

NDAWN API

This notebook will use python to get data from NDAWN. First, I will create variables for all the parameters. Then, I will test them using a for loop. Finally, I will download a csv from the site.

```
In [38]: Weather_table = "https://ndawn.ndsu.nodak.edu/get-table.html?"  ## this
        shows the table on the website

        Weather_csv = "https://ndawn.ndsu.nodak.edu/table.csv?" ##This download
        s the csv

        #Parameters:
        s = "station=" #station number
        v = "variable=" #Field measurement. It varies based on the time type so
        I did not try to make a list.
        t = "ttype=" #Timing. Can be hourly, daily, weekly, etc.
        q = "quick_pick=" #If selected in the GUI, it autofills the begin and e
        nd dates. I will leave it blank here.
        b = "begin_date=" #Begin Date
        e = "end_date=" #End Date
```

```
In [39]: station = list(range(2,143)) #I found out the stations range from 2 to  
         142, so this will make a list of the station numbers  
  
station
```

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Out[39]: [2,  
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```
In [40]: station[0] ##Testing it out
```

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Out[40]: 2
```

Testing the variables

The next few cells will test the variables. In this case, I am testing the variable "hourly rain" (hdr) and the timing "hourly". Each parameter is separated by "&".

```
In [41]: for i in station: #using a for loop with the station numbers to test the websites
          print(Weather_table + s + str(i) + "&" + v + "hdr&" + t + "hourly"
                + "&" + q + "&" + b + "2021-02-05" + "&" + e + "2021-02-05")
```

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

```
https://ndawn.ndsu.nodak.edu/get-table.html?station=137&variable=hdr&
ttype=hourly&quick_pick=&begin_date=2021-02-05&end_date=2021-02-05
https://ndawn.ndsu.nodak.edu/get-table.html?station=138&variable=hdr&
ttype=hourly&quick_pick=&begin_date=2021-02-05&end_date=2021-02-05
https://ndawn.ndsu.nodak.edu/get-table.html?station=139&variable=hdr&
ttype=hourly&quick_pick=&begin_date=2021-02-05&end_date=2021-02-05
https://ndawn.ndsu.nodak.edu/get-table.html?station=140&variable=hdr&
ttype=hourly&quick_pick=&begin_date=2021-02-05&end_date=2021-02-05
https://ndawn.ndsu.nodak.edu/get-table.html?station=141&variable=hdr&
```

```
In [42]: for i in station: ##Using a for loop with the station numbers to test the csv
          print(Weather_csv + s + str(i) + "&" + v + "hdr&" + t + "hourly" +
                "&" + q + "&" + b + "2021-02-05" + "&" + e + "2021-02-05")
```

[illegible]

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https://ndawn.ndsu.nodak.edu/table.csv?station=137&variable=hdr&ttype=hourly&quick_pick=&begin_date=2021-02-05&end_date=2021-02-05
https://ndawn.ndsu.nodak.edu/table.csv?station=138&variable=hdr&ttype=hourly&quick_pick=&begin_date=2021-02-05&end_date=2021-02-05
https://ndawn.ndsu.nodak.edu/table.csv?station=139&variable=hdr&ttype=hourly&quick_pick=&begin_date=2021-02-05&end_date=2021-02-05
https://ndawn.ndsu.nodak.edu/table.csv?station=140&variable=hdr&ttype=hourly&quick_pick=&begin_date=2021-02-05&end_date=2021-02-05
https://ndawn.ndsu.nodak.edu/table.csv?station=141&variable=hdr&ttype=hourly&quick_pick=&begin_date=2021-02-05&end_date=2021-02-05
```

```
In [ ]: import requests ##Finally, I will use requests get to download a table.
```

```
In [52]: r = requests.get(Weather_csv + s + str(station[0]) + "&" + v + "hdr&" +
t + "hourly" + "&" + q + "&" + b + "2021-02-05" + "&" + e + "2021-02-05", allow_redirects = True)

open("table.csv", 'wb').write(r.content) ##If this code works, I will see at table in my files that has the hourly rain for Eldred on February 5th.
```

```
Out[52]: 1418
```

It worked! This concludes the notebook.

```
In [ ]:
```