Brick Squad Requirements

Brick Squad is required to develop a program that will allow users to accurately search through tweets on Twitter using keywords. These keywords are also known as regular expressions. The platform will use the regular expressions to pick out real-time relevant tweets from Twitter. This allows the user to obtain opinions as well as valuable information from a wide range audience.

The program requires a general purpose tweet analyzer application that is able to allow another class to be linked to perform sophisticated analysis, as well as accept regular expressions written by any customer to perform a match analysis.

The development of the general purpose Tweet analyzer requires that the program uses methods in the tweet analyzer class to analyze tweets.

Regular Expressions tweet analysis

The development of the tweet analyzer class must create a class that is able to read a file containing keywords. The text file containing the keywords must be read into an array of strings the program must then apply them producing a list of tweets that match one or more of the regular expressions being searched for. When a match is found the tweet analyzer class method will be called and the JSON text for the Tweet, and the index will be passed as arguments to the method. It will include the location of the tweet, an index of matched regular expressions, as well as the actual character string of the corresponding tweet.

Regular expression test

To test the accuracy of our tweet analyzer class, the text file created must contain regular expressions that will aid the attempt in locating terroristic activity in the United States.

Weather Forecast Tweet analysis

In order to test if the general purpose tweet analyzer application is able to allow another class to be linked with the general purpose tweet analyzer the application must be able to create a weather map from analyzing tweets and their locations from all over the United States.

Twitter Analyzer development Kit

The interface between the tweet analyzer program and the tweet analyzer class must be very well defined and documented to allow several different types of tweet analyzer classes to be plugged in to the general purpose tweet analyzer program.

Weather Forecast Interface

The class must analyze tweets from all over the United States for the corresponding current weather and produce a geographical map of the US showing the weather.

Regular Expression Interface

The class that is able to read a file containing regular expressions to apply the regular expressions to tweets must produce an interface that displays a list of Tweets that match one or more of the regular expressions.

Usability

The application will be designed to support one user and will allow a range of users so that either a technically sophisticated customer could write their own class that would be linked with the general purpose tweet analyzer to perform a specific form of analysis and the non-technical customer can use a class that accepts regular expressions written by the customer to perform a simple match analysis of tweets.

Manageability

Interactive Operations

In this program the regular expressions class must read in from a text file with a consistent directory. There will need to be an error message thrown to the user if the directory fails allowing the user to insert a text file and proceed or exit the program.

Unattended operations

The program’s weather forecast tweet analysis class is required to display a map of the United States and such areas real-time weather based on maps shown on national television shows. Doesn’t require user interaction.

Security

Authorization and Authentication

Twitter uses OAuth to provide authorized access to its API. It’s an authentication protocol that allows users to approve application to act on their behalf without sharing their password.

Application user authentication

Your signed request identifies your application’s identity in addition to the identity accompanying granted permission of the end-user you’re making API calls on behalf of.

Application-only authentication

The application makes API requests without the user context. The pool of each method belongs to the application at large, rather than from a per- user limit. API methods that support this form of authentication will contain two rate limits in their documentation.

Data Management

Specify the requirements of any information that is to be placed into a database, including JSON decoder to parse tweet data types of information used by various functions retweet level comparing accounts data entities and relationships location reports followers count Twitter account type verified or non verified.

Risk Assessment

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk** | **Risk Type** | **Probability** | **Severity** |
| No internet connection for real-time streaming tweets | Technical Risk | Moderate | Critical |
| Application does not stream tweets with internet connection | Technical / Process Definition Risk | Moderate | Critical |
| Application does not analyze tweets based off searches | Technical Risk | Moderate | Moderate |
| Unresponsive UI due to slow process | Technical Risk | Moderate | Critical |
| Tweet analyzer fails | Technical Risk | Moderate | Catastrophic |
| Weather map (proof of concept) does not present weather according to tweets analyzed | Technical Risk | Moderate | Catastrophic |
| Tweet analyzer recognizes tweets about weather but does not | Technical Risk | High | Critical |
| User cannot enter any regular expression/keywords into search bar | Technical Risk | High | Critical |
| User enters regular expressions and tweets do not produce the searched keywords | Technical Risk | High | Critical |
| User’s system has insufficient memory to efficiently execute application. | Development Environment / Product Size Risk | Moderate | Catastrophic |
| Customer: Changes requirements. | Customer Characteristics Risk | Moderate | Moderate |
| Customer: Application fails to meet expectations. | Customer Characteristics Risk | Moderate | Critical |
| Development Team: Unable to implement proposed features. | Staff Experience Risk | Moderate | Negligible |
| Development Team: Fail to meet deadline. | Staff Experience Risk | Moderate | Negligible |
| Development Team: Inexperienced staff. | Staff Experience Risk | Low | Negligible |
| Twitter unexpectedly crashes | Business Impact Risk | Low | Moderate |
| Deadlines Tightened | Business Impact Risk | Moderate | Critical |