

Project Report

TEAM ID :PNT2022TMID02285

PROJECT :NEWS TRACKER

1. INTRODUCTION

- 1.1 Project Overview
- 1.2 Purpose

2. LITERATURE SURVEY

- 2.1 Existing problem
- 2.2 References
- 2.3 Problem Statement Definition

3. IDEATION & PROPOSED SOLUTION

- 3.1 Empathy Map Canvas
- 3.2 Ideation & Brainstorming
- 3.3 Proposed Solution
- 3.4 Problem Solution fit

4. REQUIREMENT ANALYSIS

- 4.1 Functional requirement
- 4.2 Non-Functional requirements

5. PROJECT DESIGN

- 5.1 Data Flow Diagrams
- 5.2 Solution & Technical Architecture
- 5.3 User Stories

6. PROJECT PLANNING & SCHEDULING

- 6.1 Sprint Planning & Estimation
- 6.2 Sprint Delivery Schedule

7. CODING & SOLUTIONING (Explain the features added in the project along with code)

- 7.1 Feature 1
- 7.2 Feature 2
- 7.3 Database Schema (if Applicable)

8. ADVANTAGES & DISADVANTAGES

9. CONCLUSION

10. FUTURE SCOPE

11. APPENDIX

Source Code

Live Page Url

1. INTRODUCTION

1.1 Project Overview

NewsTracker is a fullstack web application which allows users to register along with their favourite topics, upon login the app displays the news based on the user's interest. The news displayed in the app is based on the Newcatcher API and Cricbuzz API from Rapid API site. A news-sharing app wants to help users find relevant and important news easily every day and also provide explicitly news from that users locality/region which may be of help to the user.

1.2 Purpose

Enabling users to view news from anywhere at anytime. It also helps to reduce the time to get information about a specific topic. Also enables a person to get an updated news which may help Business people to make business related decisions quickly and correctly.

2. LITERATURE SURVEY

2.1 Existing problem

Physical newspapers are old fashioned in this digital era. They cost money to buy, can easily be damaged, limited amount of information, not flexible to modifications, poor quality. Sometimes may show irrelevant and updated news.

2.2 References

S. no	Paper title	Author	Published date	Implementation	Resource link
1	Following the Fed with a News Tracker	Michael William McCracken	January, 2012	The paper is not a technical paper but is essentially a statistical paper on how should one conclude whether the data have come in stronger, weaker or as expected. This is based on the CitiGroup U.S Economic Surprise Index.	(PDF) Following the Fed with a News Tracker (researchgate.net)
2	Topic Detection and Tracking in News Articles	Sagar Patel, Sanket Suthar, Sandip Patel, Neha Patel	March, 2015	1. Pre-processing 2. Tokenization 3. Stemming/Lemmization 4. Vector Space Model 5. Topic tracking	(PDF) Topic Detection and Tracking in News Articles (researchgate.net)
3	An End-to-end Weakly-supervised News Aggregation Framework	Xijin Tang, Xiaohui Huang	June, 2022	The framework combines Snorkel based weakly Supervised classification, Latent Dirichlet Allocation (LDA) topic modeling, and topic signal detection model to classify and aggregate unlabeled news texts and ultimately generate visualized results containing news categories, news topics, and temporal topic relationships. This paper uses constructed knowledge thesaurus and the Snorkel method to weakly supervise the classification of unlabeled news with no manual tagging. Subsequently, we utilize LDA to generate the topics and	An End-to-end Weakly-supervised News Aggregation Framework Request PDF (researchgate.net)

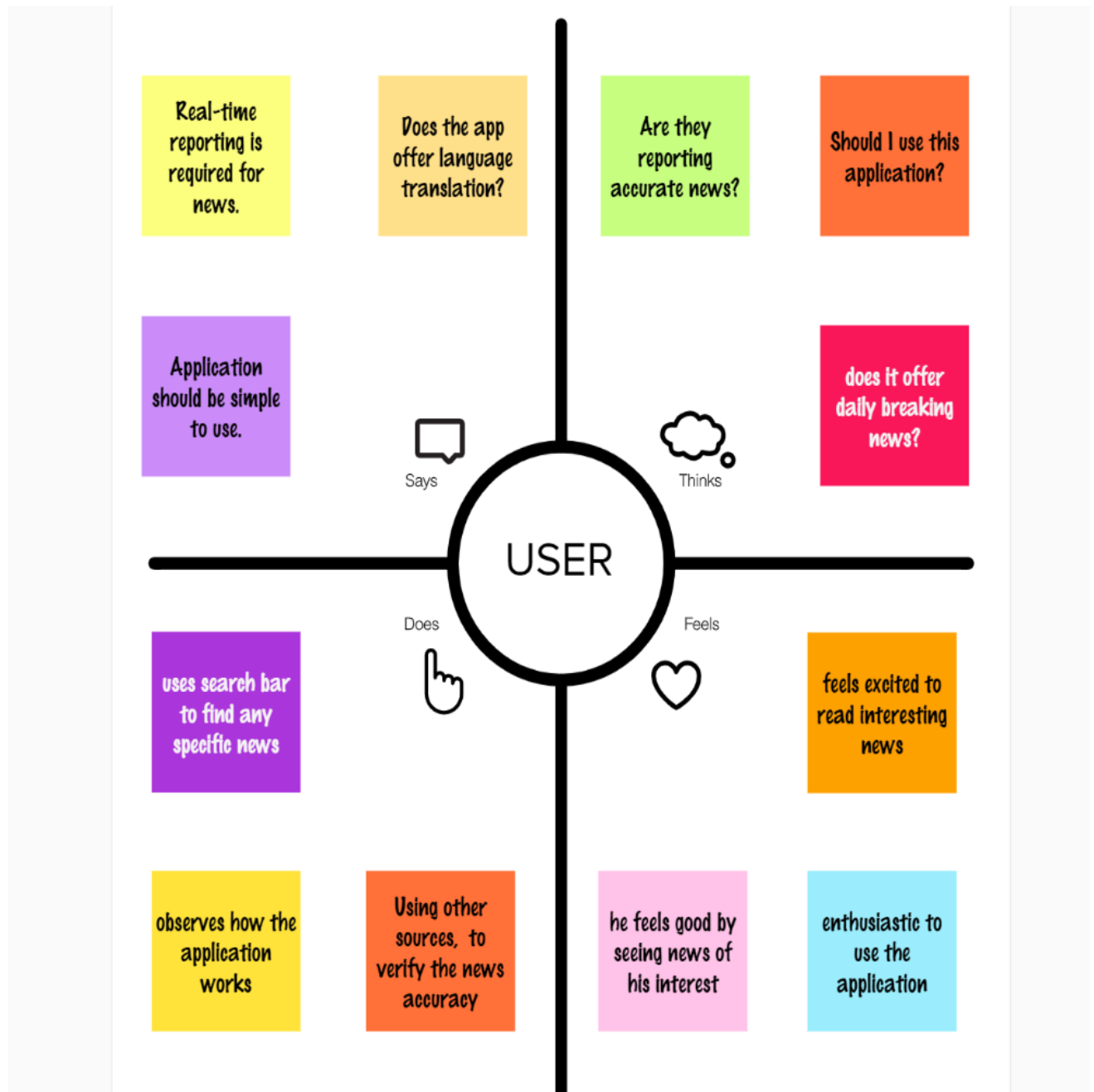
				obtain the signal value of each topic based on the topic signal detection function. Finally, we establish the temporal topic relationships and get the visualized results of news aggregation.	
4	Exploring mobile news reading interactions for news app personalisation	Marios Constantinides ,John Dowell , David Johson, Sylvain Malacria	August, 2015	<ol style="list-style-type: none"> 1. Identification of news reader types 2. Interaction logging and classification study 3. Deployment and data collection 4. Predicting News reader types 5. Adaptive UI 	(PDF) Exploring mobile news reading interactions for news app personalisation (researchgate.net)
5	Innovative Application For News Tracker	Dr.C.K.Gomathy, Dr.V.Geetha, Peddireddy Abhiram, Marios Constantinides	September, 2020	This paper aimed at developing an online news management system that is of information to either a college. Online news management system provides a simple interface for maintenance of college information. The creation management of accurate, up-to-date information regarding to college. The main objective for developing this project is provide all the functionality related to latest news and it tracks.	(PDF) The Innovative Application for News Management System (researchgate.net)

2.3 Problem Statement Definition

Newspaper contains limited , non user/reader specific, Location specific news . There are multiple news-sharing apps available which can be used by a single user and are often spammed with notifications. There is also a lot of unwanted news which gets shared. So it may take a lot of time for the user to find the news he/she likes. A news-sharing app wants to help users find relevant and important news easily every day and also provide explicitly news from that users locality/region which may of help to the user.

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas




3.2 Ideation & Brainstorming

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

Step-1: Team Gathering, Collaboration and Select the Problem Statement

Template



Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

⌚ 10 minutes to prepare
⌚ 1 hour to collaborate
👤 2-8 people recommended

➔

Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

⌚ 10 minutes

A Team gathering
Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

B Set the goal
Think about the problem you'll be focusing on solving in the brainstorming session.

C Learn how to use the facilitation tools
Use the Facilitation Superpowers to run a happy and productive session.

Open article ➔

1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

⌚ 5 minutes

PROBLEM
News needs to be organized as categories and it also needs to be related to the user interest so that it is not repeated and mislead.

Key rules of brainstorming
To run a smooth and productive session

- Stay in topic.
- Encourage wild ideas.
- Defer judgment.
- Listen to others.

Step-2: Brainstorm, Idea Listing and Grouping

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

⌚ 10 minutes

TIP
You can select a sticky note and hit the pencil (switch to select) icon to start drawing!

Pravath S	Vikram Krishna S	Vimal S Dev	Sri Sai R
Providing Search Bar	Track news according to user interest	Engletering and accessing dashboard with guest or in browser login	Editing and updating users personal data
An user friendly responsive Interface	Providing accurate news content	Login using email	Prioritize users top interest
Provide Trending News Section	Providing quick access to top interests	Push notifications and news alerts via emails and SMS	Comment and like on news
Displaying news based on filtered	Browse News Categories	Automatic playing of videos in the news application	Search and filter news based on date, region, topic and category

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

⌚ 20 minutes

Comment sections

Smart news filtering functionality where it allows its users to segregate various news sections

Browse news categories

Choose their favourite sections. It also helps the news tracking apps to increase their base

Comment & like on news

Track news according to user interest

TIP
Add customizable tags to sticky notes to make it easier to find, browse, organize and categorize important ideas as themes within your mural.

Step-3: Idea Prioritization

4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

🕒 20 minutes



3.3 Proposed Solution

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	<p>As our lives are very busy these days, we often feel we need more than 24 hrs. a day to cope up with everything we have in our schedule. Well, that's not possible but reducing the time by changing the conventional method of reading news can help. Just tell us what market news you're interested in and get a quick peek for the day. Only read what you feel is relevant and save your time. This app helps you to query for all information about Indices, Commodities, Currencies, Future Rates, Bonds, etc.... as on official websites.</p>
2.	Idea / Solution description	<p>We encounter several events that are significant locally and nationally in our daily lives, and we use NEWS to learn about them. But we recently came to a realization that there isn't a single platform that offers both. Thus, after identifying a social need, we developed a platform that offers such news in the form of brief videos that are gathered from the most reliable news sources worldwide.</p> <p>What we will do :</p> <ul style="list-style-type: none">• We deliver news in-depth and accurately.• We will be delivering information from reliable, reliable sources worldwide to prevent the spread of fake news• We also offer local news coverage based on user location• All of his favourite local news sources could be found on one platform.• We have also multilingualized our platform so that locals could readily understand it

3.	Novelty / Uniqueness	<ul style="list-style-type: none"> The application offers language translation Real-time reporting is required for news which is also provided
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> Users will find the recommendations interesting and helpful because news is suggested based on their interests and past behaviour.
5.	Business Model (Revenue Model)	Through hourly news subscriptions, we can generate revenue.
6.	Scalability of the Solution	This application is totally constructed using a scalable architecture. Therefore, this application can be expanded to meet any amount of traffic, making the user experience seamless regardless of the increase in demand. This application is totally hosted in the cloud, so when demand increases, the configurations and processing power can be changed to give users a seamless experience.

3.4 Problem Solution fit

1.Customer Segments <ul style="list-style-type: none"> No need to buy the newspaper instantly download the application easily view the news article at anytime,anywhere,anyone. 	6.Customer Constraints <ul style="list-style-type: none"> Cost effective Very portable Reliable and user friendly 	5.Available solution
2.Problems/plain <ul style="list-style-type: none"> Every news article in the internet cannot be trusted. It can also be a fake news. Going through unrelatable news articles is a waste of time. 	10.Your Solution <ul style="list-style-type: none"> News from trusted news will alone be displayed. News articles can be categorized into different sections so that it will be easier to read the required news. 	7.Behaviour <ul style="list-style-type: none"> Based on the user location it provides news articles. Users should have the option to share the news.
3.Triggers This news app is a big interactive database that think of it like would any other piece of journalism . It just uses software instead of words and pictures.	9.Problem Root Cause <ul style="list-style-type: none"> Paid subscription for daily news. It is really difficult for the user to get location based news. 	8.Channels of behaviours <ul style="list-style-type: none"> Source of the news must be verified before publishing.
4.Emotions:Before/after Fearness,satisfaction,anger and two sentiment(Positive and negative)using to extraction.		

4. REQUIREMENT ANALYSIS

4.4 Functional requirement

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Email
FR-2	User Confirmation	Confirmation via Email using Sendgrid
FR-3	User Preferred Topics	Collecting user's favourite topics
FR-4	Collecting News	Collecting news from rapid API at regular Intervals
FR-6	Login	Logging in the user using the registered email and password
FR-7	News Feed	Showing the news fetched from the API to the user

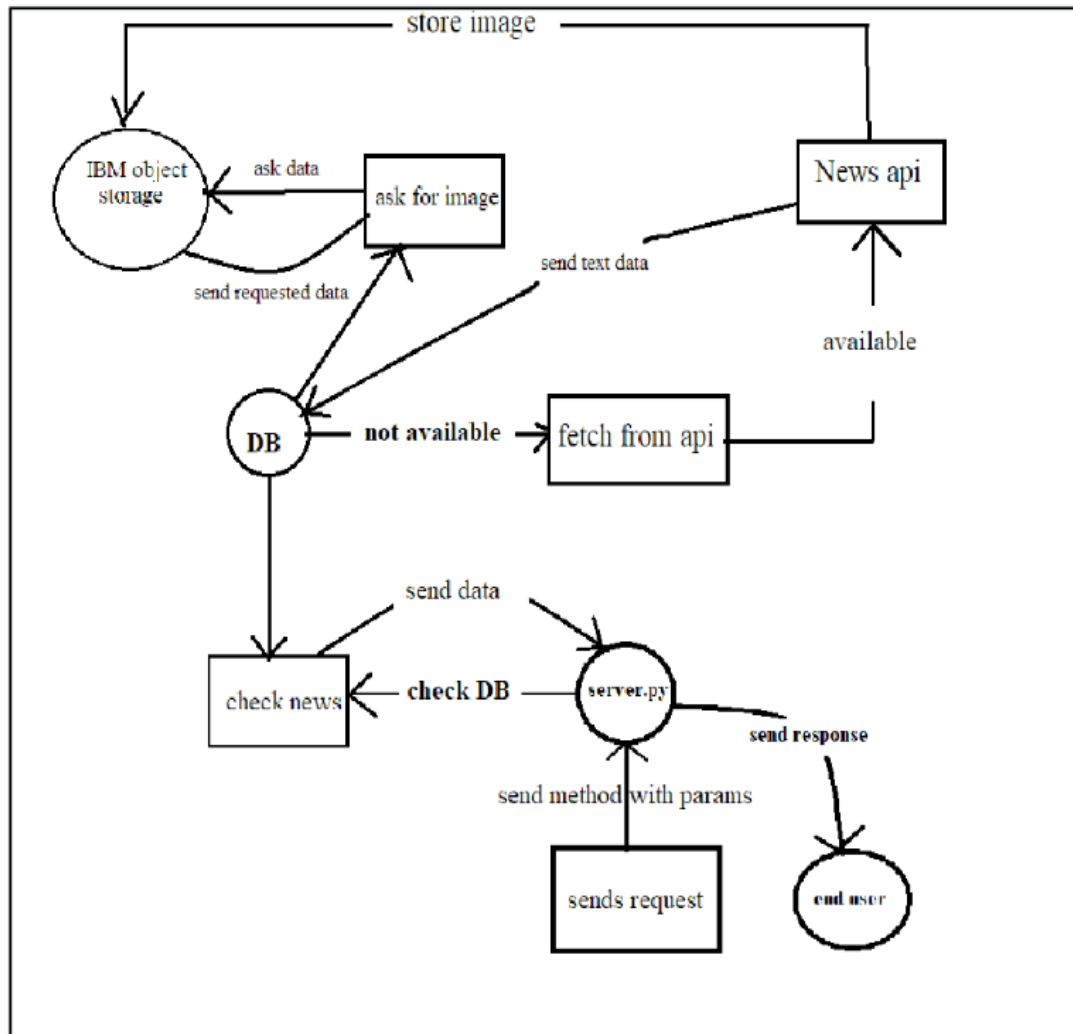
4.5 Non-Functional requirements

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The app should be able to used by all people
NFR-2	Security	The app should authenticate the legitimate users and should restrict bot attacks
NFR-3	Reliability	The app should show the news which are non fake and spam free
NFR-4	Performance	The app should be accessible in older devices too
NFR-5	Availability	The app should be available to all devices
NFR-6	Scalability	The app should handle multiple users and be designed in such a way for future upgrade

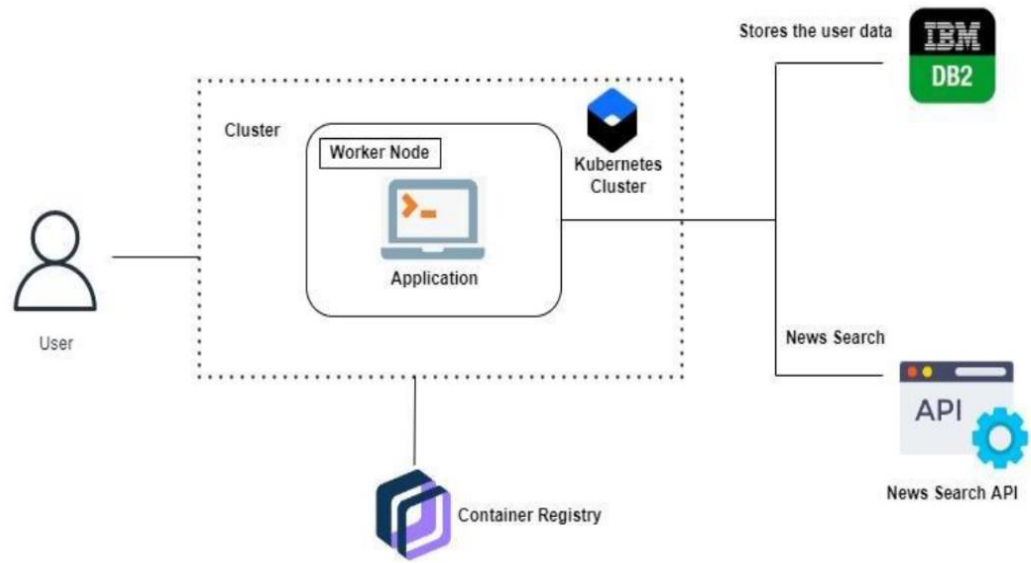
5. PROJECT DESIGN

5.4 Data Flow Diagrams

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



5.5 Solution & Technical Architecture



5.6 User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Normal User	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
	Email Verification	USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
	Login	USN-3	As a user, I can login with the email and password into the app	I can access to all the news	High	Sprint-1
	Access	USN-4	As a user, I can access the site anywhere and everywhere	I can view the site by typing the URL of the site	High	Sprint-4

6. PROJECT PLANNING & SCHEDULING

6.4 Sprint Planning & Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	10	High	Vimal S dev, Srivathsan S
Sprint-1	Login	USN-2	As a user, I will receive confirmation email once I have registered for the application	5	High	Vikram krishna S Vimal S Dev, Srivathsan S
Sprint-1	Email Verification	USN-3	As a user I can verify my email using the link sent to my mailid	5	High	Vikram krishna S Sri Sai R, Vimal S Dev
Sprint-2	API Fetch	USN-4	Fetch News from Rapid API at regular interval	10	High	Vikram krishna S, Vimal S Dev
Sprint-2	REST Endpoints for backend	USN-5	Creating endpoints at the backend in order to interact with frontend	10	Medium	Sri Sai R
Sprint-3	Designing Frontend	USN-6	Create a minimalisting design in figma to create frontend	2	Medium	Srivathsan S
Sprint-3	Creating Frontend	USN-7	Create the frontend webpage using the design	10	Low	Vimal S Dev, Srivathsan S
Sprint-3	Connect frontend and backend	USN-8	Connect the frontend and backend and complete the application	8	High	Sri Sai R, Vikram Krishna S, Vimal S Dev
Sprint-4	Testing	USN-9	Testing the application before final release	10	High	Sri Sai R, Vikram Krishna S, Vimal S Dev, Srivathsan S
Sprint-4	Deployment	USN-10	Deployment of the application	10	High	Sri Sai R, Vikram Krishna S, Vimal S Dev

7. CODING & SOLUTIONING (Explain the features added in the project along with code)

7.4 Feature 1

Verification email Sender

```
152 def send_mail(receiver,flag,firstname):
153     email_sender = 'itouch.lmt@gmail.com'
154     email_password = 'dbupsqdpwobniud'
155
156     email_receiver = receiver
157
158     code = random.randrange(100000,999999)
159
160     if flag == 'signup':
161         subject = 'signup confirmation'
162         body = ""
163         Welcome "" + firstname + "" ,
164
165         You have successfully created your account
166
167         Enjoy surfing through the latest news!..
168         ""
169         em = EmailMessage()
170         em['From'] = email_sender
171         em['To'] = email_receiver
172         em['subject'] = subject
173         em.set_content(body)
174
175         context = ssl.create_default_context()
176
177         with smtplib.SMTP_SSL('smtp.gmail.com',465,context = context) as smtp:
178             smtp.login(email_sender,email_password)
179             smtp.sendmail(email_sender,email_receiver,em.as_string())
180     else:
181         subject = 'Password change request'
182         body = ""
183         Welcome "" + firstname + "" ,
184         your password verification code for password change is: ""+str(code)
185         em = EmailMessage()
186         em['From'] = email_sender
187         em['To'] = email_receiver
188         em['subject'] = subject
189         em.set_content(body)
190
```

The above function is used to send the verification code to the desired email.

7.5 Database Schema (if Applicable)

User Table

Table definition

: ✕

USER

Approximate 2 rows (4.03 MB)
Updated on 2022-10-17 15:43:28

Name	Data type	Nullable	Length	Scale	
ID	INTEGER	N		0	👁
NAME	VARCHAR	N	255	0	👁
EMAIL	VARCHAR	N	255	0	👁
PASSWORD	VARCHAR	N	255	0	👁
FAVOURITES	CLOB	Y	1048576	0	👁
BOOKMARKS	CLOB	Y	1048576	0	👁
VERIFIED	BOOLEAN	Y	1	0	👁
RESEND_TIME	VARCHAR	N	255	0	👁

8. ADVANTAGES & DISADVANTAGES

- This app can be accessed anywhere and anytime, So that the user can view the news
- Its ad free
- The news is only based on the API
- It may contain some unwanted content but we don't have control over it

9. CONCLUSION

Thus we have developed a full stack application based on the plans and within the given time. We have tested the application in both desktop and mobile and it worked well, Overall it was a great experience.

10. FUTURE SCOPE

In future we may integrate our own news API instead of third party APIs and may develop a mobile native application so that it can be used in both android and ios.

11. APPENDIX

- [Git Repository Link](#)
- [Live Page URL](#)
- [Video Demo Link](#)