

MSiA 422 – Fall 2017

Homework # 3

DUE: 10/15/2017

Exercise 1 – Web API

Write a python program to do the following:

1. Get one month of historical weather data (i.e. temperatures). In specific: one month of data for 5 distinct locations.
 2. You can use any WEB service available for free (tested site: <http://api.wunderground.com/api>) make sure to get an API-KEY if required.
 3. Build a data summary table that summaries max, min, and mean values of the temperature during that month for each location selected.
 4. Plot a graph that shows your data for the selected locations (to be used as comparative tool).
- The only libraries to use for this exercise are: matplotlib, requests and python built-in data types.

Exercise 2 – Web Scraping/Crawling (do not use the excel sheet from the site)

Scrape the Boone County site for the following data set.

Extract the following data set:

Last Name	First Name	Age	Total Cases	Total Bail
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Submit your solution as follows:

- Do not use RegEx instead use BeautifulSoup.
- Submit 2 versions of your code one sequential and one utilizing threading.

- Provide comparisons for both versions execution times.
- Provide a plot showing the top 10 crime types (show crime description and occurrence percentage)

*The only libraries to use for this exercise are: BeautifulSoup, matplotlib, requests, threading, time and python built-in data types.