a low around 55. Chance
    of precipitation is 50%.'}]}}
[7]: import json
     print(json.dumps(data, indent=1))
    {
     "@context": [
      "https://geojson.org/geojson-ld/geojson-context.jsonld",
      {
       "@version": "1.1",
       "wx": "https://api.weather.gov/ontology#",
       "geo": "http://www.opengis.net/ont/geosparql#",
       "unit": "http://codes.wmo.int/common/unit/",
       "@vocab": "https://api.weather.gov/ontology#"
      }
     ],
     "type": "Feature",
     "geometry": {
      "type": "Polygon",
      "coordinates": [
       -76.2013097,
         43.0381354
        ],
         -76.2054039,
         43.016687000000005
        ],
```

{'unitCode': 'wmoUnit:percent', 'value': 50}, 'dewpoint': {'unitCode':

```
-76.17606919999999,
    43.013692000000006
  ],
    -76.17196879999999,
   43.03514020000001
  ],
    -76.2013097,
   43.0381354
  ]
 ]
]
},
"properties": {
 "updated": "2024-02-21T08:11:26+00:00",
 "units": "us",
 "forecastGenerator": "BaselineForecastGenerator",
 "generatedAt": "2024-02-21T15:37:33+00:00",
 "updateTime": "2024-02-21T08:11:26+00:00",
 "validTimes": "2024-02-21T02:00:00+00:00/P8DT6H",
 "elevation": {
  "unitCode": "wmoUnit:m",
  "value": 167.9448
 },
 "periods": [
  {
   "number": 1,
   "name": "Today",
   "startTime": "2024-02-21T10:00:00-05:00",
   "endTime": "2024-02-21T18:00:00-05:00",
   "isDaytime": true,
   "temperature": 45,
   "temperatureUnit": "F",
   "temperatureTrend": null,
   "probabilityOfPrecipitation": {
    "unitCode": "wmoUnit:percent",
    "value": null
  },
   "dewpoint": {
    "unitCode": "wmoUnit:degC",
    "value": -1.11111111111111112
   "relativeHumidity": {
    "unitCode": "wmoUnit:percent",
    "value": 75
  },
   "windSpeed": "12 to 15 mph",
```

```
"windDirection": "S",
    "icon": "https://api.weather.gov/icons/land/day/few?size=medium",
    "shortForecast": "Sunny",
    "detailedForecast": "Sunny, with a high near 45. South wind 12 to 15 mph."
  },
    "number": 2,
    "name": "Tonight",
    "startTime": "2024-02-21T18:00:00-05:00",
    "endTime": "2024-02-22T06:00:00-05:00",
    "isDaytime": false,
    "temperature": 32,
    "temperatureUnit": "F",
    "temperatureTrend": null,
    "probabilityOfPrecipitation": {
     "unitCode": "wmoUnit:percent",
     "value": null
    },
    "dewpoint": {
     "unitCode": "wmoUnit:degC",
     "value": -2.2222222222223
    },
    "relativeHumidity": {
     "unitCode": "wmoUnit:percent",
     "value": 82
   },
    "windSpeed": "12 to 16 mph",
    "windDirection": "S",
    "icon": "https://api.weather.gov/icons/land/night/sct?size=medium",
    "shortForecast": "Partly Cloudy",
    "detailedForecast": "Partly cloudy, with a low around 32. South wind 12 to
16 mph."
  },
   {
    "number": 3,
    "name": "Thursday",
    "startTime": "2024-02-22T06:00:00-05:00",
    "endTime": "2024-02-22T18:00:00-05:00",
    "isDaytime": true,
    "temperature": 46,
    "temperatureUnit": "F",
    "temperatureTrend": null,
    "probabilityOfPrecipitation": {
     "unitCode": "wmoUnit:percent",
     "value": 60
   },
    "dewpoint": {
     "unitCode": "wmoUnit:degC",
```

```
"value": 2.77777777777777
    },
    "relativeHumidity": {
     "unitCode": "wmoUnit:percent",
     "value": 85
    },
    "windSpeed": "10 to 14 mph",
    "windDirection": "S",
    "icon": "https://api.weather.gov/icons/land/day/bkn/rain,60?size=medium",
    "shortForecast": "Mostly Cloudy then Light Rain Likely",
    "detailedForecast": "Rain likely after noon. Mostly cloudy, with a high near
46. South wind 10 to 14 mph. Chance of precipitation is 60%. New rainfall
amounts less than a tenth of an inch possible."
  },
    "number": 4,
    "name": "Thursday Night",
    "startTime": "2024-02-22T18:00:00-05:00",
    "endTime": "2024-02-23T06:00:00-05:00",
    "isDaytime": false,
    "temperature": 37,
    "temperatureUnit": "F",
    "temperatureTrend": null,
    "probabilityOfPrecipitation": {
     "unitCode": "wmoUnit:percent",
     "value": 70
    },
    "dewpoint": {
     "unitCode": "wmoUnit:degC",
     "value": 2.777777777777777
    },
    "relativeHumidity": {
     "unitCode": "wmoUnit:percent",
     "value": 92
    "windSpeed": "8 to 14 mph",
    "windDirection": "S",
    "icon":
"https://api.weather.gov/icons/land/night/rain,60/rain,70?size=medium",
    "shortForecast": "Light Rain Likely",
    "detailedForecast": "Rain likely. Cloudy, with a low around 37. South wind 8
to 14 mph. Chance of precipitation is 70%. New rainfall amounts less than a
tenth of an inch possible."
  },
    "number": 5,
    "name": "Friday",
    "startTime": "2024-02-23T06:00:00-05:00",
```

```
"endTime": "2024-02-23T18:00:00-05:00",
    "isDaytime": true,
    "temperature": 42,
    "temperatureUnit": "F",
    "temperatureTrend": null,
    "probabilityOfPrecipitation": {
     "unitCode": "wmoUnit:percent",
     "value": 70
    },
    "dewpoint": {
     "unitCode": "wmoUnit:degC",
     "value": 3.3333333333333333
    },
    "relativeHumidity": {
     "unitCode": "wmoUnit:percent",
     "value": 96
    },
    "windSpeed": "7 to 16 mph",
    "windDirection": "W",
    "icon":
"https://api.weather.gov/icons/land/day/rain,70/snow,60?size=medium",
    "shortForecast": "Light Rain Likely then Chance Snow Showers",
    "detailedForecast": "Rain likely before 1pm, then a chance of rain showers
between 1pm and 4pm, then a chance of snow showers. Mostly cloudy, with a high
near 42. West wind 7 to 16 mph. Chance of precipitation is 70%."
  },
   {
    "number": 6,
    "name": "Friday Night",
    "startTime": "2024-02-23T18:00:00-05:00",
    "endTime": "2024-02-24T06:00:00-05:00",
    "isDaytime": false,
    "temperature": 14,
    "temperatureUnit": "F",
    "temperatureTrend": null,
    "probabilityOfPrecipitation": {
     "unitCode": "wmoUnit:percent",
     "value": 40
    },
    "dewpoint": {
     "unitCode": "wmoUnit:degC",
     "value": -3.33333333333333333
    },
    "relativeHumidity": {
     "unitCode": "wmoUnit:percent",
     "value": 75
   },
    "windSpeed": "18 to 22 mph",
```

```
"windDirection": "NW",
    "icon":
"https://api.weather.gov/icons/land/night/snow,40/snow,30?size=medium",
    "shortForecast": "Chance Snow Showers",
    "detailedForecast": "A chance of snow showers. Mostly cloudy, with a low
around 14. Chance of precipitation is 40%. New snow accumulation of less than
half an inch possible."
  },
   {
    "number": 7,
    "name": "Saturday",
    "startTime": "2024-02-24T06:00:00-05:00",
    "endTime": "2024-02-24T18:00:00-05:00",
    "isDaytime": true,
    "temperature": 22,
    "temperatureUnit": "F",
    "temperatureTrend": null,
    "probabilityOfPrecipitation": {
     "unitCode": "wmoUnit:percent",
     "value": 30
    },
    "dewpoint": {
     "unitCode": "wmoUnit:degC",
     "value": -12.7777777777779
    },
    "relativeHumidity": {
     "unitCode": "wmoUnit:percent",
     "value": 64
    },
    "windSpeed": "15 to 20 mph",
    "windDirection": "NW",
    "icon": "https://api.weather.gov/icons/land/day/snow,30?size=medium",
    "shortForecast": "Chance Snow Showers",
    "detailedForecast": "A chance of snow showers. Partly sunny, with a high
near 22. Chance of precipitation is 30%. New snow accumulation of less than one
inch possible."
  },
    "number": 8,
    "name": "Saturday Night",
    "startTime": "2024-02-24T18:00:00-05:00",
    "endTime": "2024-02-25T06:00:00-05:00",
    "isDaytime": false,
    "temperature": 17,
    "temperatureUnit": "F",
    "temperatureTrend": null,
    "probabilityOfPrecipitation": {
     "unitCode": "wmoUnit:percent",
```

```
"value": null
    },
    "dewpoint": {
     "unitCode": "wmoUnit:degC",
     "value": -10.555555555555555
    },
    "relativeHumidity": {
     "unitCode": "wmoUnit:percent",
     "value": 80
    },
    "windSpeed": "13 mph",
    "windDirection": "W",
    "icon": "https://api.weather.gov/icons/land/night/snow/bkn?size=medium",
    "shortForecast": "Slight Chance Snow Showers then Mostly Cloudy",
    "detailedForecast": "A slight chance of snow showers before 7pm. Mostly
cloudy, with a low around 17. New snow accumulation of less than half an inch
possible."
   },
   {
    "number": 9,
    "name": "Sunday",
    "startTime": "2024-02-25T06:00:00-05:00",
    "endTime": "2024-02-25T18:00:00-05:00",
    "isDaytime": true,
    "temperature": 41,
    "temperatureUnit": "F",
    "temperatureTrend": null,
    "probabilityOfPrecipitation": {
     "unitCode": "wmoUnit:percent",
     "value": null
    },
    "dewpoint": {
     "unitCode": "wmoUnit:degC",
     "value": -3.3333333333333333
    "relativeHumidity": {
     "unitCode": "wmoUnit:percent",
     "value": 71
    },
    "windSpeed": "12 to 16 mph",
    "windDirection": "SW",
    "icon":
"https://api.weather.gov/icons/land/day/bkn/rain_showers?size=medium",
    "shortForecast": "Partly Sunny then Slight Chance Rain Showers",
    "detailedForecast": "A slight chance of rain showers after 1pm. Partly
sunny, with a high near 41."
  },
   {
```

```
"number": 10,
    "name": "Sunday Night",
    "startTime": "2024-02-25T18:00:00-05:00",
    "endTime": "2024-02-26T06:00:00-05:00",
    "isDaytime": false,
    "temperature": 34,
    "temperatureUnit": "F",
    "temperatureTrend": null,
    "probabilityOfPrecipitation": {
     "unitCode": "wmoUnit:percent",
     "value": 30
    },
    "dewpoint": {
     "unitCode": "wmoUnit:degC",
     "value": -0.555555555555556
    },
    "relativeHumidity": {
     "unitCode": "wmoUnit:percent",
     "value": 85
    "windSpeed": "13 to 17 mph",
    "windDirection": "SW",
"https://api.weather.gov/icons/land/night/rain_showers,30?size=medium",
    "shortForecast": "Chance Rain Showers",
    "detailedForecast": "A chance of rain showers. Mostly cloudy, with a low
around 34. Chance of precipitation is 30%."
  },
    "number": 11,
    "name": "Monday",
    "startTime": "2024-02-26T06:00:00-05:00",
    "endTime": "2024-02-26T18:00:00-05:00",
    "isDaytime": true,
    "temperature": 48,
    "temperatureUnit": "F",
    "temperatureTrend": null,
    "probabilityOfPrecipitation": {
     "unitCode": "wmoUnit:percent",
     "value": 30
    },
    "dewpoint": {
     "unitCode": "wmoUnit:degC",
     "value": 0
    },
    "relativeHumidity": {
     "unitCode": "wmoUnit:percent",
     "value": 85
```

```
},
    "windSpeed": "9 to 13 mph",
    "windDirection": "W",
    "icon": "https://api.weather.gov/icons/land/day/snow,30/snow?size=medium",
    "shortForecast": "Slight Chance Rain And Snow Showers",
    "detailedForecast": "A chance of rain showers before 7am, then a slight
chance of rain and snow showers between 7am and 1pm. Partly sunny, with a high
near 48. Chance of precipitation is 30%."
  },
  {
    "number": 12,
    "name": "Monday Night",
    "startTime": "2024-02-26T18:00:00-05:00",
    "endTime": "2024-02-27T06:00:00-05:00",
    "isDaytime": false,
    "temperature": 37,
    "temperatureUnit": "F",
    "temperatureTrend": null,
    "probabilityOfPrecipitation": {
     "unitCode": "wmoUnit:percent",
     "value": null
    },
    "dewpoint": {
     "unitCode": "wmoUnit:degC",
     "value": 0.55555555555556
    },
    "relativeHumidity": {
     "unitCode": "wmoUnit:percent",
     "value": 82
    },
    "windSpeed": "8 to 15 mph",
    "windDirection": "SE",
    "icon":
"https://api.weather.gov/icons/land/night/bkn/rain_showers?size=medium",
    "shortForecast": "Mostly Cloudy then Slight Chance Rain Showers",
    "detailedForecast": "A slight chance of rain showers after 1am. Mostly
cloudy, with a low around 37."
   },
   {
    "number": 13,
    "name": "Tuesday",
    "startTime": "2024-02-27T06:00:00-05:00",
    "endTime": "2024-02-27T18:00:00-05:00",
    "isDaytime": true,
    "temperature": 55,
    "temperatureUnit": "F",
    "temperatureTrend": null,
    "probabilityOfPrecipitation": {
```

```
"unitCode": "wmoUnit:percent",
     "value": 50
    },
    "dewpoint": {
     "unitCode": "wmoUnit:degC",
     "value": 7.2222222222222
    },
    "relativeHumidity": {
     "unitCode": "wmoUnit:percent",
     "value": 82
    },
    "windSpeed": "15 to 22 mph",
    "windDirection": "S",
    "icon":
"https://api.weather.gov/icons/land/day/rain,40/rain,50?size=medium",
    "shortForecast": "Chance Light Rain",
    "detailedForecast": "A slight chance of rain showers before 7am, then a
chance of rain. Mostly cloudy, with a high near 55. Chance of precipitation is
50%."
  },
  {
    "number": 14,
    "name": "Tuesday Night",
    "startTime": "2024-02-27T18:00:00-05:00",
    "endTime": "2024-02-28T06:00:00-05:00",
    "isDaytime": false,
    "temperature": 47,
    "temperatureUnit": "F",
    "temperatureTrend": null,
    "probabilityOfPrecipitation": {
     "unitCode": "wmoUnit:percent",
     "value": 50
    },
    "dewpoint": {
     "unitCode": "wmoUnit:degC",
     "value": 8.3333333333333334
    },
    "relativeHumidity": {
     "unitCode": "wmoUnit:percent",
     "value": 89
    },
    "windSpeed": "23 mph",
    "windDirection": "S",
    "icon": "https://api.weather.gov/icons/land/night/rain,50?size=medium",
    "shortForecast": "Chance Light Rain",
    "detailedForecast": "A chance of rain. Mostly cloudy, with a low around 47.
Chance of precipitation is 50%."
  }
```

```
]
}
}
```

[9]: print(data['properties']['periods'])

```
[{'number': 1, 'name': 'Today', 'startTime': '2024-02-21T10:00:00-05:00',
'endTime': '2024-02-21T18:00:00-05:00', 'isDaytime': True, 'temperature': 45,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': None}, 'dewpoint': {'unitCode':
'wmoUnit:degC', 'value': -1.111111111111112}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 75}, 'windSpeed': '12 to 15 mph', 'windDirection':
'S', 'icon': 'https://api.weather.gov/icons/land/day/few?size=medium',
'shortForecast': 'Sunny', 'detailedForecast': 'Sunny, with a high near 45. South
wind 12 to 15 mph.'}, {'number': 2, 'name': 'Tonight', 'startTime':
'2024-02-21T18:00:00-05:00', 'endTime': '2024-02-22T06:00:00-05:00',
'isDaytime': False, 'temperature': 32, 'temperatureUnit': 'F',
'temperatureTrend': None, 'probabilityOfPrecipitation': {'unitCode':
'wmoUnit:percent', 'value': None}, 'dewpoint': {'unitCode': 'wmoUnit:degC',
'value': -2.22222222222223}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 82}, 'windSpeed': '12 to 16 mph', 'windDirection':
'S', 'icon': 'https://api.weather.gov/icons/land/night/sct?size=medium',
'shortForecast': 'Partly Cloudy', 'detailedForecast': 'Partly cloudy, with a low
around 32. South wind 12 to 16 mph.'}, {'number': 3, 'name': 'Thursday',
'startTime': '2024-02-22T06:00:00-05:00', 'endTime':
'2024-02-22T18:00:00-05:00', 'isDaytime': True, 'temperature': 46,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': 60}, 'dewpoint': {'unitCode':
'wmoUnit:degC', 'value': 2.77777777777777}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 85}, 'windSpeed': '10 to 14 mph', 'windDirection':
'S', 'icon': 'https://api.weather.gov/icons/land/day/bkn/rain,60?size=medium',
'shortForecast': 'Mostly Cloudy then Light Rain Likely', 'detailedForecast':
'Rain likely after noon. Mostly cloudy, with a high near 46. South wind 10 to 14
mph. Chance of precipitation is 60%. New rainfall amounts less than a tenth of
an inch possible.'}, {'number': 4, 'name': 'Thursday Night', 'startTime':
'2024-02-22T18:00:00-05:00', 'endTime': '2024-02-23T06:00:00-05:00',
'isDaytime': False, 'temperature': 37, 'temperatureUnit': 'F',
'temperatureTrend': None, 'probabilityOfPrecipitation': { 'unitCode':
'wmoUnit:percent', 'value': 70}, 'dewpoint': {'unitCode': 'wmoUnit:degC',
'value': 2.7777777777777777}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 92}, 'windSpeed': '8 to 14 mph', 'windDirection':
'S', 'icon':
'https://api.weather.gov/icons/land/night/rain,60/rain,70?size=medium',
'shortForecast': 'Light Rain Likely', 'detailedForecast': 'Rain likely. Cloudy,
with a low around 37. South wind 8 to 14 mph. Chance of precipitation is 70%.
New rainfall amounts less than a tenth of an inch possible.'}, {'number': 5,
'name': 'Friday', 'startTime': '2024-02-23T06:00:00-05:00', 'endTime':
'2024-02-23T18:00:00-05:00', 'isDaytime': True, 'temperature': 42,
```

```
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': 70}, 'dewpoint': {'unitCode':
'wmoUnit:percent', 'value': 96}, 'windSpeed': '7 to 16 mph', 'windDirection':
'W', 'icon':
'https://api.weather.gov/icons/land/day/rain,70/snow,60?size=medium',
'shortForecast': 'Light Rain Likely then Chance Snow Showers',
'detailedForecast': 'Rain likely before 1pm, then a chance of rain showers
between 1pm and 4pm, then a chance of snow showers. Mostly cloudy, with a high
near 42. West wind 7 to 16 mph. Chance of precipitation is 70%.'}, {'number': 6,
'name': 'Friday Night', 'startTime': '2024-02-23T18:00:00-05:00', 'endTime':
'2024-02-24T06:00:00-05:00', 'isDaytime': False, 'temperature': 14,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': 40}, 'dewpoint': {'unitCode':
'wmoUnit:percent', 'value': 75}, 'windSpeed': '18 to 22 mph', 'windDirection':
'NW', 'icon':
'https://api.weather.gov/icons/land/night/snow,40/snow,30?size=medium',
'shortForecast': 'Chance Snow Showers', 'detailedForecast': 'A chance of snow
showers. Mostly cloudy, with a low around 14. Chance of precipitation is 40%.
New snow accumulation of less than half an inch possible.'}, {'number': 7,
'name': 'Saturday', 'startTime': '2024-02-24T06:00:00-05:00', 'endTime':
'2024-02-24T18:00:00-05:00', 'isDaytime': True, 'temperature': 22,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': 30}, 'dewpoint': {'unitCode':
'wmoUnit:degC', 'value': -12.7777777777779}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 64}, 'windSpeed': '15 to 20 mph', 'windDirection':
'NW', 'icon': 'https://api.weather.gov/icons/land/day/snow,30?size=medium',
'shortForecast': 'Chance Snow Showers', 'detailedForecast': 'A chance of snow
showers. Partly sunny, with a high near 22. Chance of precipitation is 30%. New
snow accumulation of less than one inch possible.'}, {'number': 8, 'name':
'Saturday Night', 'startTime': '2024-02-24T18:00:00-05:00', 'endTime':
'2024-02-25T06:00:00-05:00', 'isDaytime': False, 'temperature': 17,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': None}, 'dewpoint': {'unitCode':
'wmoUnit:degC', 'value': -10.55555555555555}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 80}, 'windSpeed': '13 mph', 'windDirection': 'W',
'icon': 'https://api.weather.gov/icons/land/night/snow/bkn?size=medium',
'shortForecast': 'Slight Chance Snow Showers then Mostly Cloudy',
'detailedForecast': 'A slight chance of snow showers before 7pm. Mostly cloudy,
with a low around 17. New snow accumulation of less than half an inch
possible.'}, {'number': 9, 'name': 'Sunday', 'startTime':
'2024-02-25T06:00:00-05:00', 'endTime': '2024-02-25T18:00:00-05:00',
'isDaytime': True, 'temperature': 41, 'temperatureUnit': 'F',
'temperatureTrend': None, 'probabilityOfPrecipitation': {'unitCode':
'wmoUnit:percent', 'value': None}, 'dewpoint': {'unitCode': 'wmoUnit:degC',
'wmoUnit:percent', 'value': 71}, 'windSpeed': '12 to 16 mph', 'windDirection':
```

```
'SW', 'icon':
'https://api.weather.gov/icons/land/day/bkn/rain showers?size=medium',
'shortForecast': 'Partly Sunny then Slight Chance Rain Showers',
'detailedForecast': 'A slight chance of rain showers after 1pm. Partly sunny,
with a high near 41.'}, {'number': 10, 'name': 'Sunday Night', 'startTime':
'2024-02-25T18:00:00-05:00', 'endTime': '2024-02-26T06:00:00-05:00',
'isDaytime': False, 'temperature': 34, 'temperatureUnit': 'F',
'temperatureTrend': None, 'probabilityOfPrecipitation': {'unitCode':
'wmoUnit:percent', 'value': 30}, 'dewpoint': {'unitCode': 'wmoUnit:degC',
'value': -0.55555555555555556}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 85}, 'windSpeed': '13 to 17 mph', 'windDirection':
'SW', 'icon':
'https://api.weather.gov/icons/land/night/rain_showers,30?size=medium',
'shortForecast': 'Chance Rain Showers', 'detailedForecast': 'A chance of rain
showers. Mostly cloudy, with a low around 34. Chance of precipitation is 30%.'},
{'number': 11, 'name': 'Monday', 'startTime': '2024-02-26T06:00:00-05:00',
'endTime': '2024-02-26T18:00:00-05:00', 'isDaytime': True, 'temperature': 48,
'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
{'unitCode': 'wmoUnit:percent', 'value': 30}, 'dewpoint': {'unitCode':
'wmoUnit:degC', 'value': 0}, 'relativeHumidity': {'unitCode': 'wmoUnit:percent',
'value': 85}, 'windSpeed': '9 to 13 mph', 'windDirection': 'W', 'icon':
'https://api.weather.gov/icons/land/day/snow,30/snow?size=medium',
'shortForecast': 'Slight Chance Rain And Snow Showers', 'detailedForecast': 'A
chance of rain showers before 7am, then a slight chance of rain and snow showers
between 7am and 1pm. Partly sunny, with a high near 48. Chance of precipitation
is 30%.'}, {'number': 12, 'name': 'Monday Night', 'startTime':
'2024-02-26T18:00:00-05:00', 'endTime': '2024-02-27T06:00:00-05:00',
'isDaytime': False, 'temperature': 37, 'temperatureUnit': 'F',
'temperatureTrend': None, 'probabilityOfPrecipitation': {'unitCode':
'wmoUnit:percent', 'value': None}, 'dewpoint': {'unitCode': 'wmoUnit:degC',
'value': 0.55555555555555556}, 'relativeHumidity': {'unitCode':
'wmoUnit:percent', 'value': 82}, 'windSpeed': '8 to 15 mph', 'windDirection':
'SE', 'icon':
'https://api.weather.gov/icons/land/night/bkn/rain_showers?size=medium',
'shortForecast': 'Mostly Cloudy then Slight Chance Rain Showers',
'detailedForecast': 'A slight chance of rain showers after 1am. Mostly cloudy,
with a low around 37.'}, {'number': 13, 'name': 'Tuesday', 'startTime':
'2024-02-27T06:00:00-05:00', 'endTime': '2024-02-27T18:00:00-05:00',
'isDaytime': True, 'temperature': 55, 'temperatureUnit': 'F',
'temperatureTrend': None, 'probabilityOfPrecipitation': {'unitCode':
'wmoUnit:percent', 'value': 50}, 'dewpoint': {'unitCode': 'wmoUnit:degC',
'value': 7.2222222222222}, 'relativeHumidity': {'unitCode': 'wmoUnit:percent',
'value': 82}, 'windSpeed': '15 to 22 mph', 'windDirection': 'S', 'icon':
'https://api.weather.gov/icons/land/day/rain,40/rain,50?size=medium',
'shortForecast': 'Chance Light Rain', 'detailedForecast': 'A slight chance of
rain showers before 7am, then a chance of rain. Mostly cloudy, with a high near
55. Chance of precipitation is 50%.'}, {'number': 14, 'name': 'Tuesday Night',
'startTime': '2024-02-27T18:00:00-05:00', 'endTime':
```

```
'2024-02-28T06:00:00-05:00', 'isDaytime': False, 'temperature': 47,
    'temperatureUnit': 'F', 'temperatureTrend': None, 'probabilityOfPrecipitation':
    {'unitCode': 'wmoUnit:percent', 'value': 50}, 'dewpoint': {'unitCode':
    'wmoUnit:degC', 'value': 8.3333333333334}, 'relativeHumidity': {'unitCode':
    'wmoUnit:percent', 'value': 89}, 'windSpeed': '23 mph', 'windDirection': 'S',
    'icon': 'https://api.weather.gov/icons/land/night/rain,50?size=medium',
    'shortForecast': 'Chance Light Rain', 'detailedForecast': 'A chance of rain.
    Mostly cloudy, with a low around 47. Chance of precipitation is 50%.'}]
[8]: | forecast = pd.DataFrame(data['properties']['periods'], columns=['name', __

¬'temperature','temperatureUnit','windSpeed','windDirection','shortForecast'])
     forecast
[8]:
                          temperature temperatureUnit
                                                           windSpeed windDirection
                   name
                  Today
                                   45
                                                        12 to 15 mph
     0
                                                     F
                                                                                  S
     1
                Tonight
                                   32
                                                        12 to 16 mph
     2
               Thursday
                                                     F
                                                                                  S
                                   46
                                                        10 to 14 mph
     3
         Thursday Night
                                   37
                                                     F
                                                         8 to 14 mph
                                                                                  S
     4
                 Friday
                                   42
                                                     F
                                                                                  W
                                                         7 to 16 mph
     5
           Friday Night
                                   14
                                                     F
                                                        18 to 22 mph
                                                                                 NW
     6
               Saturday
                                                     F
                                   22
                                                        15 to 20 mph
                                                                                 NW
     7
                                                     F
         Saturday Night
                                   17
                                                              13 mph
                                                                                  W
     8
                 Sunday
                                   41
                                                     F
                                                        12 to 16 mph
                                                                                 SW
     9
           Sunday Night
                                   34
                                                     F
                                                        13 to 17 mph
                                                                                 SW
     10
                                                     F
                 Monday
                                   48
                                                         9 to 13 mph
                                                                                  W
     11
           Monday Night
                                   37
                                                     F
                                                         8 to 15 mph
                                                                                 SE
     12
                                                     F
                                                        15 to 22 mph
                                                                                  S
                Tuesday
                                   55
     13
          Tuesday Night
                                   47
                                                     F
                                                              23 mph
                                                                                  S
                                          shortForecast
     0
                                                   Sunny
     1
                                          Partly Cloudy
     2
                  Mostly Cloudy then Light Rain Likely
     3
                                      Light Rain Likely
     4
            Light Rain Likely then Chance Snow Showers
     5
                                    Chance Snow Showers
     6
                                    Chance Snow Showers
     7
         Slight Chance Snow Showers then Mostly Cloudy
     8
          Partly Sunny then Slight Chance Rain Showers
     9
                                    Chance Rain Showers
     10
                   Slight Chance Rain And Snow Showers
         Mostly Cloudy then Slight Chance Rain Showers
     11
     12
                                      Chance Light Rain
     13
                                      Chance Light Rain
```

[]: