HTML: Introduction Labs

Up/Down Dashboard

This project creates a simulation of a network up/down dashboard. We create a list of sites, and then test these sites using a random integer function to get a number between 0-2. We then assign a color to the number that was found. From here we write to an html file the name of the site with a background color that was determined.

In a real app we would ping each of these sites to determine if they were up or down.

We use file = open() for this project due to high writes to the file can cause issues with the "with open() as file" way of writing to files.

```python
from random import randint
from time import sleep

site = ['google.com','cnn.com','fox.com','tacobell.com']

while True:
    file = open('dashboard.html', 'w')
    file.write('<meta http-equiv="refresh" content="5">')
    file.write('<h1>Up/Down Dashboard</h1>')

    for host in site:
        condition = randint(0,2)

        if condition == 0:
            color = 'red'
        elif condition == 1:
            color = 'yellow'
        else:
            color = 'green'

        print(f'{host} {color}')
        file.write(f'<p style="background-color:{color};">{host}</p>\n')
    file.close()
    sleep(2)
```

Note App

With this lab we create an app where we add notes at the command line, and then those notes with a timestamp are added to a web page.

We append to a CSV file, and then use that CSV files to dynamically write the web page.

```python
from datetime import datetime

while True:
    note = input('Note: ')
    timestamp = datetime.now()
    with open('note.csv','a') as file:
        file.write(f'{timestamp},{note}\n')

    with open('note-app.html', 'w') as app:
        app.write('<h1>Note App</h1>\n')
        app.write('<table>')
        with open('note.csv', 'r') as data:
            data = data.readlines()
            for record in data:
                record = record.split(',')
                app.write('<tr>')
                for value in record:
                    app.write(f'<td>{value}</td>')
                app.write('</tr>')
            app.write(('</table>'))
```

Search App

With this project we read student data from a CSV file and then write the data to a web page in a table.

The second part of the project allows you to write only the records that correspond to certain values to the web page.

Make sure to have the student.csv file in your working directory (usually you user root)

```python
with open('student.csv', 'r') as file:
    file = file.readlines()

with open('page.html', 'w') as web_page:
    web_page.write('<table>')

    header = file[0].split(',')
    web_page.write('<tr>')
    for value in header:
        web_page.write(f'<th>{value}</th>')
    web_page.write('</tr>')

    #Print All Records
    for line in file[1:]:
        web_page.write('<tr>')
        record = line.split(',')
        for value in record:
            web_page.write(f'<td>{value}</td>')
        web_page.write('</tr>')

    # #Print Records Based on Value
    # for line in file[1:]:
    #     line = line.replace('\n','')
    #     record = line.split(',')
    #     if record[4] == 'Pollen':
    #         web_page.write('<tr>')
    #         for value in record:
    #             web_page.write(f'<td>{value}</td>')
    #     web_page.write('</tr>')

    web_page.write('<table>')
```