|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SOFTWARE REQUIREMENT SPECIFICATIONS**  Buzz Analytica  Version: 1.00   |  |  | | --- | --- | | Supervisor | Khalid Rasheed | | Co Supervisor (if any) | Dr Imran Amin | | Project Team Members | Babar Hussain(GL) 1212148  Ruttab Haroon Qureshi 1212124 | | Submission Date |  | |

Document History

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Name of Person** | **Date** | **Description of change** |
| 1.0 |  |  | Initial draft created. |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Distribution List

[Following table will contain list of people whom the document will be distributed after every sign-off]

|  |  |  |
| --- | --- | --- |
| **Name** | **Role** | |
|  | | Supervisor |
|  | | Co- Supervisor |
|  | |  |

Document Sign-Off

[Following table will contain sign-off details of document. Once the document is prepared and revised, this should be signed-off by the sign-off authority.

Any subsequent changes in the document after the first sign-off should again get a formal sign-off by the authorities.]

|  |  |  |
| --- | --- | --- |
| **Version** | **Sign-off Authority** | **Sign-off Date** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**Table of Contents**

[1. Introduction 7](#_Toc399255707)

[1.1. Purpose of Document 7](#_Toc399255708)

[1.2. Intended Audience 7](#_Toc399255709)

[1.4 Document Convention 7](#_Toc399255710)

[2. Overall System Description 8](#_Toc399255711)

[2.1. Project Background 8](#_Toc399255712)

[2.2. Project Scope 8](#_Toc399255713)

[2.3. Not In Scope 8](#_Toc399255714)

[2.4. Project Objectives 8](#_Toc399255715)

[2.5. Stakeholders 8](#_Toc399255716)

[2.6. Operating Environment 8](#_Toc399255717)

[2.7. System Constraints 8](#_Toc399255718)

[2.8. Assumptions & Dependencies 8](#_Toc399255719)

[6. External Interface Requirements 12](#_Toc399255720)

[6.1. Hardware Interfaces 12](#_Toc399255721)

[6.2. Software Interfaces 12](#_Toc399255722)

[6.3. Communications Interfaces 12](#_Toc399255723)

[7. Functional Requirements 13](#_Toc399255724)

[7.1. Functional Hierarchy 13](#_Toc399255725)

[7.2. List of all functional requirements 13](#_Toc399255726)

[7.3. List of Actors and Use Cases 13](#_Toc399255727)

[7.3.1. Use case diagram and use case description 13](#_Toc399255728)

[9. List of Non-functional Requirements 15](#_Toc399255729)

[9.1. Performance Requirements 15](#_Toc399255731)

[9.2. Safety Requirements 15](#_Toc399255732)

[9.3. Security Requirements 15](#_Toc399255733)

[9.4. User Documentation 15](#_Toc399255734)

[10. References 16](#_Toc399255735)

[11. Appendices 17](#_Toc399255736)

1. Introduction

* 1. Purpose of Document

The purpose of this document is to outline the requirements for the document and to outline the basic specifications and the guidelines this project is meant to follow.

* 1. Intended Audience

The intended audience of the document is the internal team, the supervisor and everyone else directly or indirectly linked to the development of the project.

**1.3. Abbreviations**

**1) CRM:** Customer Management

**2) SQL: S**tructured **Q**uery **L**anguage

* 1. Document Convention

The document will be confined to the default Arial font with size 10; and where appropriate, certain important items will be marked in **bold.**

1. Overall System Description
   1. Project Background

Buzz Analytica is CRM-based software for the analysis of customers of any company. Buzz Analytica consist of two main parts: Live analysis and Database analysis. In live analysis “live data” will be pulled from Twitter using the APIs and from here we could analyze any user for instance their tweets, retweets, favorites, word clouds, heat maps etc. The tool also provides live sentiment analysis of a user.

In Database analysis, we can store the tweets of an user and then analyze their tweets without the need of internet.

* 1. Project Scope

Buzz Analytica is an analytical tool that analyzes tweets, sentiment etc.

The scope of this project is:

1. Performing sentimental analysis on customer’s data obtained from selected social media sites like Twitter.
2. Clients will be able to see “the popular trends” globally and country wise
3. Generating Heat maps
4. Generating Followers and Following maps
5. Generating likes, favorites and retweeted maps
6. Generating Word Cloud
   1. Not In Scope

Data from Facebook is not included in the scope. Sentimental analysis will be done using data in English and Roman Urdu Language only.

* 1. Project Objectives

**The objective of this project is to provide clients with a CRM based service. This service can be used by the clients to check and make important business decision based on what their customers think about their products, which product is the most popular where, which product is disliked etc. This information can be used by the companies to further improve and enhance their business strategies and increase their profits. Furthermore clients can make the important decision to pullout from a market where their generating loses from.**

* 1. Stakeholders

The prime stakeholders are

* Clients who will be using this projects to gain an understanding of what their customers think about their products.
* Developers of this project
* Consumer whose data( tweets etc.) would be used for sentimental analysis
  1. Operating Environment

1. **Operating environments for the backend include:**
   * 1. Social Media website APIs like Twitter API
     2. PostgreSQL
     3. Microsoft Visual Studio
     4. R Studio
     5. Bing API
2. **Operating environments for the frontend include:**
   * 1. An Intel Core2Duo or later system.
     2. Windows 7 or later **|** MAC OSX 10.6 or later **|** Linux 2.6 or later.
     3. An internet connection
     4. A recent version of any modern web browser.
   1. System Constraints

* Need a device with an internet connection
  1. Assumptions & Dependencies
* Consumers will be posting about a company’s product on social media websites.
* Internet service would be available 24/7 to the clients

1. **Project Feasibility Analysis**
   1. **Economic Feasibility**

Clients will be able to make good business decisions based on their customer data sentimental analysis and will be able to increase profits.

* 1. **Technical Feasibility**

After a detailed assessment of the design and requirements of Buzz Analytica we have determined that we do possess all the technical expertise to handle completion of this project.

* 1. **Operational Feasibility**

Buzz Analytica is more than capable of fulfilling the client’s requirements as it will generate correct and precise analysis of consumer data which than can be used by the companies to improve or later their business decisions and marketing strategies to increase profits.

* 1. **Schedule Feasibility**

Buzz Analytica will be completed within a years’ time.

* 1. **Conclusion of Feasibility Analysis**

Buzz Analytica is a feasible project. To complete the project we possess the required experience and expertise and will complete the entire project in a year time. Buzz Analytica will fulfill all the requirement of our clients and will enable them to make business decisions and marketing strategies which will doubtfully increase profits

1. **Primary and Secondary Research**
   1. **Primary Research**
      1. **Observation**

Sentimental Analysis is primarily used to gain consumer opinion. Companies can utilize this to gain an understanding of their consumer’s behavior and opinion. Companies than would be able to either change or come up with new marketing strategies to gain profits.

* + 1. **Interviews**

We didn’t conduct Interviews

* + 1. **Rationale for Interviews**

We didn’t conduct Interviews

* 1. **Academic Research**
     1. **Development Methodology**
        1. **Appropriate Methodologies available**
* Waterfall
* Extreme Programming (XP)
* Prototyping
  + - 1. **Selection of Methodology**

We are using Waterfall methodology

* + - 1. **Methodology Reasoning**

Progress is more easily measured, as the full scope of the work is known in advance. The entire design of the system is also completed early in the software development cycle.

* + 1. **Development Tools (font end and Back end)**

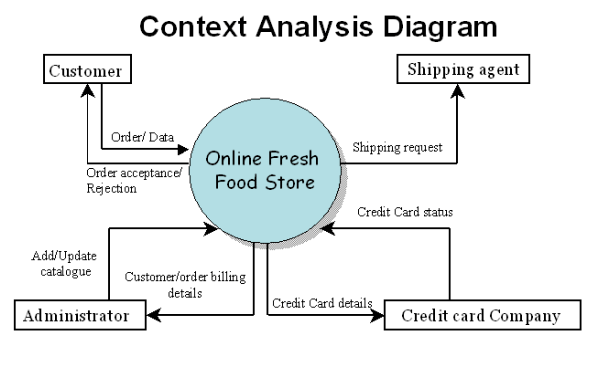
Front End: Visual Studio and Dev Express

Back End: R Studio, PostgreSQL, Visual Studio 2013, R language, C#

1. **Context Diagram**

[Place a system level context diagram here. Below is an example of System Context diagram of an online Food Oder system.

]



1. External Interface Requirements
   1. Hardware Interfaces

A personal computer with a good internet connection

* 1. Software Interfaces

A device running modern OS and a recent version of any popular browser.

* 1. Communications Interfaces

**TCP/IP** protocol for internet connection to open the website and to receive emails.

1. Functional Requirements
   1. Functional Hierarchy
   2. List of all functional requirements

* Performing sentimental analysis on customer’s data obtained from selected social media sites like Twitter
* Clients will be able to see “the popular trends” globally and country wise
* Generating Heat maps
* Generating Followers and Following maps
* Generating likes, favorites and retweeted maps
* Generating Word Cloud
  1. List of Actors and Use Cases
     1. Use case diagram

1. **Proposed Objects List from Use Cases**

[This step is accomplished by reviewing each use case to find nouns that correspond to business entities or events. Each noun that is found in reviewing the use case is added to a list of potential objects that will be analyzed further.]

1. **Initial Class Diagram**

[With the help of identified objects develop an initial class diagram here which will be the base of your next design phase.]

1. List of Non-functional Requirements
   1. Performance Requirements

Buzz Analytica will fulfill all the requirement of our clients and will enable them to make business decisions and marketing strategies which will doubtfully increase profits. The system will provide highly accurate, concurrent and precise data. The system will provide and reliable fast sentimental analysis of user data. Buzz Analytica is very reliable and gives no performance issues.

* 1. Safety Requirements

A safeguard to prevent loss of data is to create and keep backups. Also all users would need to login to use the system.

* 1. Security Requirements

A user login system will be used to authorize and authenticate users.

* 1. User Documentation

A SRS and SDD will be delivered on completion of this project

1. References
2. Appendices

[This section should include supporting detail that would be too distracting to include in the main body of the document.]