**Software Requirements Specification**

For

Bengali Newspaper

Prepared by

Fazla Rabbi Sajid – 1513155642

Rayhan Bappy - 1520824042

Md. Rakibul Kabir Khan – 1631789042

Zubaer Ahmed - 1711218042

*North South University*

*Software Engineering (CSE-327)*

***Submission Date:***

***07 July, 2021***

**Table of Contents**

**1 Introduction3**

1.1 Purpose3

1.2 Intended Audience3

1.3 Intended Use3

1.4 Product Scope3

1.5 Risk Definition3

**2 Overall Description4**

2.1 User Classes and Characteristics4

2.2 User Needs4

2.3 Operating Environments4

**3 External Interface Requirements5**

3.1 Functional Requirements5

3.2 Non Functional Requirements7

**Appendices 9**

A Glossary9

**Chapter 1**

Introduction

* 1. **Purpose**

Purpose of Software Requirements Specification (SRS) is to describe the specification and description of our project “Bengali Newspaper”. This Software Requirements Specification illustrates, in clear terms, the system's primary uses and required functionality so that the clients and other developers can easily understand what we did and how to change anything if it is required.

* 1. **Intended Audience**

The intended audience of this document would be Clients, Developers and Project Manager who will evaluate the project. As such, this document was written in plain English with little to no technical terminology so that anyone interested in the “Bengali Newspaper” project can easily read this SRS. This document contains who this application is for, how and where it will run and what it can do. It is recommended that the SRS be read sequentially according to the index given previously.

* 1. **Intended Use**

The SRS contains this software’s description, requirements ans other functional and non-functional requirements. Readers are requested to read SRS documents in the given sequence.

* 1. **Product Scope**

The purpose of this software is to make the smartphones and internet more accessible to the old people who are interested to read the newspaper but face problems browsing the internet, often have visionary problems. The objective of the application is to bring news from the trusted sources very easily to the user so that the users don't have to take the trouble to search up these news. No such application is yet on the market for competition.

* 1. **Risk Definitions**

We are creating a software that will try to help people by bringing news from trusted sources. There is no risk in our software as it will work as a third party between the news source and the user.

**Chapter 2**

Overall Description

**2.1 User Classes and Characteristics**

The software will be mainly focused onto the user, user will be able to use the software with or without signing in. The admins job is preliminary straight forward, they can update the scripts when ever the newspapers upgrade their style format and due to the security issues the admins won’t be able to access the data of the users. Users will be able to use the voice search command to search for their desired news and listen or read it as they want.

**2.2 User Needs**

* Provides news from different trusted newspaper sources.
* Users can listen to any news.
* Users can search news using their voices.
* Users can check the source of the news.
* Users can visit the official link of the news if they want.
* Users can stop and switch to any other news.

**2.3 Operating Environments**

The operating environment of **Bengali Newspaper** is listed as follows:

* Distributed Database
* Client/Server System
* Operating System: Any system that supports a modern web browser
* Database Configuration: SQLite3
* Platform: Any Platfrom

**2.4 Constraints**

* There might be an issue with the newspaper website as they block scraping crawler mistakenly.
* The system shall be available for 99.99% of the time.
* The Software is fully web crawling dependent.

**2.5 Assumptions**

* User must reliable internet connection.
* User knows how to operate web application
* User will use the software from a noise free environment.

**Chapter 3**

External Interface Requirements

**3.1 Functional Requirements**

1. **As a** user

**I want to** sign up to the system

**So that,** I can log in to the system.

**Confirmation**

* User has to put some details such as Username, First Name, Last Name, Email, Password and Retype password.
* System will alert user if any existing user with same username exists. User has to choose a new username.
* System will alert user if password length is less than eight digit or too common. User has to choose a new password which contains equals or more than eight digit.
* System will alert user if password and retype password don’t match. User has to put them again correctly.

1. **As a** user

**I want to** login in the system

**So that,** I can access full feature of the website.

**Confirmation**

* User must enter his/her username and password.
* System will alert user if entered username don’t match with existing usernames. User has to put the correct username.
* System will alert user if password is incorrect. User has to put the correct password.

1. **As a** user

**I want to** use voice search to find news

**So that,** I can listen to my preferred news.

**Confirmation**

* User has to click on ‘Speak’ button.
* System will ask user/browser for microphone use permission. If browser doesn’t give permission automatically, then user must give permission from the browser promt.
* User need to say something in bengali language to search.

1. **As a** user

**I want to** see the dashboard of the website

**So that,** I can see news and other details.

**Confirmation**

* User has to click on ‘Latest News’ button.
* User will be able to see the latest news in dashboard page.
* User can search news from the dashboard if he/she wants.

1. **As a** user

**I want to** listen to my preferred news

**So that,** I can enjoy and learn the details of a news.

**Confirmation**

* User must click on ‘Details’ button for a specific news to start listening to a specific news.
* System will alert browser to play an audio.
* If user want to stop hearing, then he/she must click on ‘Details’ button to stop listening to a specific news.

1. **As a** user

**I want to** see source and date-time for a specific news

**So that,** I can learn about the news.

**Confirmation**

* User will be able to the date-time and source newspaper name with the headline for a specific news.
* If user wants to visit the source link, then he/she must click on the button which has newspaper name.

1. **As a** user

**I want to** reset password

**So that,** I can log in to the system again as I’ve forgot my password.

**Confirmation**

* User has to put email to identify his account.
* System will generate a message and send it to the specified email.
* System will alert user if the entered email doesn’t exists in the database.

1. **As a** user

**I want to** logout

**So that,** I can be out of the system.

**Confirmation**

* User has to click on ‘Log Out’ button.
* System will alert browser to show a confirmation.
* If user will be logged out if he/she clicks on ‘OK’ on the confirmation.

**3.2 Non Functional Requirements**

**Performance Requirements**

Any Interface between a user and software shall have reasonable response time based on Intranet connection

**3.2.1 Prominent search feature**  
TITLE: Prominent search feature  
OVERVIEW: The search feature should be prominent and easy to find for the user.  
PURPOSE: In order to find the search feature easily for a user.  
DEP: none  
  
**3.2.2 Usage of the Google API**  
TITLE: Usage of the API  
OVERVIEW: Using Google Text to speech and Speech to text API's  
PURPOSE: To convert the user voice into text and use the text for search, and also using Speech to text for listening the news article  
DEP: none  
  
**3.2.3 Response time**  
TAG: Response Time  
GIST: The fastness of the search  
SCALE: The response time of a search  
METER: Measurements obtained from 1000 searches during testing.  
MUST: No more than 2 seconds 100% of the time.  
WISH: No more than 1 second 100% of the time.  
  
**3.2.4 System dependability**  
TAG: System Dependability  
GIST: The fault tolerance of the system.  
SCALE: If the system loses the connection to the Internet or missing any sensor, the user should be informed.  
METER: Measurements obtained from 1000 hours of usage during testing.  
MUST: 100% of the time.

**Safety Requirements**

To ensure no data is lost in case the user decides to change devices or if the user's device is extensively damaged all data will be stored in Google cloud storages. This will allow safe storage and easy accessibility from anywhere.

**Security Requirements**

The System shall not disclose any personal information about the users. The Application shall not grant access to an unauthorized user and the Application shall not communicate with any other devices or servers while in use by the user.  
In addition to that users must refrain from uploading any sensitive information such as credit card info, id or any personal information that is not required.

**3.2.5 Communication Security**  
TAG: Communication Security  
GIST: Security of the communication between the system and server.  
SCALE: The messages should be encrypted for log-in communications, so others cannot get user-name and password from those messages.  
METER: Attempts to get user-name and password through obtained messages on 1000 log-in session during testing.  
MUST: 100% of the Communication Messages in the communication of a log-in session should be encrypted.  
Communication Messages: Defined: Every exchanged of information between client and server.  
  
**3.2.6 User Account Security**  
TAG: User Create Account Security  
GIST: The security of creating account for users of the system.  
SCALE: If a user wants to create an account and the desired user name is occupied, the user should be asked to choose a different user name.  
METER: Measurements obtained on 1000 hours of usage during testing.  
MUST: 100% of the time.

Appendix A: Glossary

Definitions, acronyms, and abbreviations are listed below:

|  |  |
| --- | --- |
| **Term** | **Definition** |
| User | Someone who interacts with the mobile phone application |
| Admin/Administrator | System administrator who is given specific permission for managing and controlling the system |
| User | Someone who can see news |
| Admin | fsdafsadfsdf |
| DEP | Dependency |
| PFR | Primary Functional Requirements |
| SFR | Secondary Functional Requirements |
| TAG | A unique, persistent identifier contained in a Language statement [2] |
| GIST | A short description to help understanding [2] |
| SCALE | The scale of measurement used to quantify the statement [2] |
| METER | The process or device used to measure using the SCALE [2] |
| MUST | The minimum level required to avoid failure [2] |
| PLAN | The level at which success can be claimed [2] |
| WISH | A desirable level of achievement [2] |

* API: Application Protocol Interface. This is the part of a program that lets other programs or services interact with the data in the former and vice versa.
* Framework: It is like the base of a program that provides generic functionality but can be custom built for specific purposes
* Backend: The part of an app service that works behind the scenes away from the user's device, usually in the cloud (server computer owned by the company)
* Proprietary: Owned by that particular company/person etc.