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Software Requirement Specifications

3-D Newspaper

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# 1 Introduction

## 1.1 Purpose of Document

The software requirements of 3-D Newspaper 1.0 are specified in this document. This SRS covers the whole project. It provides a general overview of the system. This SRS will later be used to refer to ensure a proper pathway.

## 1.2 Introduction to 3-D Newspaper

The product serves as replacement to the current digital newspaper reading system. The 3-D Newspaper is basically an interactive app for newspaper reading.

Since reading a newspaper in mobile is in 2D by normal scrolling, it is much farther away from being close to reality. For a human to be comfortably read the digital newspaper it must be close to reality. Hence, the objective of this newspaper is to make an app closer to reality by employing 3D way to handling things. This will be achieved by displaying the digital newspaper in the form of a manupable polyhedron.

The main objective is to ensure the app is closer to reality and user’s comfort.

**Objectives of the app :**

1. Bring the digital newspaper reading closer to reality by employing 3D navigation system.
2. A navigable polyhedron using mouse gestures.
3. Interactive access of each and every surface of the polyhedron(each headline) with zoom in and out capabilities.
4. A topic wise 3D polyhedrons. Rating and save capability.

## 1.3 Product Scope

The scope of this project ranges from children reading sports news to adults reading political and international news. As the society is rapidly growing towards smart phones any user having a smartphone can use this app to read digital newspaper from anywhere as long as he has internet connection. As we intend to make the app available in different regional languages, every user capable of reading in their own language is capable of using this.

The sponsors for the app include all the newspaper companies and blog communities

# 2 Overall Description

## 2.1 Product Functions

* User class based login
* Profile management
* Search by text and voice
* Narration features of articles
* Page features
* E-wallet for paying subscriptions
* Suggestions module involving Notifications and Trending news
* Friendship module enabling recommending of newspaper articles

## 2.2 User Class and Characteristics

2.2.0 Admin: This user has root privileges and he/she can add or remove new newspaper channels

2.2.1 Reader: This reader can subscribe to multiple channels by paying monthly. And can access the articles of subscribed news channels.

2.3 References

* The IEEE Software Requirement Specifications template
* <https://en.wikipedia.org/wiki/Software_requirements_specification> website for template reference
* NPTEL webiste for software requirement specifications documents:

<http://nptel.ac.in/courses/106105087/>

# 3 Functional Requirements

## 3.1 Signing Portal

**3.1.0 Sign In Module:**

**Input:** Username, Password and User class

**Output:** Login access to the account of the concerned user

**Description:**

This module is to sign in to the concerned account of the user based on this class

**3.1.1 Sign Out Module:**

**Input:** Mouse click for signing out

**Output:** Redirect the app to the sign in/up page by logging out.

**Description:**

This module is to sign out from the account of the app.

**3.1.2 Sign Up Module:**

**Inputs:**

* First, Middle, Last name of user
* E-mail address, User class
* Password

**Output:** Creates an account for the user

**Description:**

This module is to sign up for the app and create a personal account for the user.

**3.1.2.0 Profile Creation Module:**

**Input:**

* Phone number
* Profile picture

**Output:** The profile of the user is updated duly

**Description:** This profile is to update the personal details which is useful for sending notifications and recognising the specific user.

**3.1.2.1 Star topics selector:**

**Input:** Topics of news to be selected as their prioritized topics

**Output:** The topics are saved as the prioritized topics for the user

**Description:** This module is used for selecting topics of reading newspaper. This is useful for showing the content of the selected topics first for more ease.

## 3.2 Profile Management

**Description:** This module is for customizing the app in accordance with their own comforts.

**3.2.0 E-wallet:**

**Description:** This module is used for keeping money in the app’s wallet. And this money will be used for the subscriptions of news channels

**3.2.0.0 Add money:**

**Input:**

* Amount of money to be added to the wallet
* Type of transaction, Bank, account details

**Output:** First off, the app will be directed to bank transaction site. And then the money will be added to the wallet

**Description:** This module is to add money to the wallet.

**3.2.0.1 Restore money:**

**Input:** The amount to be restored to the bank and account details

**Output:** The set amount of money will be transferred to the bank

**Description:** This module is to send back the money to the bank.

**3.2.1 Language Module:**

**Input:** His choice of language to read the newspapers

**Output:** The news articles will be displayed in his choice of languages

**Description:** This module is used for enabling the users to read the articles in their comfort zone.

**3.2.2 Subscription Module:**

**Input:** His input for subscribing to a specific newspaper channel

**Output:** The user will be subscribed to the channel by taking amount from the E-wallet

**Description:** This module is for subscribing to a news channel.

**3.2.3 Password change:**

**Input:**

* HIs original password of his account
* A new password for his account

**Output:** His password will be changed to his new one

**Description:** To change password of his account.

**3.2.4 Font Module:**

**Input:** The change of font for the articles

**Output:** The font of the articles will be changed accordingly

**Module:** This module enables user to set the font in accordance with their comfort.

## 3.3 Gestures Module

**3.3.0 Polyhedron Navigation:**

**Input:** The swipes of the finger on the polyhedron

**Output:** The polyhedron will be rotated along the axis perpendicular to the swipe

**Description:** This module is for navigating along the polyhedron for watching the headlines.

**3.3.1 Article Navigation:**

**Input:** Pinch in/out of fingers, swipe up/down/left/right

**Output:**

* Pinch in/out: The article is zoomed in/out
* Swipe up/down/left/right: The article is scrolled along up/down/left/right

**Description:** This module is for navigating along the article.

## 

## 3.4 Page Features

**3.4.0 Views Module:**

**Input:** The user visits an article

**Output:** The no. of views of this corresponding article will be increased by 1

**Description:** This module is to keep count for the views of the article.

**3.4.1 Up/Down Vote Module:**

**Input:** The user Upvotes/downvotes the article

**Output:** The no. of upvotes/downvotes will be updated accordingly

**Description:** This module is to keep count of upvotes and downvotes.

**3.4.2 Comments**

**Input:** The user comments on the article

**Output:** The comments will be there for the article for the other people to see

**Description:** This module enables the users to comment on articles.

**3.4.3 Narration Speech:**

**Input:** The user asks for narrating the article and the accent of narration

**Output:** The article will be narrated in the requested accent

**Description:** This module is for narrating the article

**3.4.4 Bookmarks and Highlights:**

**Description:** This module is to keep Bookmarks and highlight the important paragraphs.

**3.4.4.0 Add Bookmark Module:**

**Input:** The user click the article for bookmarking

**Output:** The article will be bookmarked

**Description:** This article is to add the article to bookmarks.

**3.4.4.1 View Bookmarks Module:**

**Input:** The user navigates through bookmarks and selects a bookmark to see

**Output:** The user will be shown the selected bookmarked article

**Description:** This module is for viewing the added bookmarks.

**3.4.4.2 Delete Bookmarks Module:**

**Input:** The user selects a bookmark for deleting the bookmark

**Output:** The selected bookmark will be deleted

**Description:** This module is for deleting some or all bookmarks.

**3.4.4.3 Highlighting Module:**

**Input:**

* The user selects paragraphs
* The user selects the color to be highlighted for the selected paragraphs

**Output:** The selected paragraphs will be highlighted according to the selected color

**Description:** The user might want to revisit some important point so he can highlight them. This module is for highlighting some selected paragraphs. **This works only for bookmarked articles.** As the whole purpose of highlighting is to revisit the article those must be bookmarked.

3.5 Friendship Module:

**Description:** This module is to make friends with the other users. Between friends, in this app they can see their subscriptions to news channels. And if they have common subscribed channels they can view their bookmarks and comments.

**3.5.0 Add friend:**

**Input:** The user selects the option for sending friend request

**Output:** A friend request will be sent to the other user

**Description:** This module is for sending friend requests to users

**3.5.1 Accept request:**

**Input:** The user accepts the request

**Output:** The two users will become friends

**3.5.2 Delete Friend:**

**Input:** The user choses to delete/remove a friend from user’s list

**Output:** The user will be deleted from the friend list

**Description:** This module is for deleting friends from your friend list.

3.6 Search Module:

This module is to search for other users, news channels and news articles

**Input:**

* The user inputs what he wishes to search
* The user inputs the search is whether for

-> News articles

-> News channels

-> Friends or other users

**Output:** The search will be done according to the details given by the user

**Description:** This module is for searching.This module is to search for other users, news channels and news articles.

**3.6.0 Search by Voice:**

**Input:** The user selects the option for voice searching and the language

**Output:** This module takes in the request for search and converts speech to text. And this text will be fed to the search module for searching

**Description:** This module is for the user to search by voice.

**3.6.1 Search by Text:**

**Input:** The user selects the option for text searching and the language

**Output:** This module takes in the request for search by text.

**Description:** This module is for the user to search by text.

3.7 Suggestions:

**Description:** This module is for two things.

* For Trending News
* Notifications to the phone and email address

**3.7.0 Trending News:**

**Input:** The user asks for Trending News

**Output:** The app shows him the current Trending News

**Description:** This app is to views the Trending News across the world.

The trending news is selected by two things:

* First thing is by the total no. of views on the articles.
* Second thing is by the total no. of upvotes for the articles.

**3.7.1 Notifications:**

**Input:** No input by user, the stimulating factor is whenever a new thing comes up in Trending News section or whenever someone comments on bookmarked articles or whenever the app has a new update or a new feature.

**Output:** The notification will be sent to the email and phone of user.

**Description:** This module is for sending notification regarding the app.

# 4 Non-Functional Requirements

4.1 Security Requirements

**4.1.0 Captcha generation:** Security feature to prevent bot logins

**4.1.1 Money Transactions:** The money transactions will be done along customized two layers secured portal using otp to mobile and a password enabling to be absolutely secure

4.2 Software Quality Attributes

**4.2.0 Adaptability**

The software shall be able to run on Android, iOS, Windows, Blackberry platforms.

**4.2.1 Usability**

* There will be a user guide for navigating through the app. It pops up the first time the app starts and briefs the user with the functionalities making the user fluent with the app.
* The user guide also has specific tutorials at specific points in the user guide to make the user habitual with the app. E.g- to add money to ewallet.
* When the user complete certain percentage of the app exploration the guide pops up to tell about that. Like when a user subscribes to a channel for the first time then the guide pops up telling the details about how to navigate through the channel.
* The user guide can be initiated at any time later, if in case the user forgets about certain functionalities of the app.

And the app fairly usable after all, the purpose of the app is to be able to be interactive and that means it is easier to use for normal people. So usability is pretty much easy.

**4.2.2 Testability**

The software would be testable so as to take care of any possible errors and handle them. We will send the app for beta testing to beta users and can get data on errors if any.

**4.2.3 Maintenance**

The app will be regularly monitored for bugs and users are enabled to send error reports and will be updated.

So based on user reports and tester’s bugs we can improve both usability and functionality.

Whenever there is an update there will be a message displaying the new things employed in the system.

**4.2.3 Reliability**

The news uploaded on the apps will be first checked for authenticity. And also news

containing profane news/media will not be uploaded on the app. The app will run on all android device with android 4.0.1(Jellybean) and above.

**4.2.4 Supportability**

* All code will be written as specified by the standard *mixedcaps* convention.
* Appropriate documentation and indentation will be provided for enhancing readability of the code similar to the PEP8 standard.

**4.2.5 Legal, Copyright and Other Notices**

* The code of the app is closed-source and hence is prohibited to be sold/tampered with or copied.
* The information provided by the user is highly confidential. Any external attack on this data will be dealt with strict action in the court of law.
* The name of the app will be copyrighted and hence shall not be used to name some other product.
* Initially, the app will be available in the SAARC countries.

4.3 Assumptions and Dependencies

* User’s mobile has a fairly good internet.
* The User is fluent and can read at least on language supported by the app.
* The User has a basic knowledge as to how to use a smartphone.
* The User has a working email address.

# 5 Appendix: Survey data