Part I Analyzing data trends

In this part of the assignment, you get to create a ***data file*** with a collection of ***real-world*** numeric data of your choice. It is important for your data file to include the URL from which you have retrieved the data. Your program shall first read and store these data into an ***array*** variable. After that, your program shall iterate through the ***array*** elements and display a nicely formatted table showing how much the data has changed or remained the same from one element to the next. In addition, after the table, the program shall display both the largest increase and smallest drop from one element to another.

Here is a sample data file containing the monthly unemployment rates for California in 2020.

unemployment.dat ×

```
1  https://ycharts.com/indicators/california_unemployment_rate
2  4.2 4.3 4.5 16 15.6 14.1 13.2 12.3 10.6 9.8 8.7 9.3
```

Below is a sample output for a program that works with the above data file.

```
This program analyzes the trend of the 2020 unemployment data
 for California. The source of the data is
https://ycharts.com/indicators/california_unemployment_rate

Month       Rate        Change
=======================================================
1          4.20%        No previous data available.
2          4.30%        Up by 0.10%
3          4.50%        Up by 0.20%
4         16.00%        Up by 11.50%
5         15.60%        Down by 0.40%
6         14.10%        Down by 1.50%
7         13.20%        Down by 0.90%
8         12.30%        Down by 0.90%
9         10.60%        Down by 1.70%
10         9.80%        Down by 0.80%
11         8.70%        Down by 1.10%
12         9.30%        Up by 0.60%
=======================================================

In 2020, from one month to the next, the largest increase of
unemployment rate was 11.50% and the smallest drop was 0.40%.
```

To receive full credit for this part of the assignment, your program must

- Use proper indentation and descriptive identifier names.
- Provide comments for each loop to explain the goal of the loop.
- Provide comments for each condition you check in an if-statement.
- Set up a data file to include the URL for the website where you retrieve the data and a list of at least 10 numeric data separated by spaces.
- Collect the data from the data file and store them into an array.
- Iterate through the array and display a nicely structured table using ***parametric parameters*** (not tabs or strings of spaces) to show how the elements change from element to another.
- Display a summary message to identify the largest increase and smallest drop between two consecutive elements.
- Capture a screenshot of the program output and add the screenshot into a document that you will later upload to Cougar Course.