Task 2

Resources

- https://www.weather.gov/documentation/services-web-api
- https://api.weather.gov/points/42.2813,-71.355
- https://api.weather.gov/gridpoints/BOX/62,85/forecast/hourly

Table of Contents

Get weather from web service....1
Build Timetable....1
Plot data over time....2
Export data....2
Create reports....2

Get weather from web service

```
jason = webread("https://api.weather.gov/gridpoints/BOX/62,85/forecast/
hourly");
% pol = jason.geometry.coordinates; geoscatter(pol(:,:,1),pol(:,:,2))
```

Build Timetable

```
T = struct2table(jason.properties.periods);
time = datetime(T.startTime,"InputFormat","uuuu-MM-
dd'T'HH:mm:ssssZZZZZ","TimeZone","America/New_York");
temperature = T.temperature;
TT = timetable(time,temperature)
```

TT = 156x1 timetable

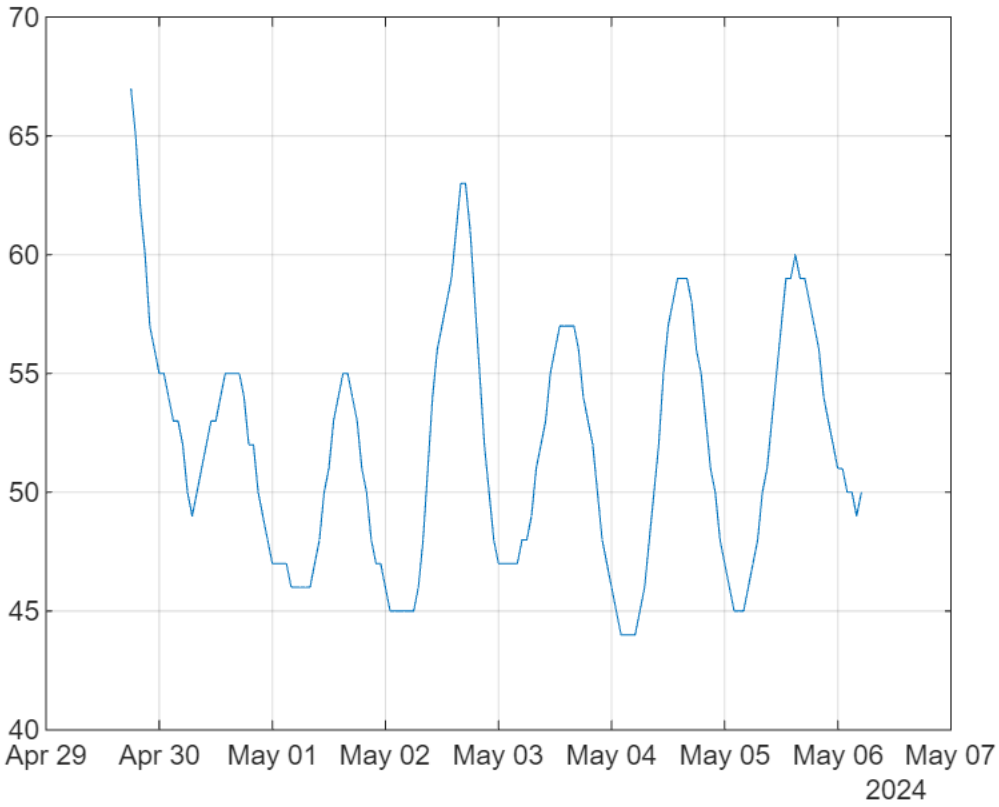
	time	temperature
1	29-Apr-2024 18:00:00	67
2	29-Apr-2024 19:00:00	65
3	29-Apr-2024 20:00:00	62
4	29-Apr-2024 21:00:00	60
5	29-Apr-2024 22:00:00	57
6	29-Apr-2024 23:00:00	56
7	30-Apr-2024 00:00:00	55
8	30-Apr-2024 01:00:00	55
9	30-Apr-2024 02:00:00	54
10	30-Apr-2024 03:00:00	53
11	30-Apr-2024 04:00:00	53
12	30-Apr-2024 05:00:00	52

	time	temperature
13	30-Apr-2024 06:00:00	50
14	30-Apr-2024 07:00:00	49

⋮

Plot data over time

```
plot(TT.time,TT.temperature)
grid on
```



Export data

```
writetimetable(TT,'Data/natick.csv')
```

Create reports

```
export('Tasks/task2.mlx','Reports/task2.md');
export('Tasks/task2.mlx','Reports/task2.ipynb');
export('Tasks/task2.mlx','Reports/task2.docx');
export('Tasks/task2.mlx','Reports/task2.pdf');
export('Tasks/task2.mlx','Reports/task2.html');
```