CS 495 - Introduction to Web Science

Fall 2014

Assignment 1

by

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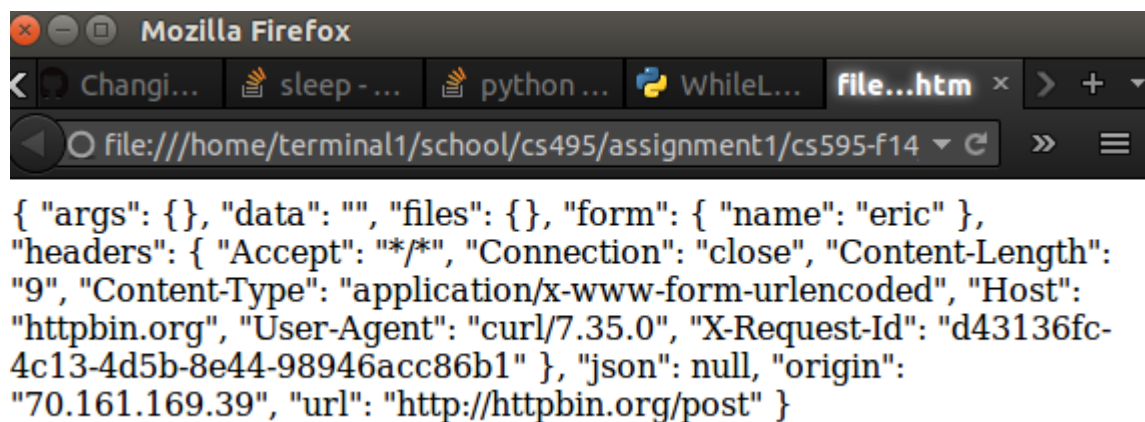
Signed: Eric Littley

Contents

1   Introduction

This is the first assignment for CS 495 Web Science. The assignment has three parts. The first part is a demonstration of curl the second part is a python program that pulls information from a website, and the third part is to analyze a graph. Each part has its own section below.

2   Part 1: Curl

The first part of the assignment is to POST data to a web site. After searching for a while trying to find a website that would let me post things, a fellow classmate, George Micros, pointed me to the website http://httpbin.org/post this site is on a test server that lets people experiment with different Internet protocols. A post was successfully made to this website with the response saved in response.htm. A screen shot of the command executed is shown below.

A screen shot of the output can be seen below.

3   Part 2: Python Program

Part three of the assignment was to write a python program that is given three arguments: a school name, a time value, and a URI. The program is supposed to access a yahoo college scoreboard page and display the game score of that college every specified time value. The implementation of this program uses the urllib2 library to access the URI specified and download the html page. The Beautiful Soup library is used to parse and navigate through the html page. A screen shot of the program running is shown below.

Note: The program has absolutely no error handling so names and values need to be typed in exactly.

```
terminal1@terminal1-HP:~/school/cs495/assignment1$ python asst1p2.py "Arizona" 5
 "http://sports.yahoo.com/college-football/scoreboard/?week=2&conf=all"
away: Arizona
away score: 26
home score: 23
home: UTSA

away: Arizona
away score: 26
home score: 23
home: UTSA

away: Arizona
away score: 26
home score: 23
home: UTSA
```
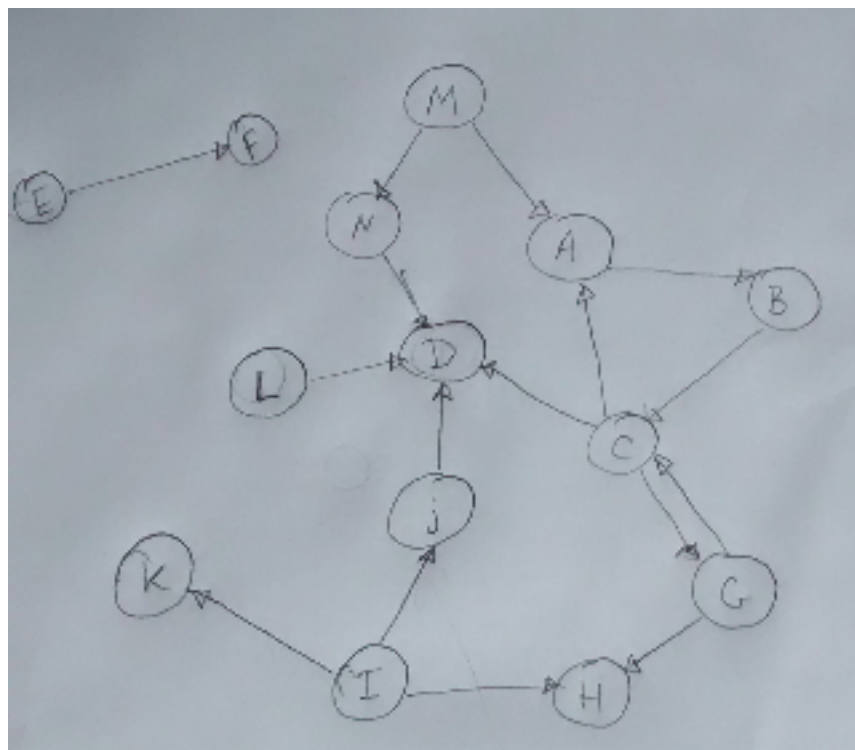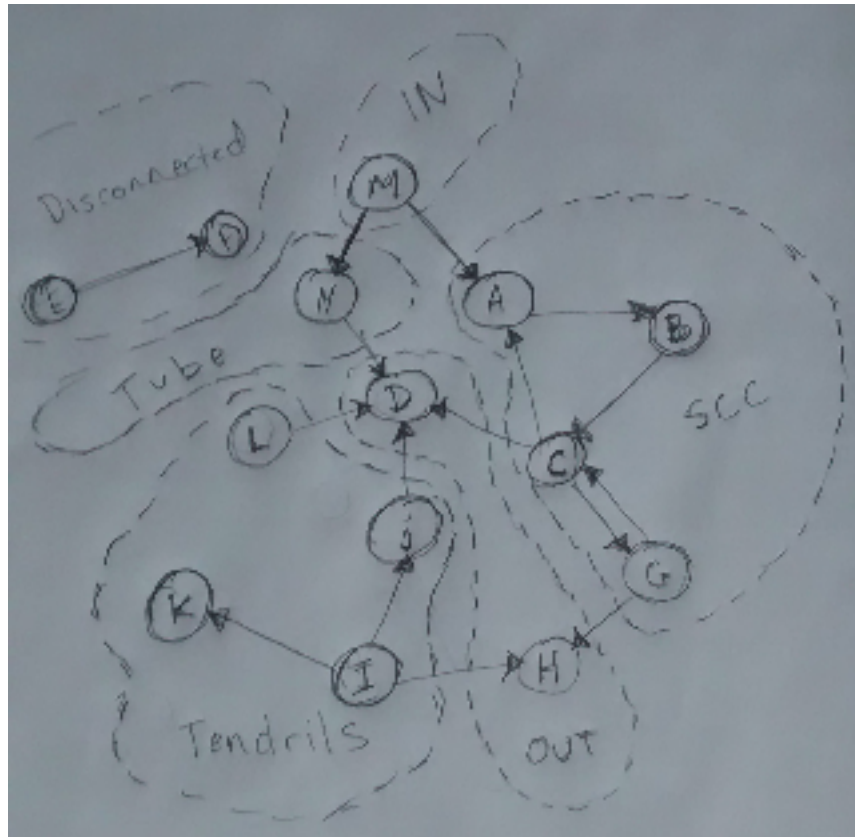
4   Part 3: Bow-Tie Graph

For part three of this assignment a graph was given. The graph was analyzed to determine which nodes of the graph satisfied the definitions for the Internet "bow-tie" structure defined in the Broder et al paper. The graph is shown below.

The analysis was done graphically as shown below.

The components of the "bow-tie" graph and the nodes in the graph that satisfied their definition are shown below.

IN : M
SCC: A, B, C, G
OUT: D, H
Tendrils: K, I, J
Tubes: N
Disconnected: E, F