**Title**

GitHub Repository Connect and Reading Commit Comments Demonstration

**Architecture**

This application written in .Net platform using C#.Net as the main programming language. It follows the Factory Method Design Pattern. Here we created object of the concrete class without exposing the creation logic to the Client and refer to the newly created object using a common Interface.

**Framework Used**

* .NET Framework 4.6.1

**Development Environment Used**

* Visual Studio 2017
* C#.Net
* Unit Testing

**Third Party Component Used**

* OctoKit.DLL (0.50.0.0)
* Log4net.DLL (2.0.8.0)

**Key Objective**

The key objective of the application are as follows:

* It takes input as Username, GitHub access token and a repository name only.
* Iterate through all the commits for the repository and retrieve each commit comment.
* For every commit comment it will search for the words (Here finding words based on delimiter single space)
* The application then applies a Binary Search Tree to sort the words in each commit comment in order based on the ASCII codes of the characters in each word
* The application will also count the occurrence of each word present in the total collection of commits.
* It will then output the words in sort order to screen along with the occurrence count for each word.
* The application will also ask user to export the total collection of words along with their occurrence count in a CSV format file.
* If user select ‘Yes’ option, it will export the collection of words.

**Assumptions**

The code is searching for set of words from individual comments and applying the sorting of words on individual comments based on the word ASCII values and then produce a total result output in this application. For each word the occurrence will count on the total collection of comments.

**Demo with Example**

Open the folder name as ‘**GitHubAccessExe**’

Click on the exe file name as ‘**GitHubApiAccess.exe’**

Enter a username attached to a valid GitHub Account

For demo enter username as ‘**sounakOffice**’

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Enter a GitHub access token attached to the user

For demo enter token as ‘**ghp\_NbDbaQMhDhEw3OWQ5sWWLziB0Ce4fs1uQskr’**

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Enter Repository Folder name

For demo enter repository name as ‘**SampleRepo**’

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Press key Enter and the wordlist with occurrence and ASCII values will appear to the screen in a sorted way per commit wise comment wise.

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User will now prompt for export option, write ‘Yes’ on the screen and the file will exported to the corresponding exe folder path

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Press enter key to exit the application.