Part 3: Project Writeup / Reflection

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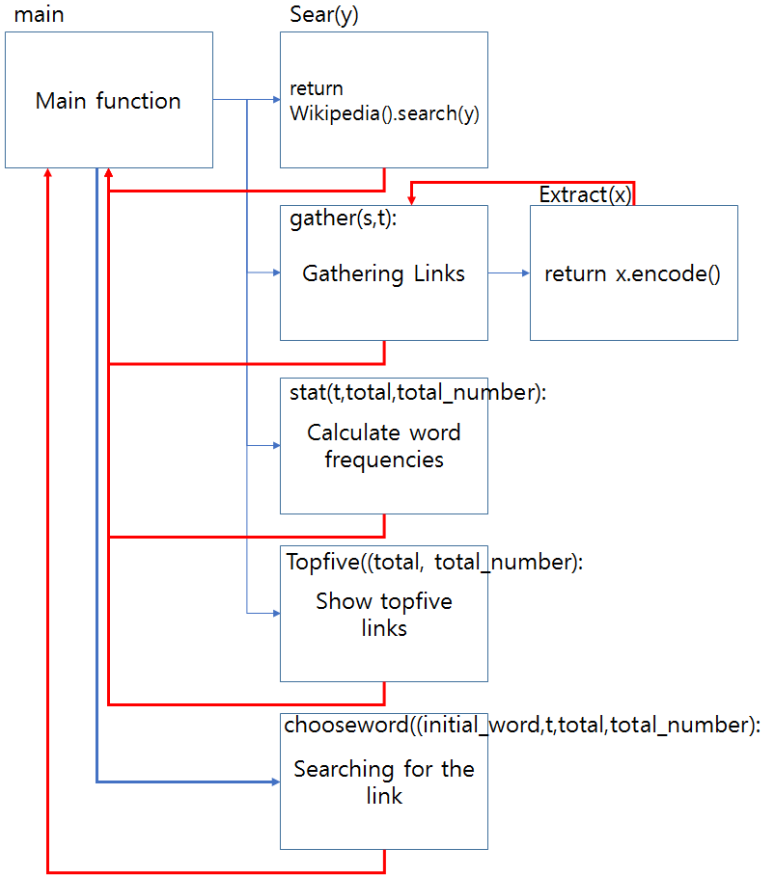
1. Project Overview: What were you trying to accomplish? What was your general approach?
   (1) I wanted to show the whole article from Wikipedia if I type words what I want to search for
   (2) Also, I wanted to represent all the links related to the article and search the link if I type the link
   (3) Lastly, I calculated the number of the links among all the links from the articles that I searched for
   (4) To do these things, I used "pattern.web" library and lists

2. Implementation: How does your code work? What libraries did you use? How would someone (for instance a NINJA) run your code? What data structures (e.g. lists, dictionaries) did you use in your program and why?
   (1) I used "pattern.web" library
   (2) Concept of Algorithm



(3) Variables
- initial_word : words that you want to search for
- t : all the links in a articles
- total : all the links in all the articles you searched for
- total_number : the number of links appeared in the whole lists of links

3. Include some examples of your program's output.

Step 1) Searching for “SBAS”

The result is

GNSS augmentation

Augmentation of a global navigation satellite system (GNSS) is a method of improving the navigation system's attributes, such as accuracy, reliability, and availability, through the integration of external information into the calculation process. There are many such systems in place and they are generally named or described based on how the GNSS sensor receives the external information. Some systems transmit additional information about sources of error (such as clock drift, ephemeris, or ionospheric delay), others provide direct measurements of how much the signal was off in the past, while a third group provide additional vehicle information to be integrated in the calculation process.

…
view_abstract.cfm?jp=j&idno=207>
* ^ http://isro.gov.in/pressrelease/scripts/pressreleasein.aspx?Jan03_2014
* ^ http://www.thehindu.com/news/national/kerala/gagan-system-ready-for-operations/article5565700.ece
* ^ GRAS advantages
* ^ US Government page on GPS augmentation systems

External links* Airservices Australia GBAS and GNSS website
* US Government page on GPS augmentation systems

The related articles :
1. Clock drift
2. Ephemeris
3. Global navigation satellite system
4. Ionospheric delay
5. DGPS
6. Satellites
7. China
…
33. Avionics
34. Celestial navigation
35. Dead reckoning
36. Inertial Navigation System
37. LORAN#eLORAN
38. Assisted GPS
39. GPS augmentation

Top five words :

1. Clock drift : 1
2. Ephemeris : 1
3. Global navigation satellite system : 1
4. Ionospheric delay : 1
5. DGPS : 1

Enter the number you want to see(0 : back) : 5

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step 2) searching for 5.DGPS(enter 5)

Differential GPS

Differential Global Positioning System (DGPS) is an enhancement to Global Positioning System that provides improved location accuracy, from the 15-meter nominal GPS accuracy to about 10 cm in case of the best implementations.

DGPS uses a network of fixed, ground-based reference stations to broadcast the difference between the positions indicated by the satellite systems and the known fixed positions. These stations broadcast the difference between the measured satellite pseudoranges and actual (internally computed) pseudoranges, and receiver stations may correct their pseudoranges by the same amount. The digital correction signal is typically broadcast locally over ground-based transmitters of shorter

range.

The term refers to a general technique of augmentation. The United States Coast Guard (USCG) and Canadian Coast Guard (CCG) each run such systems in the U.S. and Canada on the longwave radio frequencies between 285 kHz and 325 kHz near major waterways and harbors. The USCG's DGPS system has been named NDGPS (National DGPS) and is now jointly administered by the Coast Guard and the U.S. Department of Transportation's Federal Highway Administration. It consists of broadcast sites located throughout the inland and coastal portions of the United States including Alaska, Hawaii and Puerto Rico. [1]

A similar system that transmits corrections from orbiting satellites instead of ground-based transmitters is called a Wide-Area DGPS (WADGPS) [2] or Satellite Based Augmentation System.

…
* Useful DGPS Links, Databases and Resources
* Worldwide database of IALA DGPS Reference stations on an interactive map

The related articles :
1. CLAAS
2. Canadian Coast Guard
3. Global Positioning System
…
72. International Standard Book Number
73. Office of Science and Technology Policy
74. Trinity House

Top five words :

1. Wide Area Augmentation System : 3
2. Clock drift : 2
3. Ephemeris : 2
4. Global navigation satellite system : 2
5. European Geostationary Navigation Overlay Service : 2

Enter the number you want to see(0 : back) :

4. Reflection: from a process point of view, what went well? what could you improve? Was your project appropriately scoped? Did you have a good plan for unit testing?

   (1) I think that my codes show clear articles and well-arranged links of the articles

   (2) Also, I calculated the word frequencies and show the high-related words among the articles that I searched for. So, I satisfied Part1 and Part2.