**3. Specific requirements**

**3.1 External interface requirements**

In this project,we will get tweets and location information through out twitter, and we will keep this information in a database.We will do sentiment analysis on Turkish sentences according to the tweet contents in the database.For example, positive / negative emotions , hashtags and content (specific name , organization name, etc.).So, we decided to design windows form application for this project. The aim of the project is to develop a new algorithm to do sentiment analysis on Turkish sentences. In the scope of the project, Turkish tweets in the determined areas will be analyzed by using this algorithm to figure out the opinions of the users about the selected topics.

**3.1.1 User interfaces**

* **A Colorful Map of Turkey:** In the project we will have a map of Turkey in our home page, that shows the mood of people if they generally are sad, happy or neutral this mood will be as an emoji on the map. The colors in the map will divisible into three major colors (Red for sad mood , Green for happy mood ,Yellow for neutral mood).
* **Login Page:**An other requirement will be login page for the members or the people who want to join our application.
* **The List of Categories:** Users can access what they want to tweet the sentiment analysis in this list belong to the category ,such as health or education in tweets.

**3.1.2 Hardware interfaces**

We don’t use hardware interfaces in our project.

**3.1.3 Software interfaces**

* **C# Language:** We will code the project using C # language.
* **Visual Studio 2015:** We will use Visual Studio 2015 for Windows form application project.
* **Sql Sever Mangement Studio 2012 :**Beside this, we use Sql Sever Mangement Studio 2012 for our Databse. For our application we created some Tables which are

(Tweet,User, Katagories,Hashtag and Admin Tables).These tables are related to our application.

* **NuGet :**We code our application in C# languages in windows form and we use NuGet as a provided library and some other like (using system linq) which are necessary for web.
* **GitHub:** GitHub which is a Web-based Git repository hosting service besidde this we use SoureTree so, we can design and code,and creating developer tools exactly where we want to be.
* **DevTwitter:** We take a twitter account for our application which names is (proje20152016) and we mach it with DevTwitter which is a brows that makes the tweets visible.

**3.1.4 Communications interfaces**

* **Email and Phone Number:**We will use the Email and the phone number of members in our application and get the Email form their so, we can keep in touch with them and when they be a member to our application.
* **Hashtag :** Users can add hashtag to our application and then the admin of our application will aprove it, if it is a approval hashtag.

**3.2 System features**

**3.2.1 Collect Twitter Data**

**3.2.1.1 Introduction/Purpose of feature**

The system should collect Tweets according to the keyword or hastag and specific date range provided by the user.

**3.2.1.2 Stimulus/Response sequence**

**i.** User enters keyword or hastag

**ii.** User chooses date range

**iii.** Send request to the Twitter Servers

**iv.** Get the Tweets related with the keyword or hashtag

**3.2.1.3 Associated functional requirements**

**3.2.1.3.1 Functional requirement 1**

User should enter keyword or hastag to the textbox

**3.2.1.3.2 Functional requirement 2**

User chooses date range from the date pickers

**3.2.1.3.3 Functional requirement 3**

System should send hashtag or keyword to the Twitter Servers in order to get corresponding tweets.

**3.2.2 Sentiment Analysis**

**3.2.1.1 Introduction/Purpose of feature**

Tweets that is collected will analyzed according to the Turkish algorithm and it obtained a result that expresses sentiment like positive,negative or neutral emotion.

**3.2.1.2 Stimulus/Response sequence**

**i.** Turkish tweets

**ii.** Tweet cleaning

**iii.** Tweet analysis

**iv.** Sentimental result

**3.2.1.3 Associated functional requirements**

**3.2.1.3.1 Functional requirement 1**

Tweets that are in the Turkish language can be transferred to the system.

**3.2.1.3.2 Functional requirement 2**

The content of tweets is cleaned suitably in Turkish.

**3.2.1.3.3 Functional requirement 3**

Tweets will analyzed via the Turkish algorithm that are designed.

**3.2.1.3.3 Functional requirement 4**

It gives a result that expresses the sentiment of the sentence.

**3.3 Performance requirements**

**-** The system should handle all related tweets about the searched keyword or hashtag in XXX minutes.

**-**The system should handle all related tweets if tweet number is too hashtag or words entered by the user in XXX minutes.

**-**The system should handle all related tweets if tweet number is very little hashtag or words entered by the user in XXX minutes.

**3.4 Design constraints**

System designed on the windows forms application.There are categories that organized according to the requests of the company in application screen.Users can see the tweets of hashtag and the word belong to these categories. The system analyze the tweets of hashtag and the word belong to these categories.Therefore, user can see only the sentiment analysis of tweets belong to this categories.

* 1. **Software system attributes**

Using C# Language**:** We code the project by using C # language.

Using Visual Studio 2015**:** We use Visual Studio 2015 for Windows Form Application project.

Using Sql Sever Mangement: we use Sql Sever Mangement Studio 2012 for our Databse. For our project, we created some Tables which are (Tweet,User, Katagories,Hashtag and Admin Tables).These tables are related to our application.

Using NuGet: We code our application in C# languages in Windows Form App. and we use NuGet as a provided library and some other like (using system linq, using LinqToTwitter) thus, we can get the API .

Using API: The Twitter API is built using Representational state transfer (REST). This process used to be as simple as typing a URL into a browser.

Getting Geographical Information: we can obtain info on places associated with geographical information.

Using GitHub**:** GitHub which is a Web-based Git repository hosting service besidde this we use SoureTree so, we can design and code,and creating developer tools exactly where we want to be.

Using DevTwitter**:** We take a twitter account for our application which names is (proje20152016) and we mach it with DevTwitter which is a brows that makes the tweets visible.

**3.6 Other requirements**