

A
Project Report
On
News By Tag
(<http://newsbytag.herokuapp.com>)

B.Tech (CE) Sem-VI

In fulfillment of all requirements for

Bachelor of Technology

In

Computer Engineering

SEM VI

In the Subject of

System Design Practice

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CERTIFICATE

This is to certify that the project carried out in the subject of System Design Practice entitled “News By Tag” and recorded in this report is a work of

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Abstract

In the era of digitization, everybody has access to online news via various websites or applications, which shows an overview of all types of breaking news. That's fine with regular use, but in this type, user irritates with many irrelevant news. So many users every time searches their favorite topics on the internet, which is waste of time.

The solution to this limitation is one can tell their favorite topics and the system will store that topic in that user's account and give only news relevant to that respective topic. Also that topics will be updated frequently, so when the user comes next time, directly from user's account, user can select any previously entered topic and see new breaking-news.

This is the aim of this project and by this, it will save the time of the user and increase knowledge in the direction user wants.

CHAPTER: 1

INTRODUCTION

1. Introduction

1.1 Project Details: Introduction

Most of the news publishers give collections of news in the very high level of categories like business, art, politics etc. But most of the users want only news of very specific topics that interest them. Because of this, they end up searching this topic on the internet everywhere, they find possibility. Which is completely time consuming and inefficient process.

So, the aim of this project “News By Tag” is to solve this problem by giving users only news of topics, they want and ease out the process of reading relevant news.

The system will work like following. It will store all favorite topics of the user and update it, every time new news comes respectively to that topic. So the user does not have to go every time everywhere on the internet to just find news of his/her favorite topic.

1.2 Technology Used

Front End:

- **HTML (v4.1)**
- **CSS (v4)**
- **JavaScript (jQuery (v3.3.1))**
- **Bootstrap (v3.3.7)**

As the system is a web application, the need for **HTML, CSS, and JavaScript** can be understood.

All the static content like images, custom CSS and JavaScript file of the project will be loaded in requested page directly from the server where it resides.

JQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers

Bootstrap is an open source toolkit for developing front-end of a web app with HTML, CSS, and JavaScript. It will be loaded every time in the requested page via CDN (Content Delivery Network) service, which loads it in the compressed version from nearest location possible to the requester of the page to faster the process of loading a page.

Back End:

- **Python (v3.6.4) (Flask Framework (v0.12.2))**
- **SqlAlchemy (v1.2) (ORM Module of Python)**
- **News API (v2)**
- **FlaskMigrate (v2.2.1)**

The project is built using **Flask framework** of **python** with **SqlAlchemy** as **ORM module** (Object Relational Mapping) to handle back-end side of database manipulation.

NewsAPI is an API service for fetching new breaking news and blog post of particular topics with HTTP requests and getting a response of news in JSON (JavaScript Object Notation) format.

Flask-Migrate is an extension that handles ORM SQLAlchemy database migrations for Flask applications using Alembic. To migrate database schema without losing original data.

Database: PostgreSQL (v10.3)

PostgreSQL is a powerful, open source object-relational database system. Classified as a semi-structured database program, PostgreSQL (latest version) supports both SQL and NoSQL operation. In the project, only SQL part is used.

API Testing Tool: Postman (v6.0.1)

Postman tool is used to make API development simple while testing and processing request and response.

Version Control Tool:

- **Git (v2.17) (VCS)**
- **GitKraken (v3.5) (GUI Tool for Git)**

Git is a free and open source distributed VCS (Version Control System) designed to track modification in project files with versions.

GitKraken is GUI (Graphical User Interface) tool to handle all simple Git operation with clicks instead of commands in the terminal in a very fast and effective manner.

Deployment Platform: Heroku (PaaS)

Heroku is a cloud platform (Platform as a Service) that lets the user build, deliver, monitor and scale apps with the support of CI (Continuous Integration)

Diagram Environment: ERD-Plus

ER-Diagram of this project is made in online web app ERD-Plus.

Link: <https://erdplus.com/>

Operating System: Ubuntu (v17.10)

Ubuntu is an open-source operating system for computers. It is a Linux distribution based on the Debian architecture and is used as the development environment of this project.

CHAPTER: 2

SOFTWARE REQUIREMENTS SPECIFICATIONS (SRS)

2. Software Requirement Specifications

2.1 Purpose

This is an SRS document refers to News By Tag Release 2018 version 1.0.0. It describes the functionality and specification of how the System will help the user save time by providing only news they want in an efficient way. It also specifies how it will interact with the end users.

2.2 Scope

This system will provide the functionality of adding a new tag to account and system with show trending tags based on how many users store that tag.

This system will not provide a general overview of all kind of live breaking news as it is provided by most of the other web application like the-hindu, the-times-of-india etc.

2.3 Overall Description

2.3.1 Product Perspective

This software is developed as a part of coursework the subject “System Design Practice”. The software aims to provide only news which user wants with ease. The web-app’s main perspective is towards saving the time of the user and providing a user-flexible system of online news reading.

2.3.2 Product Functions

The product offers a breaking news related to tags entered by the user in their account. Once the tag is added to the system, it will be updated every day.

The user can add new tag directly by writing or by searching tag (entered by another user) or also from trending tag section.

The system won't allow the user to add a tag which is vulgar. Currently support for only three languages English, Gujarati, Hindi in profanity filter. Admin can add any tag to block list if he/she find it vulgar.

2.3.3 User Classes and Characteristics

(1) News Reader:-

The system is developed for people of all genre and mainly for those who love to read news and blog post of specific topics without searching it from various sources.

(2) Admin:-

Admin of this web app can delete any user, if find it fake and can delete any tag or add to block list if find it vulgar.

2.3.4 Operating Environment

Because the system is developed based on RESTful API concept, where host app will provide all back-end task which can be fired by HTTP requests. The system can support all kind of web API consumer interface like web client (Chrome, Firefox, Opera etc.) or Android app or IOS app etc.

Currently, there is support for web client (various browsers) only. Because of the front-end development of web client is responsive, it can adjust UI (User Interface) to any screen size.

2.3.5 Design and Implementation Constraints

The main constraint is that there is not every time news exists for rare tags, so when user enter some rare tags, he/she won't get any news for a long time.

Some vulgar tags may not be identified by the system.

So admin has to manually add it to block list category, which is a time-consuming process.

2.3.6 Assumptions and Dependencies

The system may not update new news if the appropriate network is not available because it completely depends on fetching new news from API request.

The system requires the user to be online because web client can't store that much of data as offline.

2.4 External Interface Requirements

2.4.1 User Interfaces

The application can be accessed through any browser interface. The software will be fairly compatible with Microsoft Edge Version 40 and above on which it is tested or other modern web browsers as well.

2.4.2 Hardware Interfaces

Server Side:

Processor: Pentium 3.0 GHz or higher.

RAM: 2GB or higher.

Hard-Disk: 100GB or more.

Client Side:

Processor: Pentium 3.0 GHz or higher.

RAM: 2GB or higher.

Hard-Disk: 100GB or more.

2.4.3 Software Interfaces

Client Side:

HTML supported Web Browsers, Windows 7, 8, 8.1, 10, MAC OS, Linux (All Flavors).

Server Side:

Linux, PostgreSQL Client.

2.4.4 Communication Interfaces

The “News By Tag” will use the HTTP protocol for communication over the internet and intranet communication will be through TCP/IP protocol suite.

2.5 Functional Requirements

2.5.1 R1: System provides a feature to add new tags to the account and deleting it from the account.

Input: Tag Details, Action

Output: Stored or deleted tag detail

Processing: Given tag name will be added to the database and will be sent for a queue of fetching news related to that tag and user will be redirected to that tag page also delete in case of that provided as action.

2.5.2 R2: System will provide functionality of autocompleting tag name while searching.

Input: Entered Character

Output: All matched tag name result

Processing: It will match all the tags with given character and return JSON object with a list of result.

2.5.3 R3: System will provide facility to show trending tags in order of number of users, subscribes to given tag.

Input: All tags details with user link

Output: Ordered list of trending tags

Processing: It will order the tags based on a number of users added that tag to their account.

2.5.4 R4: System will rank articles based on relevancy to tag name in a best possible way.

Input: Tag with corresponding articles

Output: Modified link order of article with the tag

Processing: Based on indexing algorithm it will sort the articles with relevancy level to that tag and modify that order.

2.5.5 R5: System provides a feature that prevent adding new profanity word as the tag name.

Input: Tag Details

Output: Status of profanity

Processing: It matches the list of profanity word and if matched then according to status appropriate message will be given.

2.5.6 R6: System provides the basic functionality of sign up, sign in and change the password.

Input: Credentials, action

Output: Status

Processing: It will take log in, sign in or changing password related action based on the input of credential and action.

2.6 Non-Functional Requirements

2.6.1 R1: GUI of web client should be mobile responsive

Solution: In order to provide mobile responsive, its GUI will be created in a mobile responsive framework such as Bootstrap.

2.6.2 R2: Page response should be fast because people want to read news quickly

Solution : To achieve this, I will keep back-end database as PostgreSQL, which is known for its faster processing.

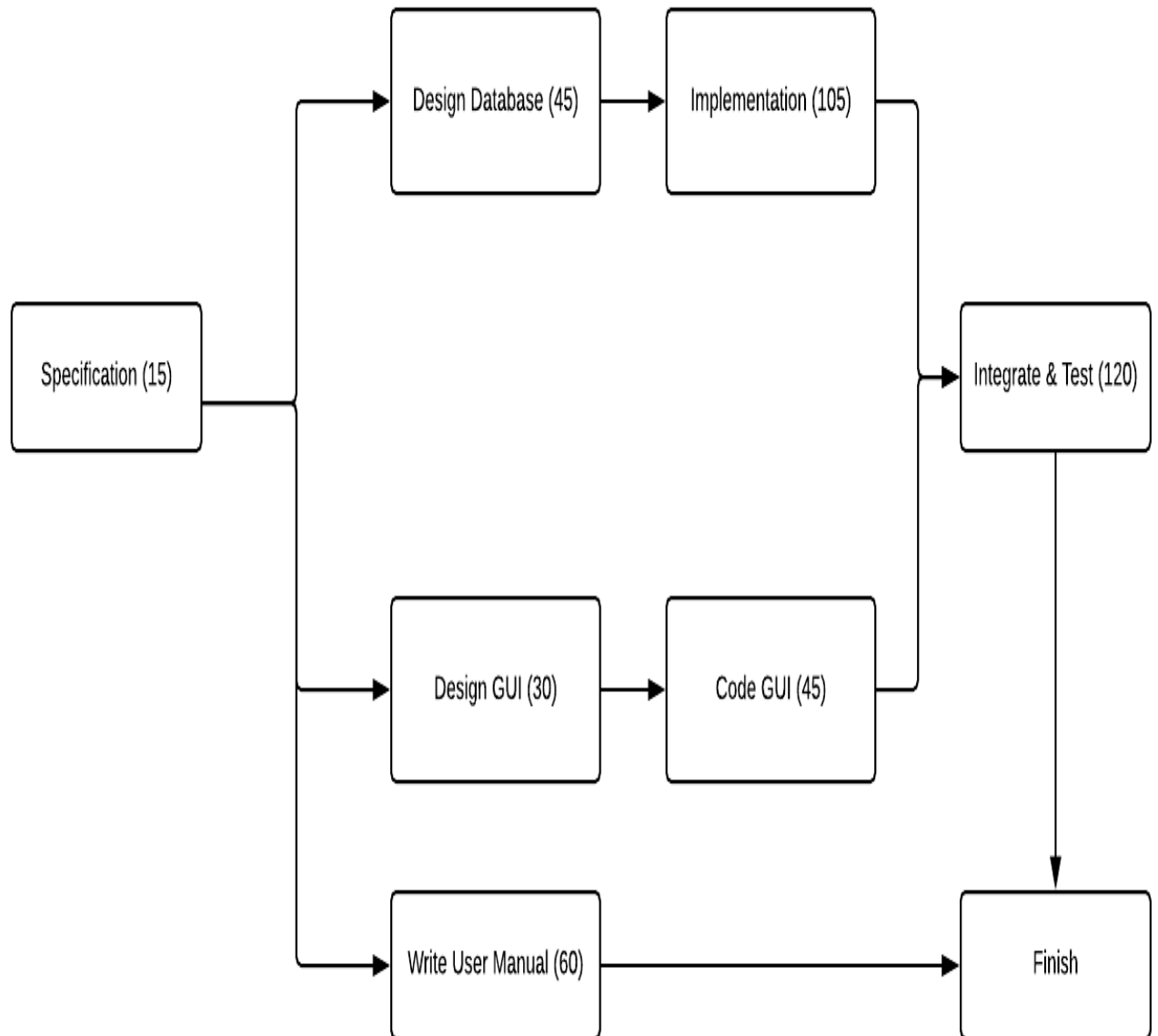
2.6.3 R3: Web app should handle a minimum of 1000 users simultaneously in the first release.

Solution : To achieve this, I will deploy it to heroku platform which provides this facility as free tier which can be extended in case of more traffic.

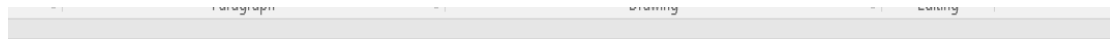
CHAPTER: 3

DESIGN

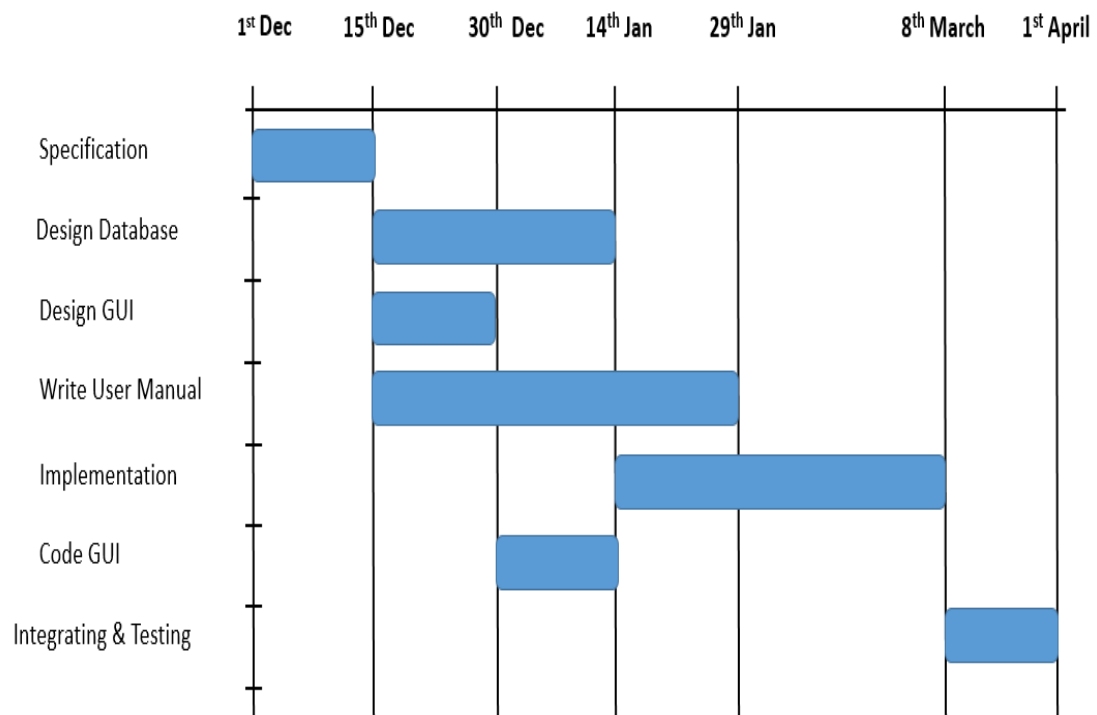
3.1 Activity Network Diagram



3.2 Gantt Chart

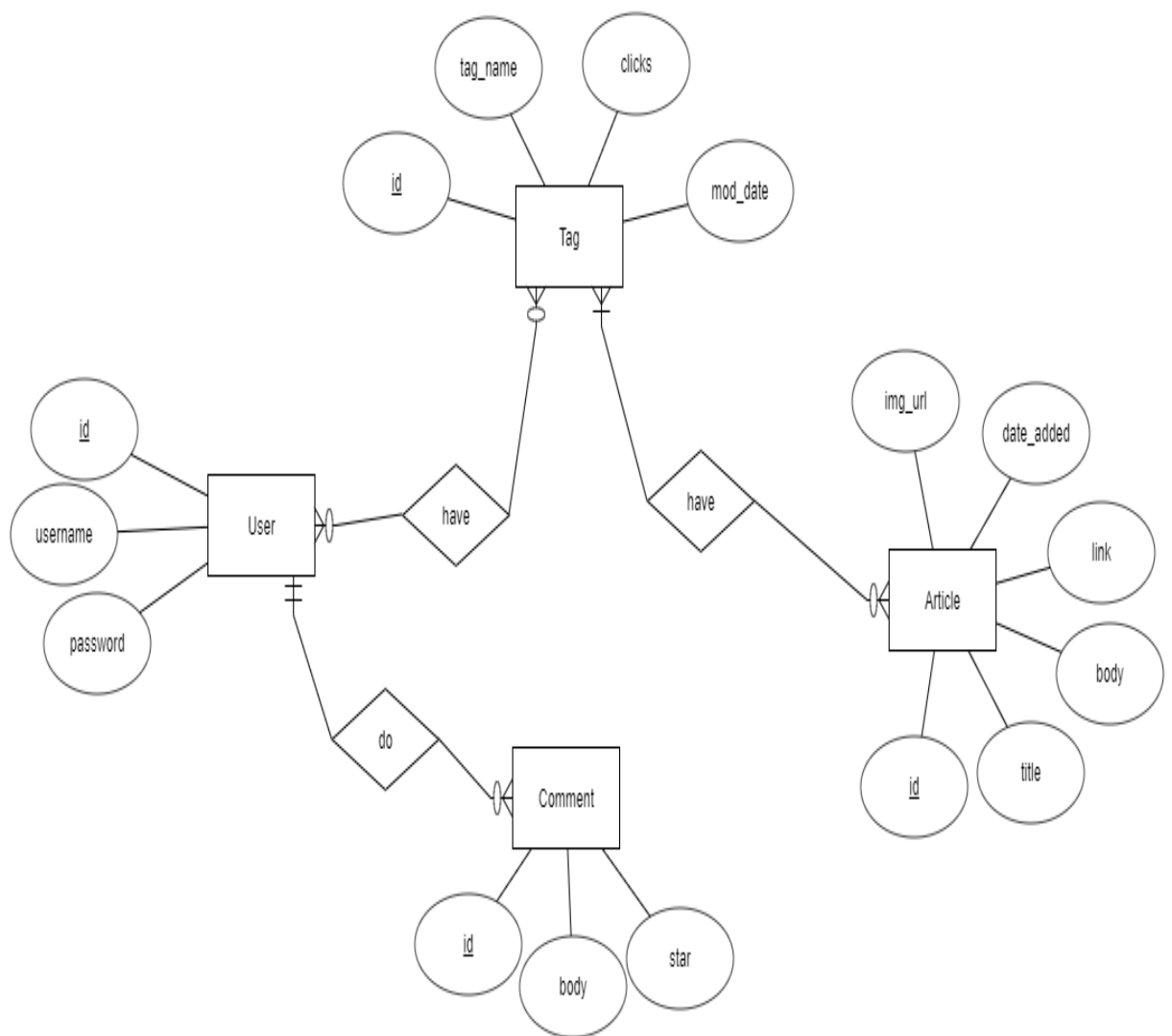


Gantt Chart



3.3 E-R Diagram

E-R Diagram :: NewsByTag



3.4 Data Dictionary

Tag				
Sr.no	Field_name	Data_type	Width	Constraint
1	Id	Int		PRIMARY KEY UNIQUE
2	Tag_name	Varchar	20	NOT NULL
3	Clicks	Int		NOT NULL
4	Mod_date	DateTime		NOT NULL

User				
Sr.no	Field_name	Data_type	Width	Constraint
1	Id	Int		PRIMARY KEY UNIQUE
2	Username	Varchar	20	NOT NULL
3	Password	Varchar	20	NOT NULL

User_Tag				
Sr.no	Field_name	Data_type	Width	Constraint
1	User_id	Int		NOT NULL FOREIGN KEY
2	Tag_id	Int		NOT NULL FOREIGN KEY

Article				
Sr.no	Field_name	Data_type	Width	Constraint
1	Id	Int		PRIMARY KEY UNIQUE
2	Title	Varchar	200	NOT NULL
3	Body	Varchar	1000	NOT NULL
4	Img_url	Varchar	1000	NOT NULL
5	Link	Varchar	1000	NOT NULL
6	Date_added	DateTime		NOT NULL

Tag_Article				
Sr.no	Field_name	Data_type	Width	Constraint
1	Article_id	Int		NOT NULL FOREIGN KEY
2	Tag_id	Int		NOT NULL FOREIGN KEY

Comment				
Sr.no	Field_name	Data_type	Width	Constraint
1	Id	Int		PRIMARY KEY UNIQUE
2	Body	Varchar	200	NOT NULL
3	Star	Int		NOT NULL
4	User_id	Int		NOT NULL FOREIGN KEY

CHAPTER: 4

IMPLEMENTATION

4. Implementation

4.1 Modules Description

➤ Sign-Up / Log - In Module

It is used to store information of users who are new to the system and accessing the system for the first time. It also authenticates the users before they can explore various auctions listed in the system.

Input: User's information or credentials

Output: Stored or verified successfully

Processing: Check user's credentials in the database while logging in or store them in the database while registering a new user.

➤ Tag Module

This module comes into action when a user wants to access or store tag related information.

Input: Username, Tag name, Action

Output: Status of Action in JSON

Processing: It will add, delete or modify data about tag as given in action parameter.

➤ **News Module**

It will fetch news from the database and return back all result articles of given tag.

Input: Tag name

Output: Status of Result and News in JSON

Processing: It will return all the articles related to given tag name and return back to JSON format.

➤ **Updater Module**

It will update new entered tags as well as renew already entered tags with new news by fetching news from API request and make the link between the tag and that article.

Input: Tag name

Output: Status of Result

Processing: It will link tag with the corresponding article fetched from API request and store it to the database.

➤ **Admin Control Module**

This module is used by the administrator of the system in order to maintain control of the present tag, user, and comment. By this admin can delete any tag, user and also add a tag to block list category to avoid next time addition of that tag to the system, if an admin finds it vulgar.

CHAPTER: 5

TESTING

5. Testing

5.1 Testing Plan

The testing is a technique that is going to be used in the project is black box testing, the expected inputs to the system are applied and only the outputs are checked.

5.2 Testing Strategy

The development process repeats this testing subprocess a number of the lines for the following phases.

- Unit Testing
- Integration Testing

Unit Testing tests a unit of code after coding of that unit is completed. Integration Testing tests whether the previous programs that make up a system, interface with each other as desired. System testing ensures that the system meets its stated design specifications. Acceptance testing is testing by users to ascertain whether the system developed is a correct implementation of the software requirements specification.

Testing is carried out in such a hierarchical manner to that each component is correct and the assembly/combination of the component is correct. Merely testing a whole system at the end would most likely throw up errors in a component that would be very costly to trace and fix. I have performed both Unit Testing and System Testing to detect and fix errors.

5.3 Testing Methods

I have performed Black-box testing for the testing purpose. A brief description is given below:

Black-box testing is a method of software testing that examines the functionality of an application without peering into its internal structures or workings. This method of test can be applied to virtually every level of software testing: unit, integration, system, and acceptance. It typically comprises most if not all higher level testing, but can also dominate unit testing as well.

5.4 Test Cases

Test, Case ID	Test Scenario	Test Steps	Test Data	Expected Results	Pass or Fail
T01 (2.5.6)	Sign Up with proper data	1. Provide right Information on the signup page	User Information	Stored Successfully	pass
T02 (2.5.6)	Sign Up with empty as well as wrong data	1. In signup page, enter wrong details	User information	Display a respective error message	pass
T03 (2.5.6)	Log In with proper data	1. Enter proper credential	Login Credentials	Display Homepage as logged in	pass
T04 (2.5.6)	Log In with improper data	1. In the login page, enter wrong details	Login Credentials	Display a respective error message	pass
T05	Adding proper New Tag	1. Enter proper tag name with keeping the limit in character	Tag Name	Adding a tag to the database and fetching new news	pass

T06 (2.5.5)	Adding Profanity word	1.Add Improper profanity word	Profanity word as a tag name	Showing error message accordingly	pass
T07	Tag Limit Per Account	1.Add tags to limit in one account 2.Enter one more tag	Tag Limit per Account	Showing error message accordingly	pass
T08 (2.5.6)	Changing password with the wrong old password	1.Enter the wrong old password	Password matching capability	Showing according to msg	pass
T09 (2.5.6)	Changing password with the right old password	1.Enter the right old password	Password matching capability	The message of the changed password on the homepage	pass
T10	Deleting a tag from the account	1.Click Delete the icon from my tag section	Deleting tag	The tag should not appear that in my tag section	pass
T11	Adding the tag to the block list	1.Open Admin Panel 2.Click add icon near any tag	Adding a tag to block list	Tag name should be shown in the blacklist and should not be added next time in the system	pass

CHAPTER: 6

SCREENSHOTS

6. Screen-shots

6.1.1 - 6.1.4 Sign Up, Log In, Changing Password And Feedback Page

- **Sign-Up Page**

- This sign up page will be starting page when some new user comes to the website.
- The user can skip sign up page with button **Skip SignUp** or can go to sign in page by **SignIn** button.
- All fields are necessary to be filled for completing the sign-up process, otherwise, an appropriate error message will be shown as in the following screenshot.
- After successful sign-up, the user will be redirected to home page of the site.

SignUp Form

!! All fields should be filled !!

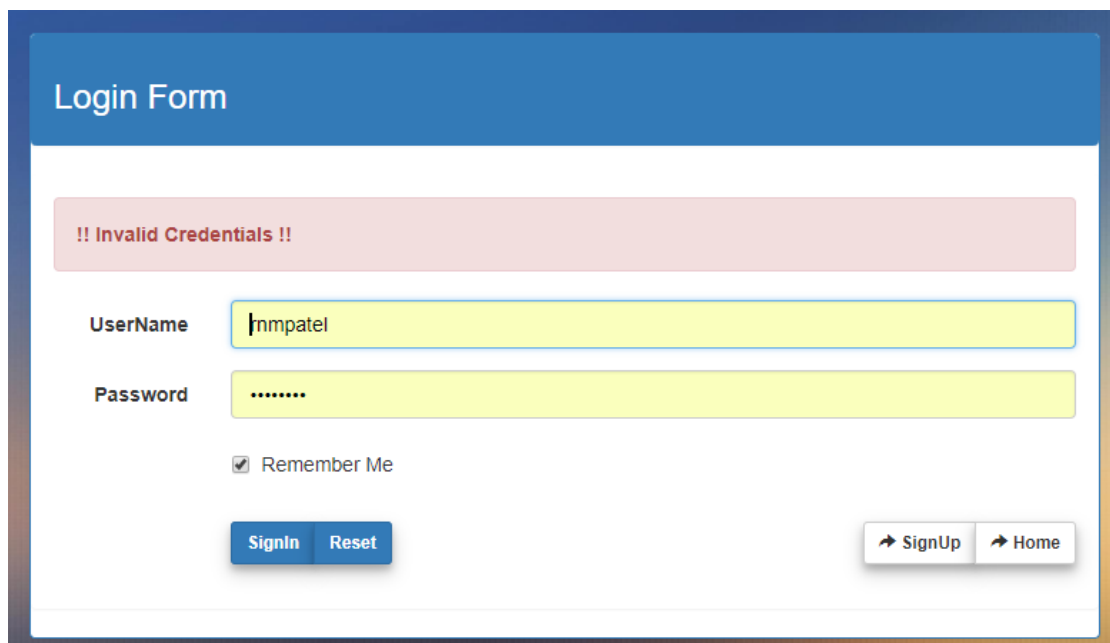
* Username
UserName :: Minimum length: 6 character

* Password
Password :: Minimum length: 4 character

* Re-Enter Password

- **Login Page**

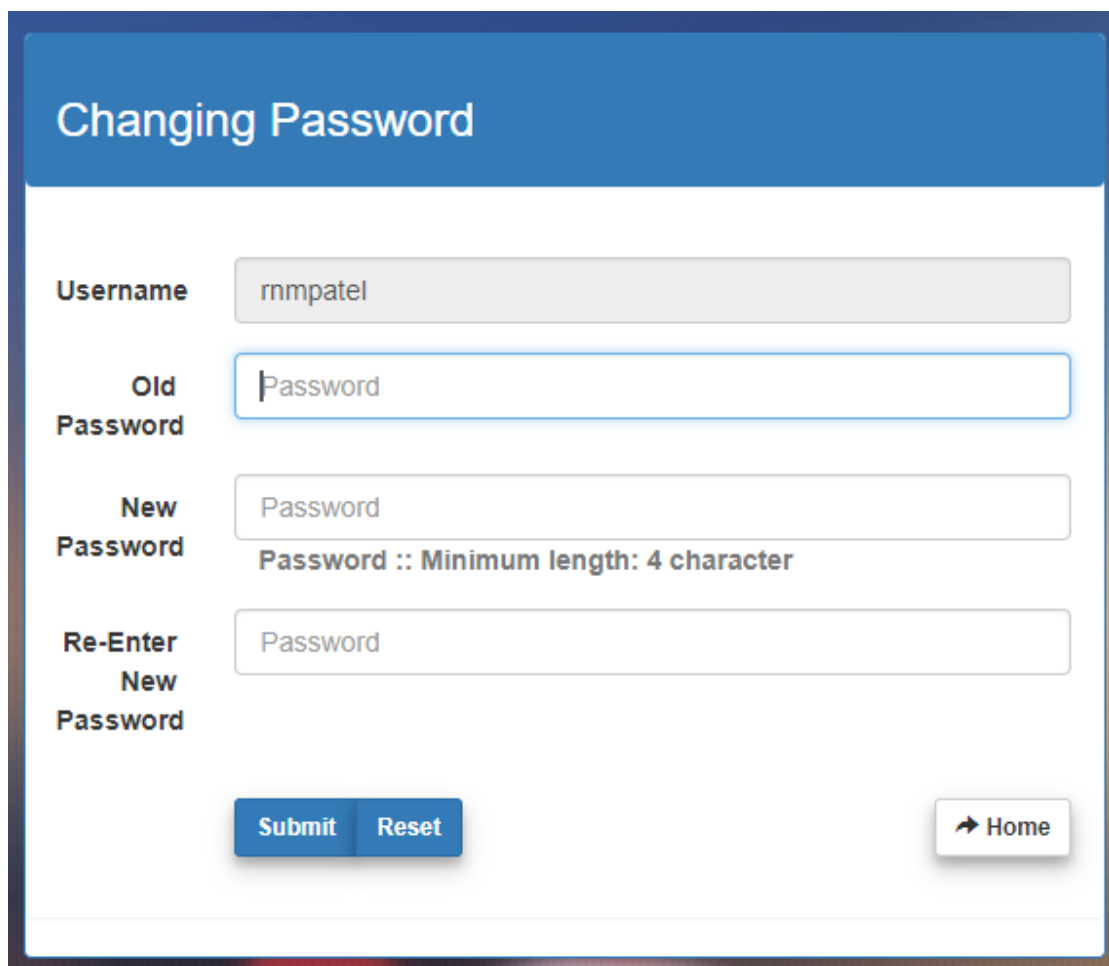
- This login page will come after clicking on sign in button anywhere from the site.
- All fields are necessary to be filled for logging process, otherwise, an appropriate error message will be shown as in the following screenshot.
- After successful sign-up, the user will be redirected to home page of the site.



The screenshot displays a web application's login interface. At the top, a blue header bar contains the text "Login Form". Below this, a light red error message box reads "!! Invalid Credentials !!". The form includes two input fields: "UserName" with the text "Inmpatel" and "Password" with masked characters ".....". A checkbox labeled "Remember Me" is checked. At the bottom left, there are two buttons: "SignIn" and "Reset". At the bottom right, there are two buttons: "SignUp" and "Home".

- **Changing Password Page**

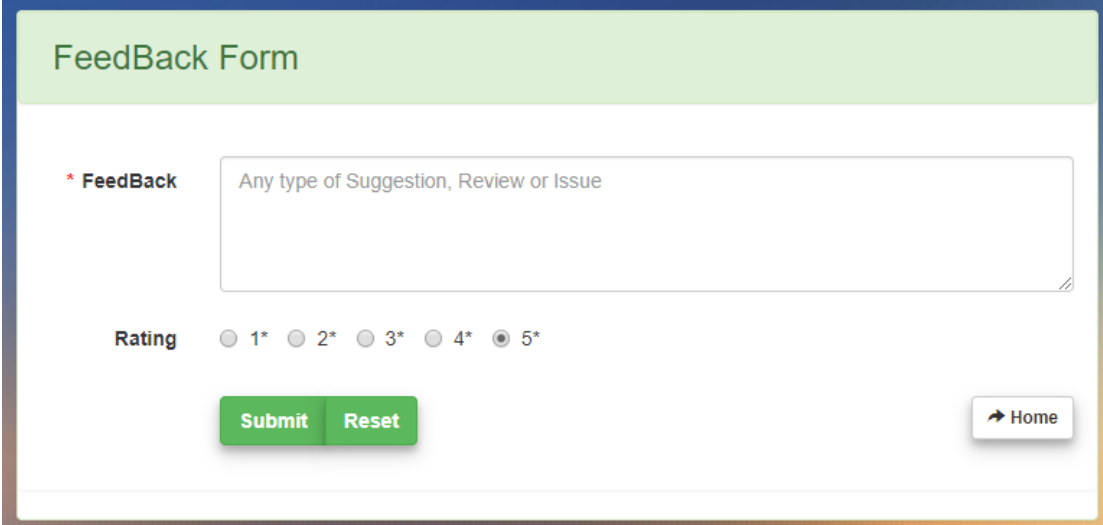
- This page will come after clicking on account button in home page after login.
- All fields are necessary to be filled in correct way as shown in form with a right old password for changing the password, otherwise, an appropriate error message will be shown.
- After successful sign-up, the user will be redirected to home page of the site.



The screenshot shows a web form titled "Changing Password" with a blue header. The form contains four input fields: "Username" (pre-filled with "rnmpatel"), "Old Password", "New Password", and "Re-Enter New Password". Each password field has a placeholder text "Password". Below the "New Password" field, there is a validation message: "Password :: Minimum length: 4 character". At the bottom of the form, there are three buttons: "Submit", "Reset", and "Home" (which includes a right-pointing arrow icon).

- **Feedback Page**

- This page will come after clicking on **Feedback** button.
- All fields are necessary to be filled in correct way as shown in form, otherwise, an appropriate error message will be shown.
- After successful submission, the user will be redirected to home page of the site.

A screenshot of a web form titled "FeedBack Form" in a light green header. The form contains a text area labeled "* FeedBack" with placeholder text "Any type of Suggestion, Review or Issue". Below the text area is a "Rating" section with five radio buttons labeled "1*", "2*", "3*", "4*", and "5*", where the "5*" button is selected. At the bottom of the form are three buttons: "Submit" and "Reset" in green, and a "Home" button with a right-pointing arrow in a light gray box.

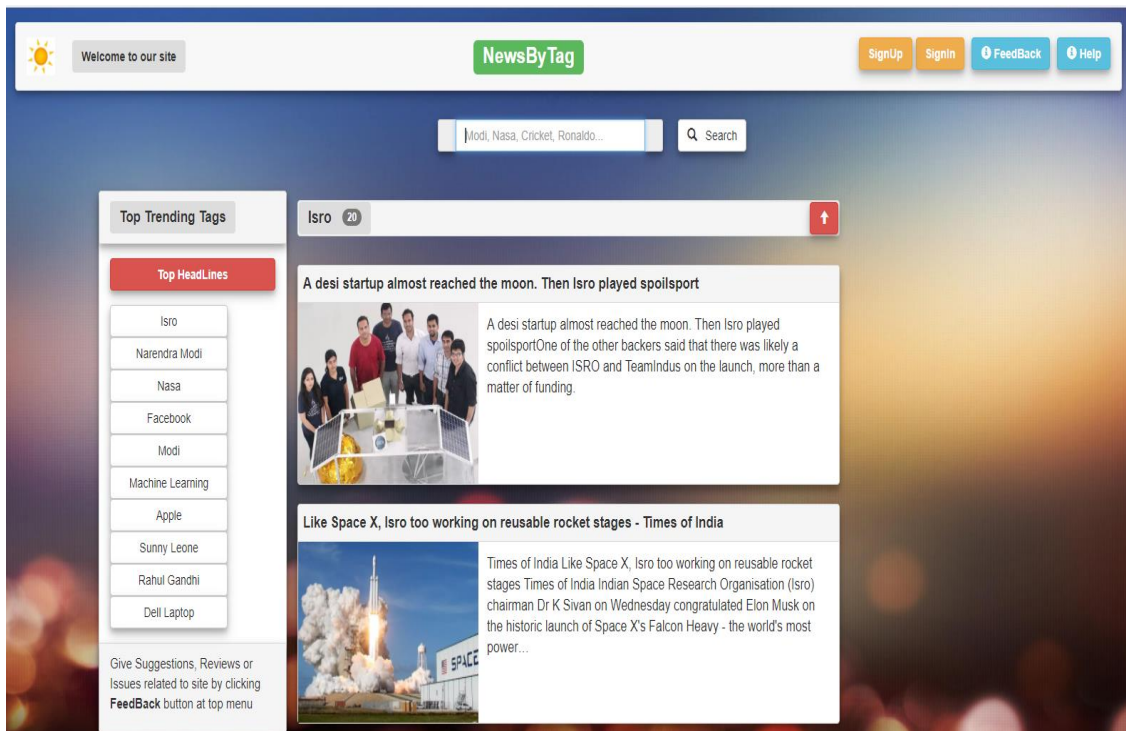
FeedBack Form

* FeedBack

Rating ☐ 1* ☐ 2* ☐ 3* ☐ 4* ☒ 5*

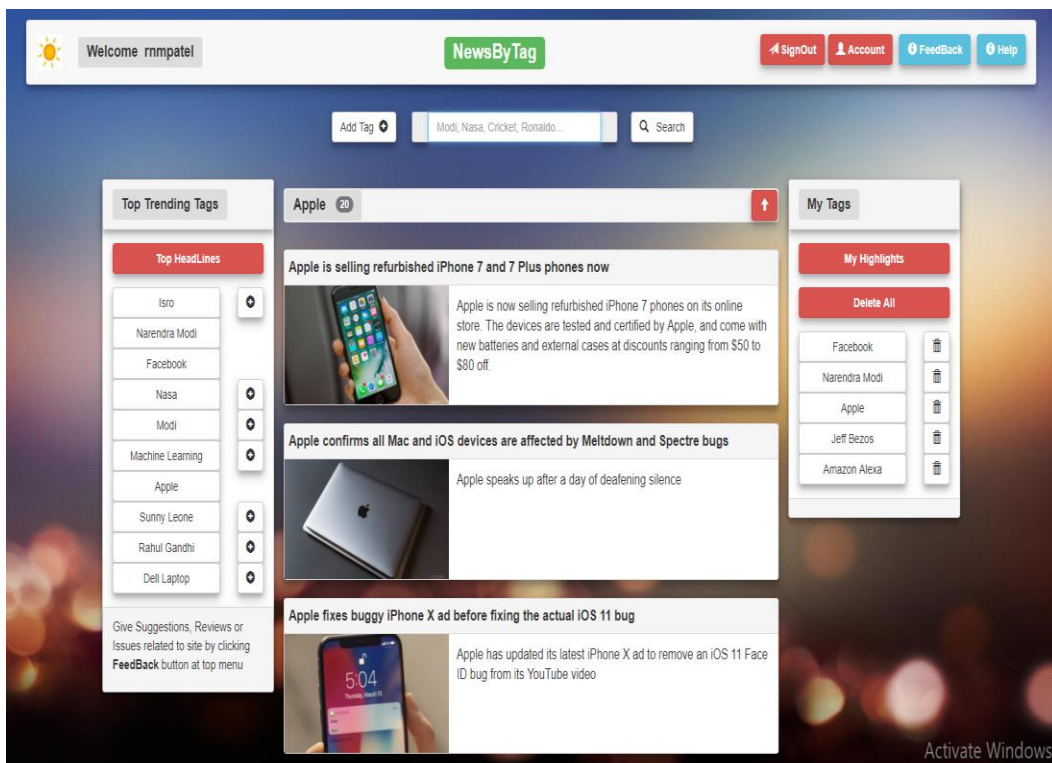
6.2 Home Page before Sign-In

- This page will come after clicking on **Skip Sign up** or **Home** button anywhere from the site without login or signup.
- The most trending tag will be shown by default and user can search tags (entered by another user) and can read the news of it.
- The user can also see headlines overview from top trending tags by clicking on button **Top Headlines**.
- The user can select any of tag from given **Top Trending Tags** section.
- The user can go to feedback page, help page, sign up a page or sign in page any time by clicking appropriate buttons given in menu bar of this page.



6.3 Home Page After Sign-In or Sign-Up

- This page will come after successful **Sign-Up** or **Sign-In**.
- Extra from non-signed-in or non-signed-up users, one can,
- Add new tags in the system and account.
- Delete tags from their account by clicking delete icon near to that tag and also can delete all tags by clicking on **Delete All** button.
- See highlights of news respective to the tags in their account by clicking on **My Highlights** button.



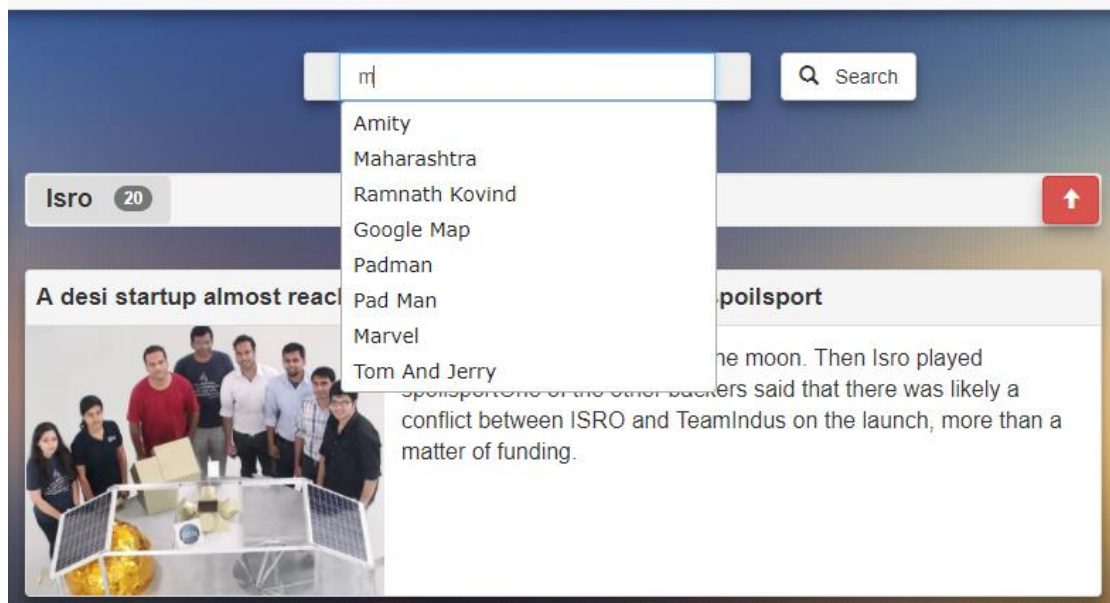
6.4 Close News View

- This is a close view of how each news will be shown to the user.



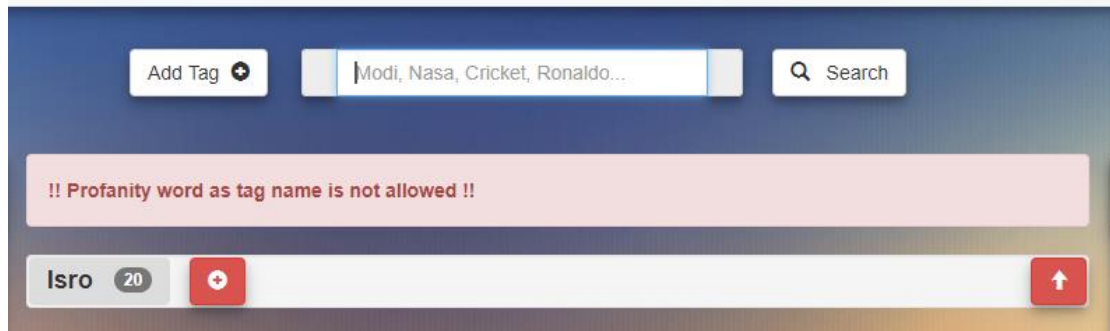
6.5 Autocomplete Search

- This is a close view of how to autocomplete search will show matching tag names from database to given input.



6.6 Profanity word as a tag name

- This is a close view of how error message will be shown in case user try to enter the profanity word as a tag name.



6.7 Help Page Overview

- This is help page of the site, comes when the user clicks on **Help** button from home page.
- It will show details of the creator of the site, mentor of the creator, site purpose, overview, current release version, future version, features, notes and FAQ (Frequently Asked Questions).

The screenshot displays the 'Help' page layout. On the left, the 'Creator' section features a profile picture of Rajat N Movaliya, his name, and details: Student at DDU (Nadiad), Computer Engineering, 6th Semester, Live in Rajkot, and email rajatmovaliya512@gmail.com. The central 'Help' section has a 'Home' button, two green note boxes with feedback and browser instructions, a 'News By Tag (v-1.1.2 Stable)' section explaining search functionality and tag usage, and a 'Coming Soon (v-2.0.0)' section listing features like relevant news, tag recommendations, faster loading, and more tags. On the right, the 'Mentor of Creator' section shows a profile picture of Jigar M Pandya, his name, and details: Professor at DDU (Nadiad), Computer Engineering Dept., and Core Subject: Database. An 'Activate Windows' watermark is visible in the bottom right corner.

Creator

Rajat N Movaliya

- Student at DDU (Nadiad)
- Computer Engineering
- 6th Semester
- Live in Rajkot
- ✉ rajatmovaliya512@gmail.com

Help

[Home](#)

!! Note : Give your Suggestions, Reviews or Issues related to website by clicking on [FeedBack](#) button

!! Note : Use this site in [Laptop's Browser](#) for better UI Interaction

News By Tag (v-1.1.2 Stable)

Using this website you can search breaking-news, article and blogs of various topics from your region to all over the world,

By adding your personal favourite tags in your account after SignIn or SignUp, you will get all news and blog post link related to that tags

Coming Soon (v-2.0.0)

Features :

- More relevant breaking-news and blog-post
- Recommendation of tag based on user activity, by collaborative filtering and content based filtering
- Faster image and page loading
- More number of tags per account

Mentor of Creator

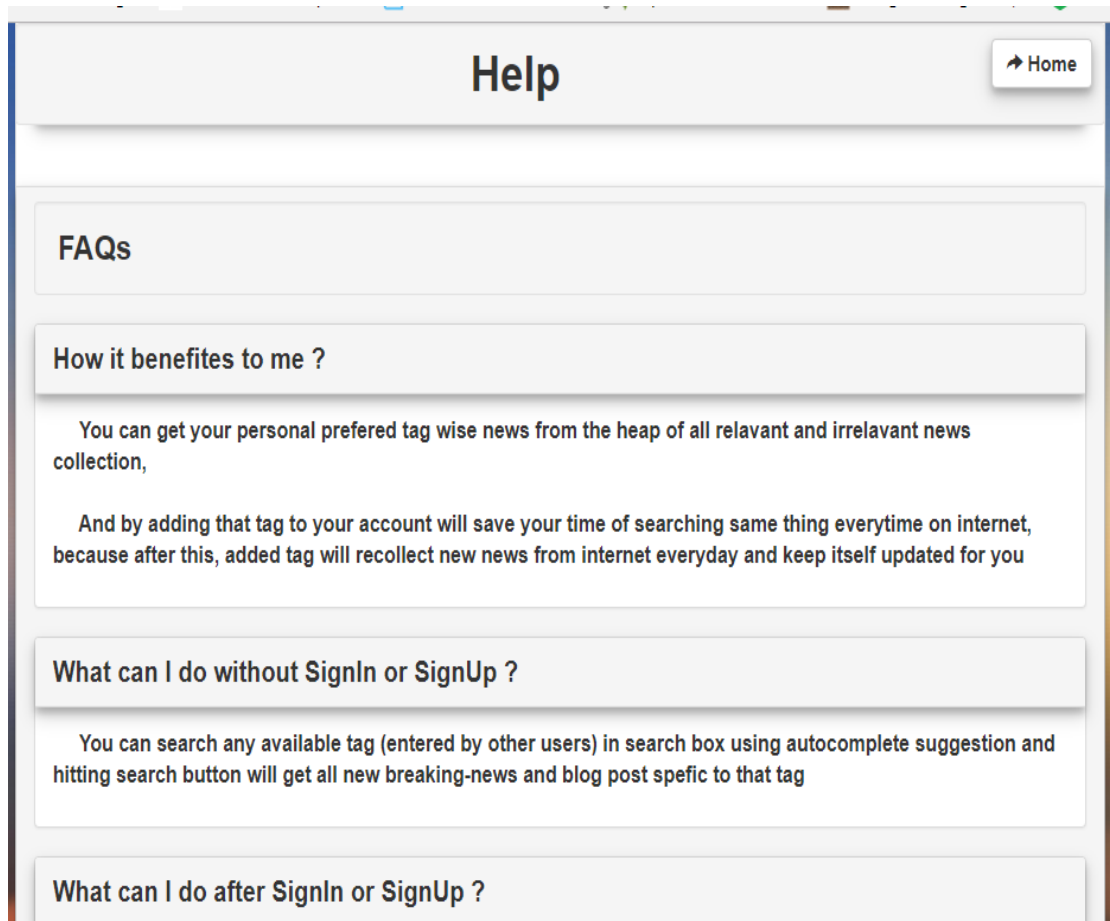
Jigar M Pandya

- Professor at DDU (Nadiad)
- Computer Engineering Dept.
- Core Subject : Database

Activate Windows
Go to Settings to activate

6.8 Help Page Close view

- This is a close view of FAQs in help page of the site.



6.9 Admin Panel

- After login to admin panel, admin can do many things like,
- Can see how many users have registered with all details of user entered while sign up.
- Can block any tag, which will be then added to block list and can't be entered again in the database.
- Can delete any tag from the system.
- Can see all comments.
- Can see all the tables currently in the database.

Admin									
Overview User Tag Comment Table Tag Table User Table Comment Table Record									
user									
id	username	password	que	ans	tags			Delete	Block
1	rmpatel	rmpatel	rmpatel	rmpatel	tags	delete	block		
					Facebook				
					Narendra Modi				
					Apple				
					Jeff Bezos				
					Amazon Alexa				
3	rkking	123456	Mobile	vivo	tags	delete	block		
					Heat				
					Amity				

CHAPTER: 7

Software Version Deployment Steps

7. Software Version Deployment Steps

➤ Steps :

Note:

- Pre-Requirements : Linux Based OS
(Recommended - Ubuntu)
- Run all the following command in Terminal, which will be opened by pressing (Ctrl + Alt + T).
- **Pre-Requirement :**
 - Install “pgadmin” from software center directly by searching its name.
 - Create “p8” database from GUI directly with option “create new database”.

- 1) Most of the Linux based OS comes python installed.
You can check this by typing

```
python -V
```

This will give you output as “python <version>” if getting this then fine otherwise run command

```
sudo apt-get update  
sudo apt-get -y upgrade
```

This will upgrade your system with latest python version.

- 2) Go to the root of “Phost” project directory where app.py is resided and enter the following command which will change your python environment from your local computer to virtual environment given in project directory from where all required modules will be fetched in the current project.

```
source ./venv/bin/activate
```

In order to reverse the process, you can just type the following command.

```
deactivate
```

This will reset your python environment to local machine environment as was earlier.

- 3) After changing this virtual environment, run following command to start API hosting program.

python3 app.py

This will host web API hosting program in 5000 port with IP: 127.0.0.1 (localhost) with its own built-in development web server.

- 4) Do all same steps (2) and (3) from the root of the “Pconsume” project directory by opening new terminal window, because previous will be used for hosting program.

From whole repeated process only change will be that this consumer program will run on port number 5001 instead of 5000 and will be on same IP address that is 127.0.0.1 (localhost) with its own built-in development web server.

- 5) Now open any web browser available (Recommended: Google’s Chrome Browser) and enter the following URL

127.0.0.1:5001

This will bring you to the home page of the project. You can continue using it as flow direct you in pages.

CHAPTER: 8

CONCLUSION

8. Conclusion

All functionalities in the SRS are successfully implemented by me which are as follow.

- Showing breaking news of tags provided by the user.
- The user can add a tag and delete tag to the account.
- Autocomplete of tag name while searching new tags.
- Updating tags every day with new breaking news.
- User account management like sign-up, log-in etc.
- Preventing user from adding profanity word as a tag name.
- Showing trending tag based on the number of users subscribes to respective tag.
- Admin can add any vulgar tag to block-list, from which system will prevent next time from adding that tag to the database.
- System's GUI is responsive to any screen size.
- The system will automatically remove a long time unused tags from the database, where time will be set by the admin.
- The system won't update tags which are not used so long, where time will be set by the admin.

Hereby, I declare that the functionality implemented in this system was performed by understanding all the modules.

This project's main aim is to provide breaking news by tag names provided by the users which were fulfilled to a greater extent. All the diagrams were prepared before implementation and the coding was done accordingly. After the coding was completed, comprehensive testing was performed and the results were provided in the report. Unit testing of all modules was done and later, Integration Testing was also performed.

CHAPTER: 9

LIMITATIONS

AND

FUTURE ENHANCEMENT

9. Limitations and Future Enhancements

➤ Limitations

1. Admin needs to manually add vulgar tags entered by the user to block list, in case system does not recognize it.
2. Many rare tags do not have, that frequent new breaking news, so the user has to wait for a long time to news updates for that tag.

➤ Future Enhancements

1. Recommendations of tags based on user activity and also by collaborative filtering and content-based filtering.
2. More and more, tag relevant news and blog post.
3. Android App can be made because it makes a lot easier for the user to use with offline news storage facility and it will reduce the number of steps to open news.
4. Separate favorite news storage facility.
5. News in other than the English language as well.
6. Filtration of news based on post dates, the word in body and title, and much more.
7. Some fastest process of fetching new tag news in API request.
8. Loading images and pages faster by CDN (Content Delivery Network) and by providing the various size of thumbnail versions of images.
9. Adding SSL (Secure Socket Layer) based communication to add more security to credentials.

CHAPTER: 10

BIBLIOGRAPHY

10. Bibliography

Web Tutorials:

- <http://docs.sqlalchemy.org>
- <http://flask.pocoo.org/docs/0.12/tutorial>
- <https://flask-migrate.readthedocs.io/en/latest/>
- <https://www.tutorialspoint.com/python/index.htm>
- <https://www.tutorialspoint.com/postgresql/index.htm>
- <http://www.vogella.com/tutorials/Git/article.html>
- <https://devcenter.heroku.com/categories/reference>
- <http://jinja.pocoo.org/>

CHAPTER: 11

ABOUT

11. About

- **Project Name** : NewsByTag
- **Released Version** : 1.1.2 (stable)
- **Released Date** : 1st April 2018
- **Deployed Link** : <http://newsbytag.herokuapp.com>

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- **Note:** Site has been bounded with Google Analytics.
After sharing link within DDU students of
Computer Branch.
Following is report after two days.

- It got around **6500 page requests**.
- Around **300 users**.
- Almost **600 session**.

- **Creator of web app :**

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- **Mentor of creator :**

Name : Jigar M. Pandya (Assistant Professor)
Department : Computer Engineering

