NEWS TRACKER APPLICATION

Team ID: PNT2022TMID12670

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1.INTRODUCTION

1.1.Project Overview

News articles are collected from various news channels and news sources from across the internet. These news articles are then categorized into various sections. All the news, belonging to a particular category will be displayed under a specific section.

The news articles are displayed on the basis of the interests and preference of the user. News feed is used to analyzed the interest of the user. Based on the type of news the users views, their interests is analyzed.

User also will have the option to save snippets from news articles, mark some news articles as bookmark and later to see their views about the news.

Prefer the language for the user based on their location and user wants to change the language manually .

1.2.purpose

The goal of this project is to collect all the news articles from across the internet and display it in an orderly manner, based on the interests and preferences of the user, at a single destination.

2.LITERATURE SURVEY

2.1.Existing `problem

News are collected from various news sources and are displayed without being properly categorized into various sections.

News articles are recommended randomly.

Every news articles, whether important or not, is given the same preference and are displayed by being sorted on the basis of the time it was published.

Every news articles will be displayed whether or not the content is correct.

The language of the UI is English and users have no option to change the language.

2.2.References

- ❖ Allan, J., Papka, R., Lavrenko, V.: On-line New Event Detection and Tracking. In: Proceedings of 21st ACM SIGIR, Melbourne (1998)
- ❖ Bacan, H., Pandzic, I.S., Gulija, D.: Automated News Item Categorization. In: JSAI (2005)
- ❖ Blei, D.M., Ng, A.Y., Jordan, M.I.: Latent Dirichlet Allocation. Journal of Machine Learning Research 3, 993–1022 (2003)
- ❖ Yamron, J.P., Carp, I., Gillick, L., Lowe, S., Van Mulbregt, P.: Topic Tracking in a News Stream. In: Proceedings of DARPA Broadcast News Workshop (1999)
- ❖ Mori, M., Miura, T., Shioya, I.: Topic Detection and Tracking for News Web Pages. In: IEEE/WIC/ACM International Conference on Web Intelligence, pp. 338–342 (2006)

2.3 Problem Statement Definition

A well-articulated customer problem statement allows you and your team to find the ideal solution for the challenges your customers face. Throughout the process, you'll also be able to empathize with your customers, which helps you better understand how they perceive your product or service

Iam	Regular news reader in online news tracker applications
I'm trying to	Read online articles without any annoying contents
But	• There are multiple news-sharing apps used by a single user and are often spammed with notifications. • There is also a lot of fake news which gets shared. • A news-sharing app wants to help users find relevant and importantnews easily every day and understand explicitly that the news is notfake but from proper sources.
Because	• News apps are trying to be like social media apps • News apps want to increase the time that user spends on their app sothat they can show ads and generate revenue • To increase the user screen time, news apps make users encountereye-catching news rather than credible ones

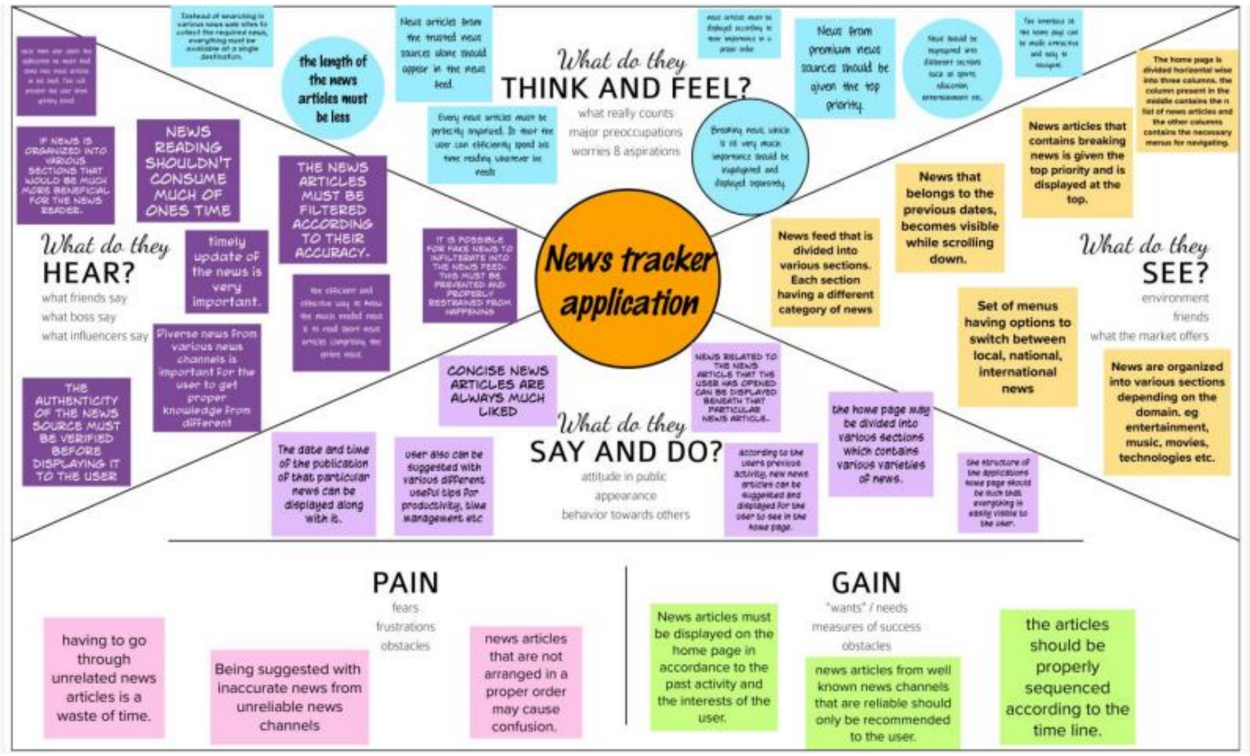
	• Apps generate income through subscriptions.
Which makes me feel	• Fake news hurts individuals and society as it persuades consumersto accept false beliefs that are shared to forward specific agendas. • Identifying relevant news from excessive amounts of information onsocial media requires substantial time, energy, and mental efforts • Constant news updates and pop-ups of breaking news in social media may increase the feeling of news overload.

I am	***I'm trying to***	***But***	***Because***	***Which makes me feel***
Online news articles reader	Read online articles without any annoying contents	Spamming of messages usually leads to clearing of the content without viewing thus probably leading the user to lose access to important information.	Businesses must publish irrelevant news because younger generations prefer news with more fun instead of reliable news.	Irritated
	Read online articles without any ads	Ads in the apps might irritate the user while reading the news	Apps generate income through subscriptions andads	Frustrated
	Read precisecontents	News apps want to increase the time that user spends ontheir app so that they can show ads and generate revenue	Users don't want to spendtime reading the entire content. They need short and crisp news	Annoying

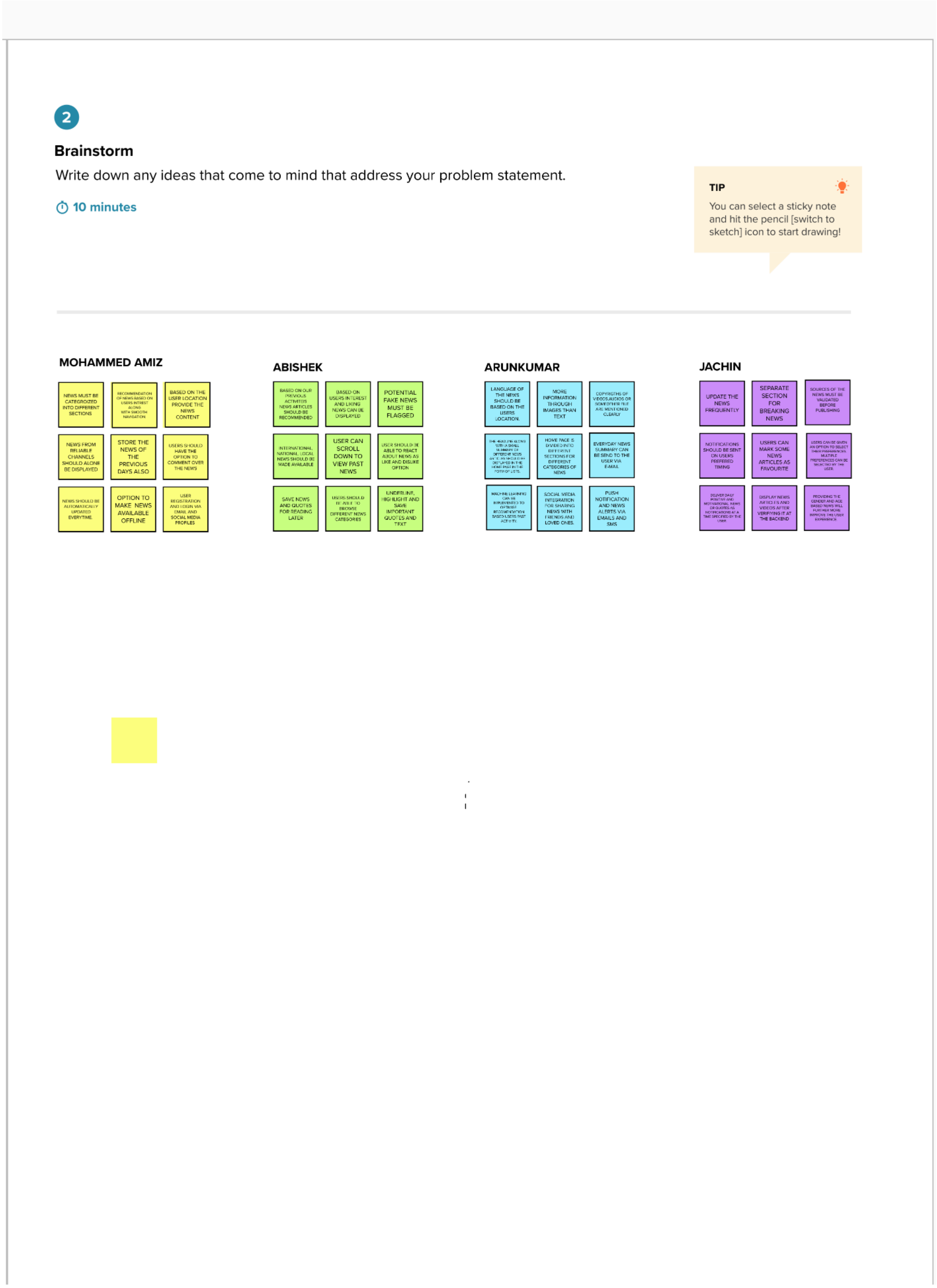
	Avoid irrelevant news	Irrelevant news makes the user stop viewing the news thus losing access to credible news	Businesses must publish irrelevant news because younger generations prefer news with more fun instead of reliable news.	Exhausted

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas


News tracker application
What do they THINK AND FEEL?
what really counts
major preoccupations
worries & aspirations
Instead of searching in various news web sites to collect the required news, everything must be available at a single destination.
the length of the news articles must be less
News articles from the trusted news sources alone should appear in the news feed.
Every news articles must be perfectly organized. So that the user can efficiently spend his time reading whatever he needs
News articles must be displayed according to their importance in a proper order
Breaking news which is of very much importance should be highlighted and displayed separately
News from premium news sources should be given the top priority.
News should be segregated into different sections such as sports, education, entertainment etc.
The interface of the home page can be made attractive and easy to navigate.
What do they HEAR?
what friends say
what boss say
what influencers say
[illegible]
IF NEWS IS ORGANIZED INTO VARIOUS SECTIONS THAT WOULD BE MUCH MORE BENEFICIAL FOR THE NEWS READER.
NEWS READING SHOULDN'T CONSUME MUCH OF ONES TIME
THE NEWS ARTICLES MUST BE FILTERED ACCORDING TO THEIR ACCURACY.
timely update of the news is very important.
The efficient and effective way to know the much needed news is to read short news articles comprising the entire news.
IT IS POSSIBLE FOR FAKE NEWS TO INFILTERATE INTO THE NEWS FEED. THIS MUST BE PREVENTED AND PROPERLY RESTRAINED FROM HAPPENING
Diverse news from various news channels is important for the user to get proper knowledge from different
THE AUTHENTICITY OF THE NEWS SOURCE MUST BE VERIFIED BEFORE DISPLAYING IT TO THE USER
What do they SEE?
environment
friends
what the market offers
The home page is divided horizontal wise into three columns. the column present in the middle contains the n list of news articles and the other columns contains the necessary menus for navigating.
News articles that contains breaking news is given the top priority and is displayed at the top.
News that belongs to the previous dates, becomes visible while scrolling down.
News feed that is divided into various sections. Each section having a different category of news
Set of menus having options to switch between local, national, international news
News are organized into various sections depending on the domain. eg entertainment, music, movies, technologies etc.
What do they SAY AND DO?
attitude in public
appearance
behavior towards others
CONCISE NEWS ARTICLES ARE ALWAYS MUCH LIKED
NEWS RELATED TO THE NEWS ARTICLE THAT THE USER HAS OPENED CAN BE DISPLAYED BENEATH THAT PARTICULAR NEWS ARTICLE.
The date and time of the publication of that particular news can be displayed along with it.
user also can be suggested with various different useful tips for productivity, time management etc
according to the users previous activity, new news articles can be suggested and displayed for the user to see in the home page.
the home page may be divided into various sections which contains various varieties of news.
the structure of the applications home page should be such that everything is easily visible to the user.
PAIN
fears
frustrations
obstacles
having to go through unrelated news articles is a waste of time.
Being suggested with inaccurate news from unreliable news channels
news articles that are not arranged in a proper order may cause confusion.
GAIN
"wants" / needs
measures of success
obstacles
News articles must be displayed on the home page in accordance to the past activity and the interests of the user.
news articles from well known news channels that are reliable should only be recommended to the user.
the articles should be properly sequenced according to the time line.

3.2Ideation&Brainstorming



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 sketch] icon to start drawing!

MOHAMMED AMIZ

- NEWS MUST BE CATEGROIZED INTO DIFFERENT SECTIONS
- RECOMMENDATION OF NEWS BASED ON USERS INTREST ALONG WITH SMOOTH NAVIGATION
- BASED ON THE USER LOCATION PROVIDE THE NEWS CONTENT
- NEWS FROM RELIABLE CHANNELS SHOULD ALONE BE DISPLAYED
- STORE THE NEWS OF THE PREVIOUS DAYS ALSO
- USERS SHOULD HAVE THE OPTION TO COMMENT OVER THE NEWS
- NEWS SHOULD BE AUTOMATICALLY UPDATED EVERYTIME.
- OPTION TO MAKE NEWS AVAILABLE OFFLINE
- USER REGISTRATION AND LOGIN VIA EMAIL AND SOCIAL MEDIA PROFILES

ABISHEK

- BASED ON OUR PREVIOUS ACTIVITIES NEWS ARTICLES SHOULD BE RECOMMENDED
- BASED ON USERS INTEREST AND LIKING NEWS CAN BE DISPLAYED
- POTENTIAL FAKE NEWS MUST BE FLAGGED
- INTERNATIONAL, NATIONAL, LOCAL NEWS SHOULD BE MADE AVAILABLE
- USER CAN SCROLL DOWN TO VIEW PAST NEWS
- USER SHOULD BE ABLE TO REACT ABOUT NEWS AS LIKE AND DISLIKE OPTION
- SAVE NEWS AND QUOTES FOR READING LATER
- USERS SHOULD BE ABLE TO BROWSE DIFFERENT NEWS CATEGORIES
- UNDERLINE, HIGHLIGHT AND SAVE IMPORTANT QUOTES AND TEXT

ARUNKUMAR

- LANGUAGE OF THE NEWS SHOULD BE BASED ON THE USERS LOCATION.
- MORE INFORMATION THROUGH IMAGES THAN TEXT
- COPYRIGTHS OF VIDEOS,AUDIOS OR SOMEOTHER FILE ARE MENTIONED CLEARLY
- THE HEADLINE ALONG WITH A SMALL SUMMARY OF DIFFERENT NEWS ARTICLES SHOULD BE DISPLAYED IN THE HOME PAGE IN THE FORM OF LISTS.
- HOME PAGE IS DIVIDED INTO DIFFERENT SECTIONS FOR DIFFERENT CATEGORIES OF NEWS
- EVERYDAY NEWS SUMMARY CAN BE SEND TO THE USER VIA E-MAIL
- MACHINE LEARNING CAN BE IMPLEMENTED TO OPTIMISE RECOMENDATION BASED USERS PAST ACTIVITY.
- SOCIAL MEDIA INTEGRATION FOR SHARING NEWS WITH FRIENDS AND LOVED ONES.
- PUSH NOTIFICATION AND NEWS ALERTS VIA EMAILS AND SMS

JACHIN

- UPDATE THE NEWS FREQUENTLY
- SEPARATE SECTION FOR BREAKING NEWS
- SOURCES OF THE NEWS MUST BE VALIDATED BEFORE PUBLISHING
- NOTIFICATIONS SHOULD BE SENT ON USERS PREFERED TIMING
- USERS CAN MARK SOME NEWS ARTICLES AS FAVOURITE
- USERS CAN BE GIVEN AN OPTION TO SELECT THEIR PREFERENCES. MULTIPLE PREFERENCES CAN BE SELECTED BY THE USER.
- DELIVER DAILY POSITIVE AND MOTIVATIONAL NEWS OR QUOTES AS NOTIFICATIONS AT A TIME SPECIFIED BY THE USER
- DISPLAY NEWS ARTICLES AND VIDEOS AFTER VERIFIYING IT AT THE BACKEND
- PROVIDING THE GENDER AND AGE BASED NEWS WILL FURTHER MORE IMPROVE THE USER EXPERIENCE

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

⏱ 20 minutes

User interface and home page.

- HOME PAGE IS DIVIDED INTO DIFFERENT SECTIONS FOR DIFFERENT CATEGORIES OF NEWS
- NEWS MUST BE CATEGORIZED INTO DIFFERENT SECTIONS
- SEPARATE SECTION FOR BREAKING NEWS
- THE HEADLINE ALONG WITH A SMALL SUMMARY OF DIFFERENT NEWS ARTICLES SHOULD BE DISPLAYED IN THE HOME PAGE IN THE FORM OF LISTS.
- USERS SHOULD BE ABLE TO BROWSE DIFFERENT NEWS CATEGORIES

News recomendation system

- RECOMMENDATION OF NEWS BASED ON USERS INTREST ALONG WITH SMOOTH NAVIGATION.
- BASED ON THE USER LOCATION PROVIDE THE NEWS CONTENT
- BASED ON OUR PREVIOUS ACTIVITEIS NEWS ARTICLES SHOULD BE RECOMMENDED
- BASED ON USERS INTEREST AND LIKING NEWS CAN BE DISPLAYED
- USERS CAN BE GIVEN AN OPTION TO SELECT THEIR PREFERENCES. MULTIPLE PREFERENCES CAN BE SELECTED BY THE USER.
- LANGUAGE OF THE NEWS SHOULD BE BASED ON THE USERS LOCATION.
- MACHINE LEARNING CAN BE IMPLEMENTED TO OPTIMISE RECOMENDATION BASED USERS PAST ACTIVITY.
- PROVIDING THE GENDER AND AGE BASED NEWS WILL FURTHER MORE IMPROVE THE USER EXPERIENCE.

Reliability of news

- POTENTIAL FAKE NEWS MUST BE FLAGGED
- NEWS FROM RELIABLE CHANNELS SHOULD ALONE BE DISPLAYED
- SOURCES OF THE NEWS MUST BE VALIDATED BEFORE PUBLISHING
- COPYRIGTHS OF VIDEOS AUDIOS OR SOMEOTHER FILE ARE MENTIONED CLEARLY
- DISPLAY NEWS ARTICLES AND VIDEOS AFTER VERIFIYING IT AT THE BACKEND

Mark and save important news

- UNDERLINE, HIGHLIGHT AND SAVE IMPORTANT QUOTES AND TEXT
- SAVE NEWS AND QUOTES FOR READING LATER
- USERS CAN MARK SOME NEWS ARTICLES AS FAVOURITE

REACT TO THE NEWS CONTENT

- USERS SHOULD HAVE THE OPTION TO COMMENT OVER THE NEWS
- USER SHOULD BE ABLE TO REACT ABOUT NEWS AS LIKE AND DISLIKE OPTION

DISPLAY THE NEWS IN VARIOUS WAYS

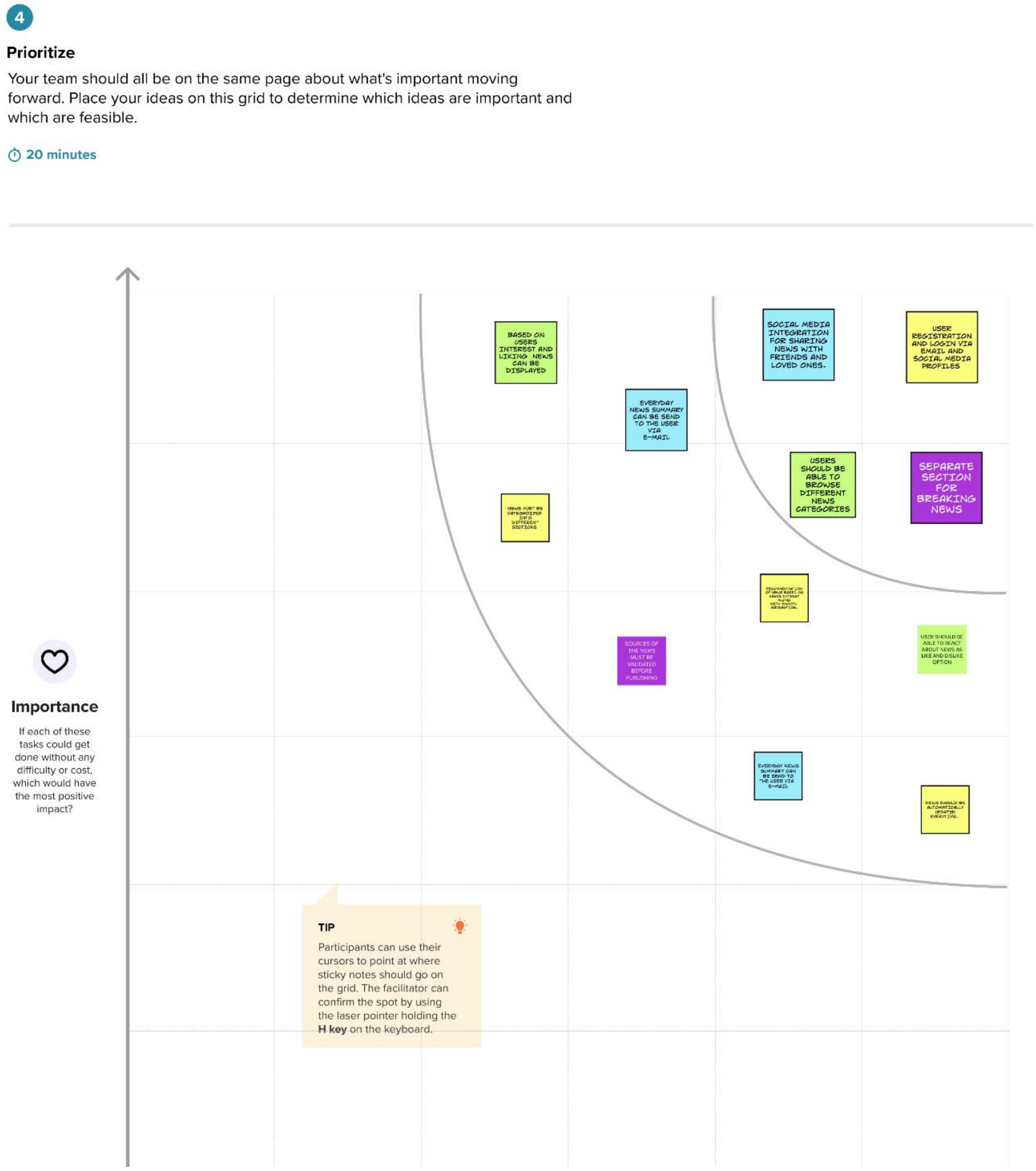
- EVERYDAY NEWS SUMMARY CAN BE SEND TO THE USER VIA E-MAIL
- PUSH NOTIFICATION AND NEWS ALERTS VIA EMAILS AND SMS
- DELIVER DAILY POSITIVE AND MOTIVATIONAL NEWS OR QUOTES AS NOTIFICATIONS AT A TIME SPECIFIED BY THE USER.
- NOTIFICATIONS SHOULD BE SENT ON USERS PREFERED TIMING

IMPORTANT FEATURES ABOUT THE APP

- UPDATE THE NEWS FREQUENTLY
- OPTION TO MAKE NEWS AVAILABLE OFFLINE
- STORE THE NEWS OF THE PREVIOUS DAYS ALSO
- INTERNATIONAL, NATIONAL, LOCAL NEWS SHOULD BE MADE AVAILABLE
- MORE INFORMATION THROUGH IMAGES THAN TEXT
- NEWS SHOULD BE AUTOMATICALLY UPDATED EVERYTIME.

LOGIN CREDINTIALS

- USER REGISTRATION AND LOGIN VIA EMAIL AND SOCIAL MEDIA PROFILES
- SOCIAL MEDIA INTEGRATION FOR SHARING NEWS WITH FRIENDS AND LOVED ONES.



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

BASED ON USERS INTEREST AND LIKING NEWS CAN BE DISPLAYED

EVERYDAY NEWS SUMMARY CAN BE SEND TO THE USER VIA E-MAIL

SOCIAL MEDIA INTEGRATION FOR SHARING NEWS WITH FRIENDS AND LOVED ONES.

USER REGISTRATION AND LOGIN VIA EMAIL AND SOCIAL MEDIA PROFILES

NEWS MUST BE CATEGORIZED INTO DIFFERENT SECTIONS

USERS SHOULD BE ABLE TO BROWSE DIFFERENT NEWS CATEGORIES

SEPARATE SECTION FOR BREAKING NEWS

RECOMMENDATION OF NEWS BASED ON USERS INTEREST ALONG WITH SMOOTH NAVIGATION.

SOURCES OF THE NEWS MUST BE VALIDATED BEFORE PUBLISHING

USER SHOULD BE ABLE TO REACT ABOUT NEWS AS LIKE AND DISLIKE OPTION

EVERYDAY NEWS SUMMARY CAN BE SEND TO THE USER VIA E-MAIL

NEWS SHOULD BE AUTOMATICALLY UPDATED EVERYTIME.

Importance

If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the **H key** on the keyboard.

3.3 Proposed Solution

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Display news from various news sites and news platforms in a single destination along with personalising the news according to users interests.
2.	Idea / Solution description	Instead of the user having to search across theinternet for news; news articles from various news sites and news platforms across the internet must be collected and displayed in anorganized manner, by segregating them into various categories, at a single destination.
3.	Novelty / Uniqueness	1 Based on the user's past activity and interest, news articles will be recommended. 2 News are categorized into various sections forthe convenience of the user. 3 News is updated in real time. 4 User will have the option to select whatvarieties of news he would like to see.
4.	Social Impact / Customer Satisfaction	1 As news is recommended according to the user's interests and past activity, users will findthe recommendations interesting and useful. 2 Users time is greatly saved because they willnever have to search through the internet to find the required news. Every news will be available at a single destination. 3 Users will have the option to customize the appearance, look and feel of the app accordingto their liking. 4 They can even change the way the news willbe displayed in the home page according to their convenience. These factors will surely make the customers more satisfied.
5.	Business Model (Revenue Model)	The major revenue stream is the adds that are published throughout the app. The secondary revenue stream can be from the news channels and news sites whose news will be published in this application. Based on the
6.	Scalability of the Solution	As this application is hosted entirely on cloud, when there is an increase in demand, the configurations and processing power can be varied inorder to provide users with a seamlessexperience.

3.4 Problem Solution fit

Define CS fit into CC

1. CUSTOMER SEGMENT(S) CS

- No need to buy the newspaper instantly download the application easily view the news article at anytime,any where,anyone.
- now world's turn as modernize so it's easily to reach news readers.

i.e. working parents of 0-5 y.o. kids

6. CUSTOMER CONSTRAINTS C

- cost effective
- no need pay as uses.
- portable,interopertability.
- reliable and user friendly

5. AVAILABLE SOLUTIONS A

- Many online news channels are avaliable, which publishes news for people to read news online.

or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital

- But it is really hard for people to find the right and proper news.
- Different varieties of news is avalable in the internet, but it will be effictive only if the news articles are organized properly.

Explore AS differentiate

2. JOBS-TO-BE-DONE / PROBLEMS J&

- Being suggeseted with inaccurate news from unreliable news channels
- every news article in the internet cannot be trusted .It can be fake news also.
- news articles that are arranged in a proper manner may cause confusion,having go through unrelatable news articles is a waste of time.
- advertising and news overloading

9. PROBLEM ROOT CAUSE RC

- paid subscription for daily
- news nowadays, nobody have the time to search and read the right news from the internet.
- people find it really difficult read the daily news papers. So it will be very convinient if it possible to read news effectively via smartphones itself.

7. BEHAVIOUR BE

i

- Based on the user location provide the news articles it's usefull to the customer
- user should have the option to comment over news content and user likes,dislikes the articles should be placed.

3. TRIGGERS

TR

- User can mark some articles as favourites
- User can be given an option to express his views and emotions by commenting about the news article in the comment section.

4. EMOTIONS: BEFORE / AFTER

EM

- User liking news articles should be recommended to the use

10. YOUR SOLUTION

SL

- news from trusted news channel should alone be displayed.
- fake news should be flagged
- news articles can be categorized into different sections so that
It will be user to read the required news
- based on user past activity and interest news articles can be recommended

8. CHANNELS of BEHAVIOUR

CH

- copyrights of video,audio or someother files are mentioned clearly.
- source of the news must be verified before the publishing

4.REQUIREMENT ANALYSIS

4.1.Functional Requirement

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	User language selection	From a list of languages, users should select a language in which the news must be displayed.
FR-4	User preferences	User is asked to select the topics regarding which he would like to see the news i.e cinema, cricket, technology, climate etc.
FR-5	Notification preference	User is given the option to choose the means through which he would like to receive notifications eg. SMS, email, mobile notification. User is also given the option to select the topics on which he would like to receive notification.
FR-6	Appearance selection	Option is provided for the user to select the manner in which he wants the news to appear in the home page, how it should be organised and so on.

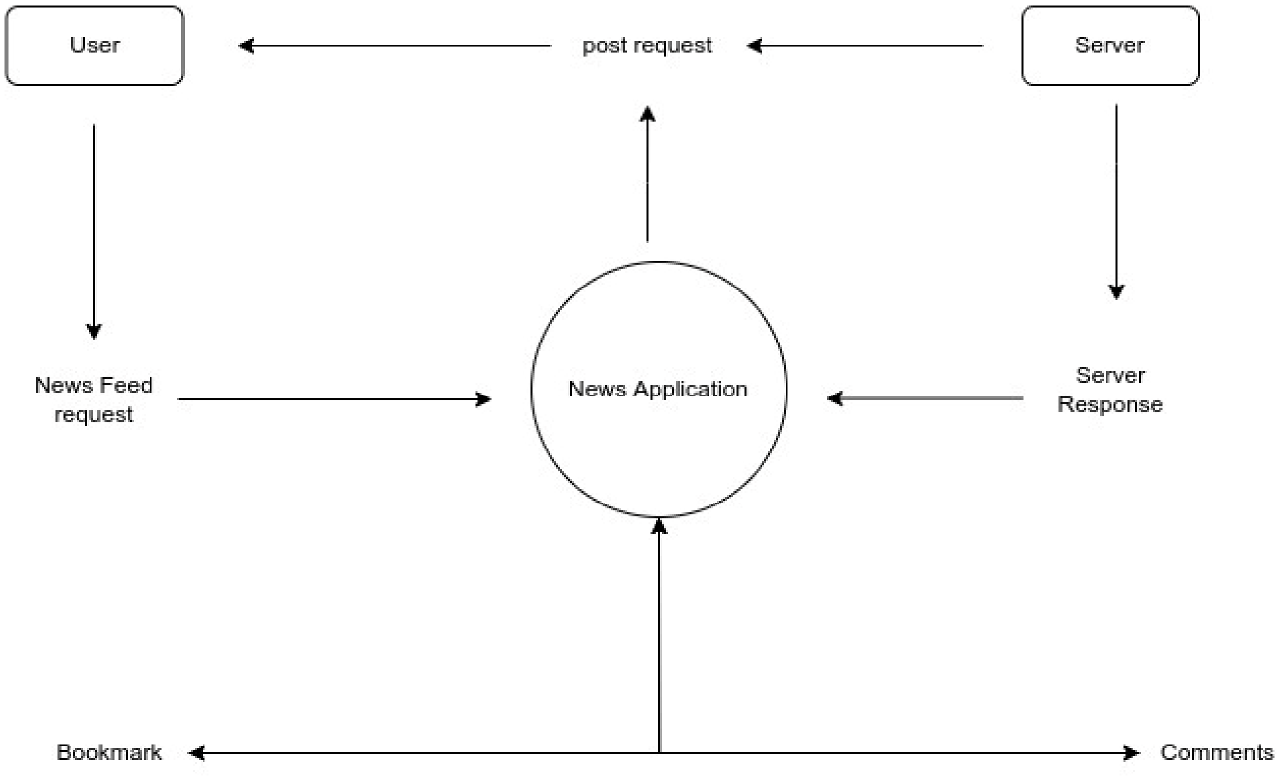
4.2 Non-Functional Requirement

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	News articles must be fetched quickly from the internet and should be displayed as soon as the user opens the application. While scrolling down the homepage, it shouldn't take too long for the news articles to load.
NFR-2	**Security**	Proper authentication is done to ensure that only authenticated persons are accessing the news. The personal information of the user such as the email, name etc is stored in an encrypted database.

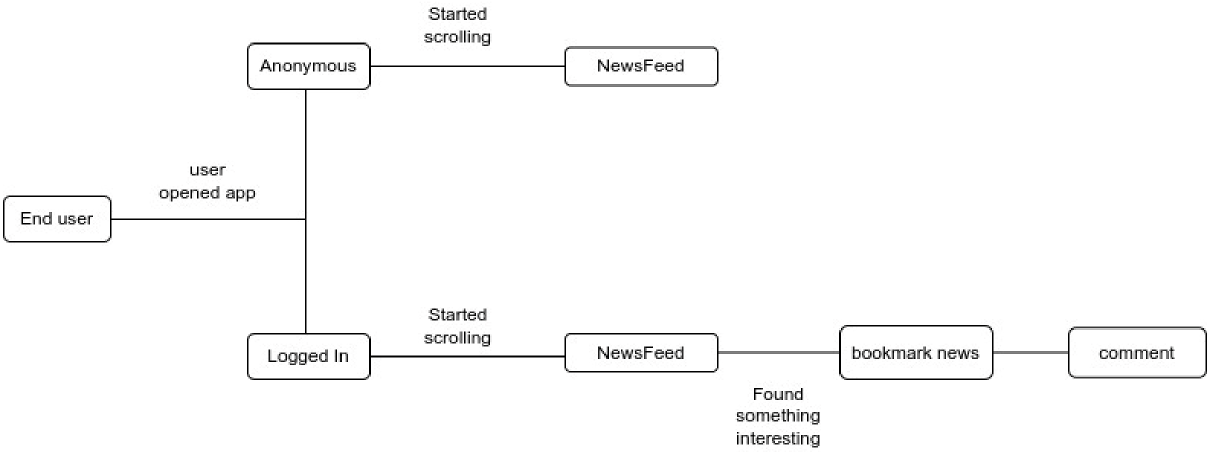
NFR-3	**Reliability**	The server on which this application is running is configured in such a way that the connection is reliable no matter what the network traffic is.
NFR-4	**Performance**	The RAM and the processing power of the server is configured in such a way that the user is able to quickly navigate across different sections and the news articles load in no time.
NFR-5	**Availability**	Irrespective of the time of the day the application should be up and running. The server configuration is done in such a way that it is available 24/7.
NFR-6	**Scalability**	This application will be hosted in IBM cloud and it will be made sure that it is easier to scale the server and storage up or down according to rise or fall of the total number of users accessing the application at a given time.

5.PROJECT DESIGN

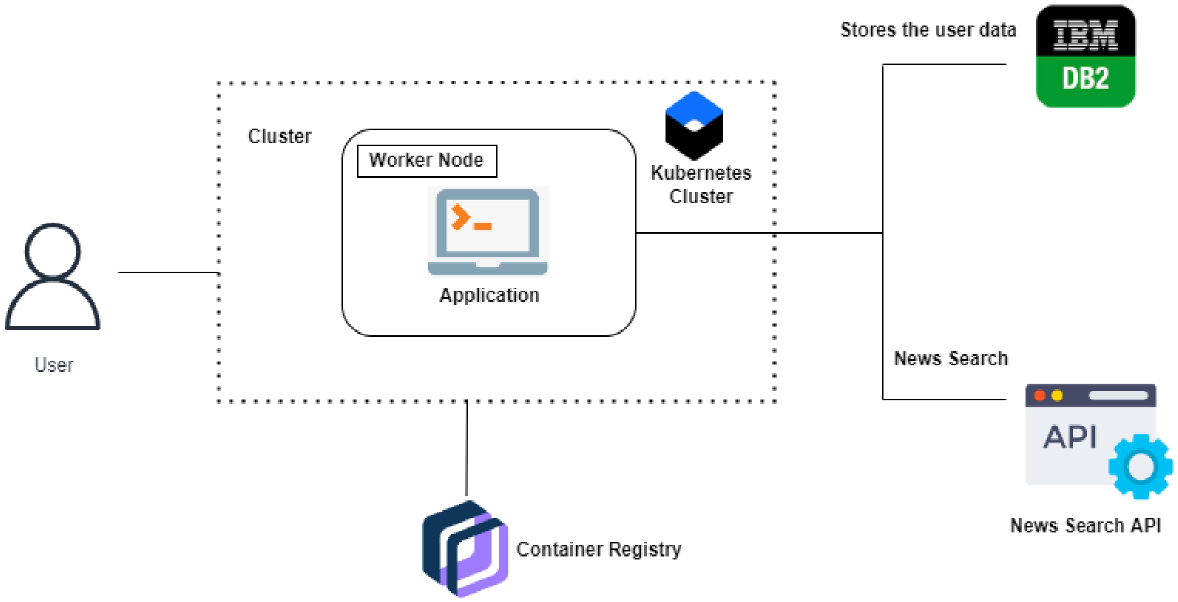
5.1.Data Flow Diagram



5.2.1Solution Architecture



5.2.2 Technology Architecture



5.3 User stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile 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
		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
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail		Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password		High	Sprint-1
	Dashboard					
Customer (Web user)	Registration form	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
		USN-2	As a user, I can register for the	I can register & access the	High	Sprint-1

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
			application through Facebook	dashboard with Facebook Login		
Customer Care Executive	Query	USN-1	As a user ,I have any queries means asked immediately	Watson assistant Bot helped to the user any time ,any where	High	Sprint-1
		USN-2	As a user report the news content	Copyrights issues are solved	High	Sprint 3
Administrator	Database	USN-1	As a user	Store ,retrive the based on particular user data	High	Sprint -3
	ShortNews	USN-2	As a user ,I can summary of the particular news content	View content like reels	High	Sprint-3

6.PROJECT PLANNING & SCHEDULING

6.1. Sprint Planning & Estimation

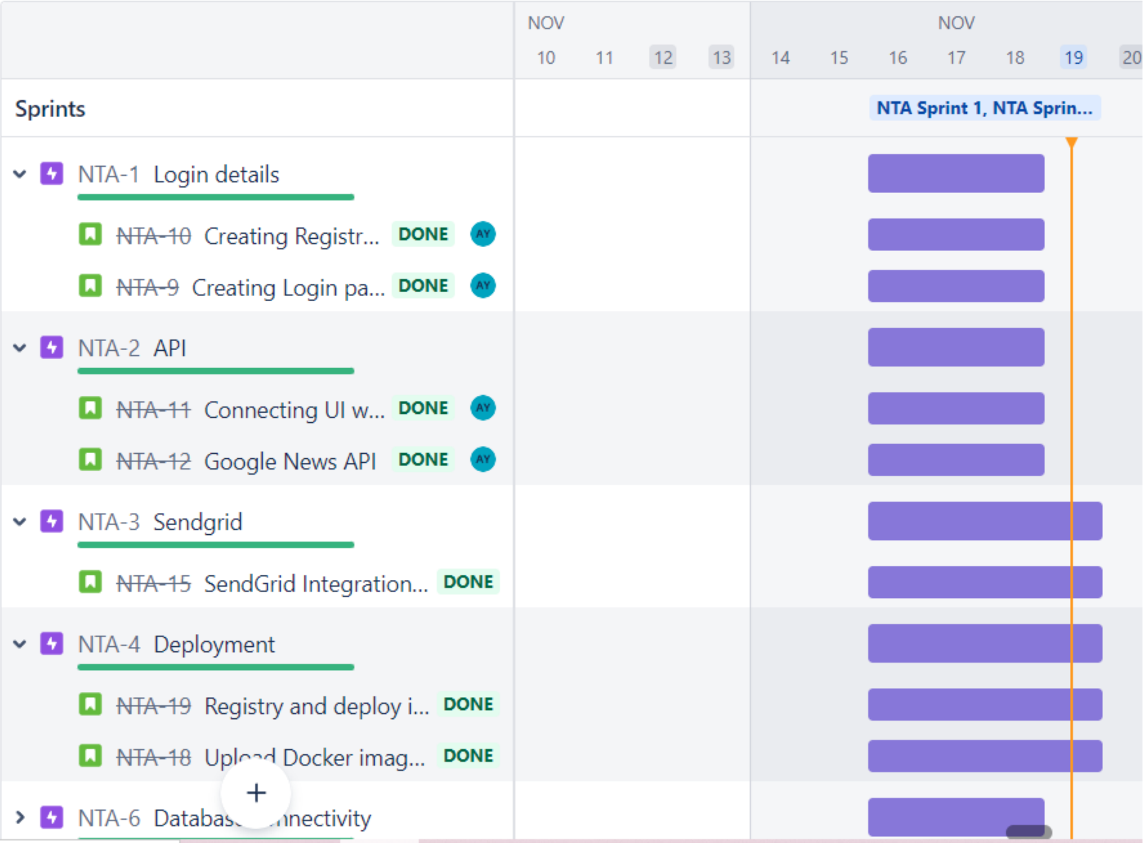
Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	Creating Login page Creating Registration page	10	High	Arunkumar,Abishek,Jachin
Sprint-1	Database Connectivity	USN-2	To Store details of the customer Connecting UI with Database	10	Medium	Arunkumar ,Abishek
Sprint-2	News Tracker UI	USN-3	Building UI News Tracker Application	10	High	
Sprint-2	API	USN-4	Connecting UI with News	10	High	Abishek

			API,Google News API			
Sprint-3	SendGrid Integration	USN-5	SendGrid Integration With Python Code	10	Low	
Sprint-3	News Reader (Voice)	USN-6	Building Voice Assistant to read the news	10	Medium	Jachin,Arun
Sprint-4	Containerization	USN-7	Containerizing the app	10	High	
Sprint -4	Upload image and deployment	USN-8	Upload Docker image to the IBMRegistry and deploy it in the Kubernetes Cluster	10	High	

6.2.Sprint Delivery Schedule

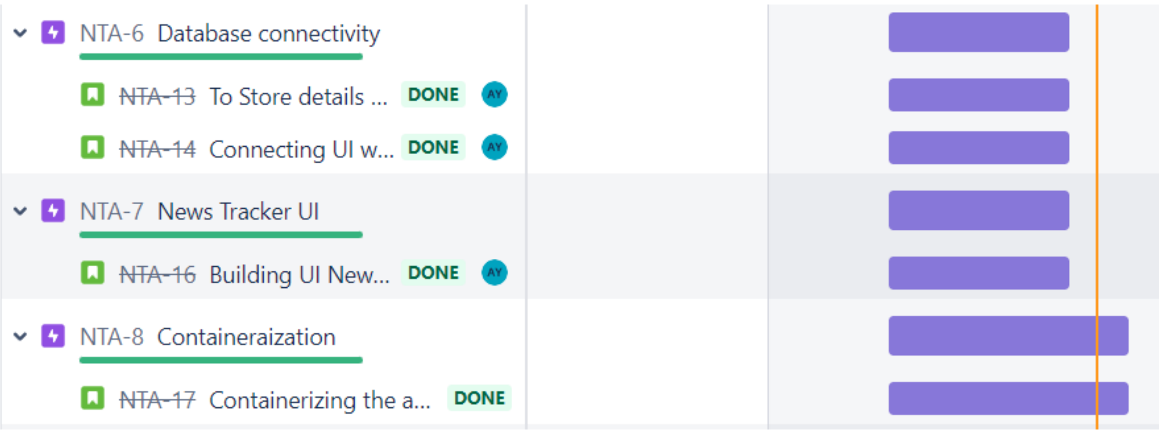
Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date(Actual)
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	19 Nov 2022

6.3.Report from Jira



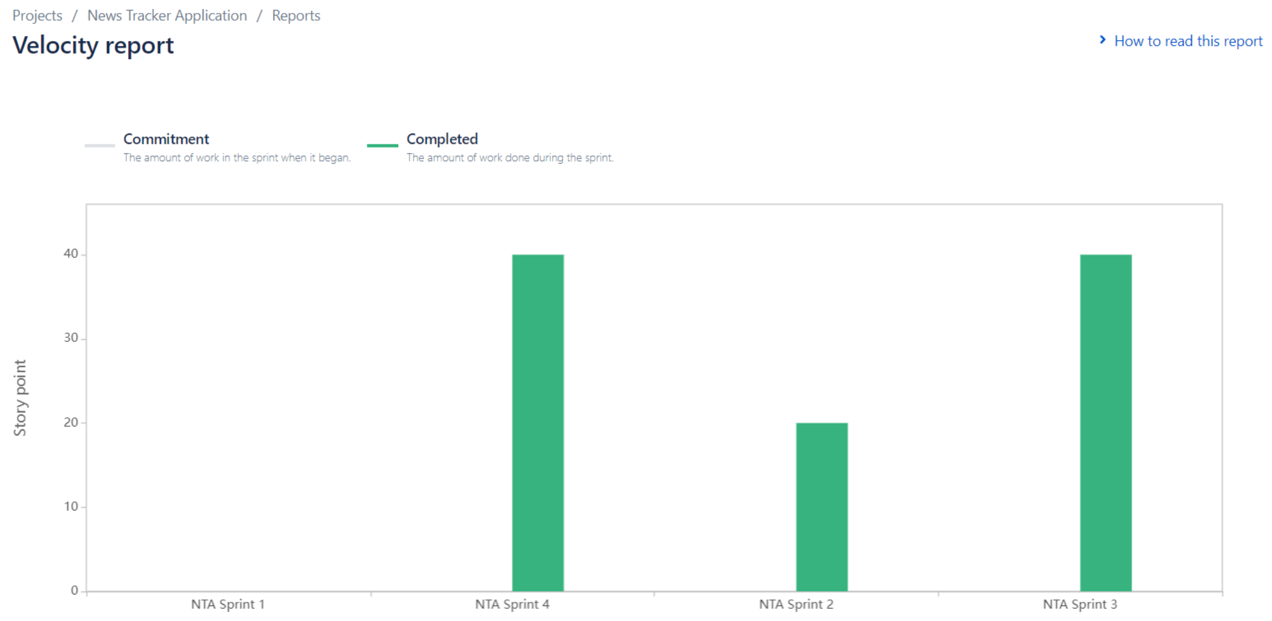
Sprints — NTA Sprint 1, NTA Sprin...

- NTA-1 Login details
  - ~~NTA-10~~ Creating Registr... DONE AY
  - ~~NTA-9~~ Creating Login pa... DONE AY
- NTA-2 API
  - ~~NTA-11~~ Connecting UI w... DONE AY
  - ~~NTA-12~~ Google News API DONE AY
- NTA-3 Sendgrid
  - ~~NTA-15~~ SendGrid Integration... DONE
- NTA-4 Deployment
  - ~~NTA-19~~ Registry and deploy i... DONE
  - ~~NTA-18~~ Upload Docker imag... DONE
- NTA-6 Database connectivity



- NTA-6 Database connectivity
  - ~~NTA-13~~ To Store details ... DONE AY
  - ~~NTA-14~~ Connecting UI w... DONE AY
- NTA-7 News Tracker UI
  - ~~NTA-16~~ Building UI New... DONE AY
- NTA-8 Containeraization
  - ~~NTA-17~~ Containerizing the a... DONE

Velocity report



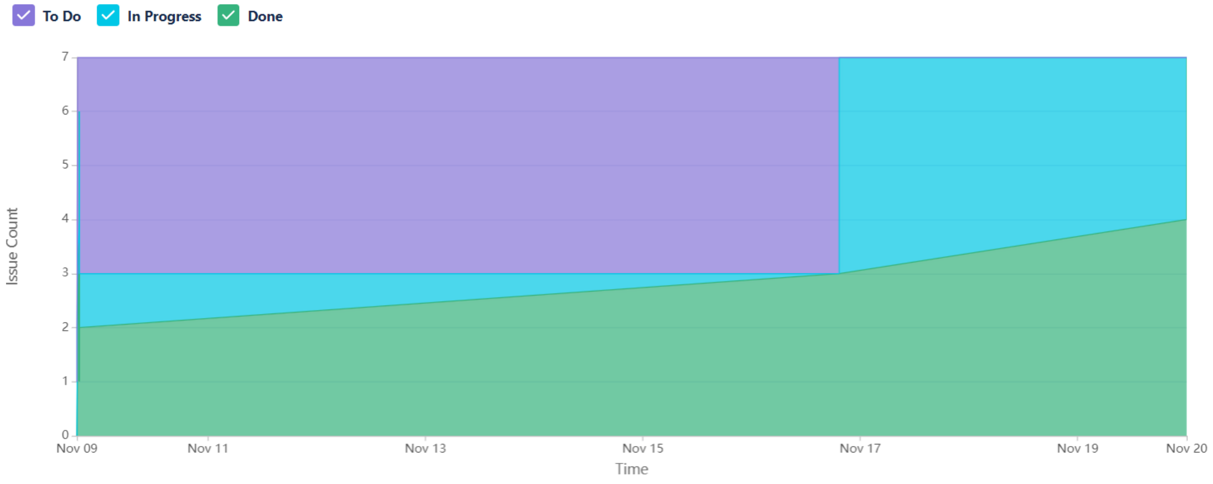
Projects / News Tracker Application / Reports

Velocity report

› How to read this report

Commitment
The amount of work in the sprint when it began.
Completed
The amount of work done during the sprint.
Story point
40
30
20
10
0
NTA Sprint 1
NTA Sprint 4
NTA Sprint 2
NTA Sprint 3

Cumulative Report

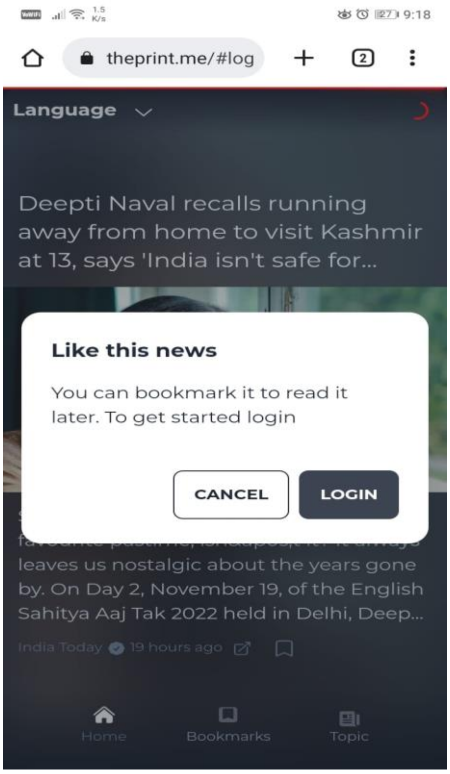


7. CODING & SOLUTIONING

7.1.Bookmark

```
import Header from "@components/header";
import News from "@components/news";
import { isMobile } from "react-device-detect";
import { Swiper, SwiperSlide } from "swiper/react";
import "swiper/bundle";

import "swiper/css";

import { useEffect, useState } from "react";
import BottomNav from "@components/bottomNav";
import Select from "@components/Select";
import DialogComponent from "@components/Dialog";
import { unstable_getServerSession } from "next-auth";
import { authOptions } from "./api/auth/[...nextauth]";

export default function IndexPage({ data }: any) {
const [space, setSpace] = useState(0);
const [currentData, setCurrentData] = useState<any>([]);
const [swiperRef, setSwiperRef] = useState();

useEffect(() => {
if (!isMobile && typeof window !== "undefined") {
setSpace(-80);
}
}, []);

useEffect(() => {
// setCurrentData(data);
const parsed = JSON.parse(data);
const filtered = parsed.map((item: any) => JSON.parse(item.CONTENT));

setCurrentData(filtered);
}, [data]);

return data ? (
<>
<Header />

<Select />
<Swiper
// @ts-ignore
onSwiper={setSwiperRef}
spaceBetween={space}
direction={"vertical"}
mousewheel={true}
className="mySwiper"
>
{currentData?.length &&
currentData.map((item: any, i: number) => {
return (
<SwiperSlide key={`${Date.now()}_${item.id}_${i}`}>
<News data={item} />
</SwiperSlide>
);
})}
</Swiper>

<BottomNav swiperRef={swiperRef} />
```

```
<DialogComponent />
</>
) : (
<div>Loading...</div>
);
}

export async function getServerSideProps({ req, res, query }: any) {
res.setHeader(
"Cache-Control",
"public, s-maxage=10, stale-while-revalidate=59"
);

const session = await unstable_getServerSession(req, res, authOptions);

if (!session) {
return {
redirect: {
permanent: false,
destination: "/api/auth/signin",
},
};
}

try {
const response = await fetch(`${process.env.SERVER_URL}getbookmarks`, {
method: "POST",
headers: {
"Content-Type": "application/json",
},
body: JSON.stringify({
email: session.user?.email,
}),
});
const data = await response.json();

if (!data.success)
return {
props: { data: null },
};

return { props: { data: data.bookmarks } };
} catch (err) {
console.log(err);
}
}
```



Deepti Naval recalls running away from home to visit Kashmir at 13, says 'India isn't safe for...

Like this news

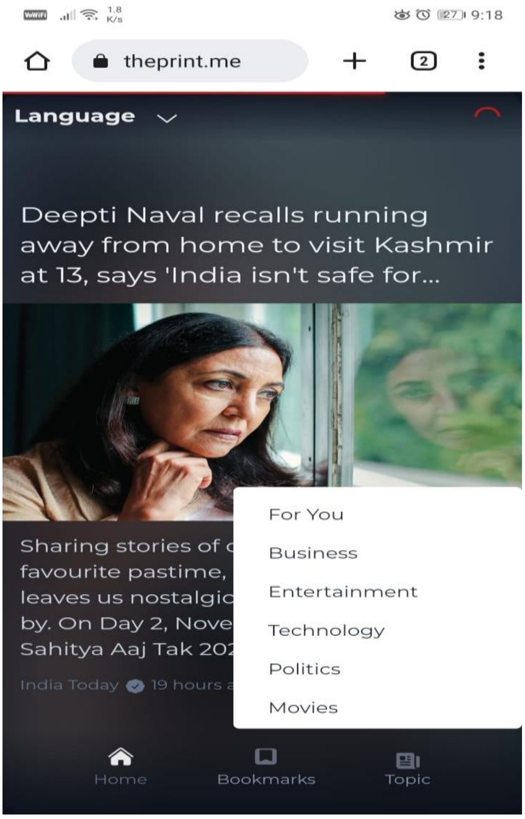
You can bookmark it to read it later. To get started login

leaves us nostalgic about the years gone by. On Day 2, November 19, of the English Sahitya Aaj Tak 2022 held in Delhi, Deep...

7.2.Choosetopics

```
import { NewspaperIcon } from "@heroicons/react/24/solid";
import * as Popover from "@radix-ui/react-popover";
import * as ScrollArea from "@radix-ui/react-scroll-area";
import { useRouter } from "next/router";

export default function ChooseLang({ swiperRef }: any) {
const router = useRouter();

const handleClick = (topic = "For You") => {
swiperRef?.slideTo(0);
router.query.topic = topic;
router.push(router);

const body = document.querySelector("body");
body?.click();
};

const TOPICS = [
"For You",
"Business",
"Entertainment",
"Technology",
"Politics",
"Movies",
"India",
];

return (
<Popover.Root>
<Popover.Trigger>
<div className="flex items-center flex-col cursor-pointer pt-4 mb-4">
<NewspaperIcon className="h-5 w-5 mt-1 text-gray-500" />
<p className="text-slate-400 text-xs">Topic</p>
</div>
</Popover.Trigger>
<Popover.Portal>
<Popover.Content className="PopoverContent">
<ScrollArea.Root className="ScrollAreaRoot">
<ScrollArea.Viewport className="ScrollAreaViewport">
<ul className="menu compact bg-base-100 p-2">
{TOPICS.map((itm: string, i: number) => (
<li key={`TOPICS_RENDERED_${i}`}>
<a onClick={() => handleClick(itm)}>{itm}</a>
</li>
))}
</ul>
</ScrollArea.Viewport>
<ScrollArea.Scrollbar
className="ScrollAreaScrollbar bg-slate-200"
orientation="vertical"
>
<ScrollArea.Thumb className="ScrollAreaThumb bg-slate-600" />
</ScrollArea.Scrollbar>
<ScrollArea.Corner className="ScrollAreaCorner" />
</ScrollArea.Root>
</Popover.Content>
</Popover.Portal>
</Popover.Root>
);
```

}



Deepti Naval recalls running away from home to visit Kashmir at 13, says 'India isn't safe for...

Sharing stories of c
favourite pastime,
leaves us nostalgic
by. On Day 2, Nove
Sahitya Aaj Tak 202

India Today 19 hours a

7.3.news feed

```
import type { NextApiRequest, NextApiResponse } from "next";
import { ALLOWED_ORIGINS } from "../../lib/origins";


type Data = {
data: [];
next: null | string;
error?: string;
nextIndex?: string;
activeTopic?: string;
};


export default async function handler(
req: NextApiRequest,
res: NextApiResponse<Data>
```

```
) {
try {
const { url, nextIndex, activeTopic } = req.body;

const { origin } = req.headers;

if (origin && ALLOWED_ORIGINS.indexOf(origin) === -1) {
return res.status(403).json({ data: [], error: "Forbidden", next: null });
}

res.setHeader("Access-Control-Allow-Origin", origin || "*");

if (typeof url !== "string")
return res
.status(400)
.json({ error: "Invalid url", data: [], next: null });

const parsedURL = `${process.env.API_URL}?url=${encodeURIComponent(
url
)}&nextIndex=${nextIndex}&activeTopic=${activeTopic}&activeNavIndex=0&topicEngName=${activeTopic}`;
const response = await fetch(parsedURL);
const json = await response.json();

res.status(200).json({
data: json?.data?.rows || [],
next: json?.url || null,
nextIndex: json?.nextIndex || null,
activeTopic: json?.activeTopic || null,
});
} catch (err) {
```

```
console.log(err);
res.status(500);
}
}
```

7.4.Database schema

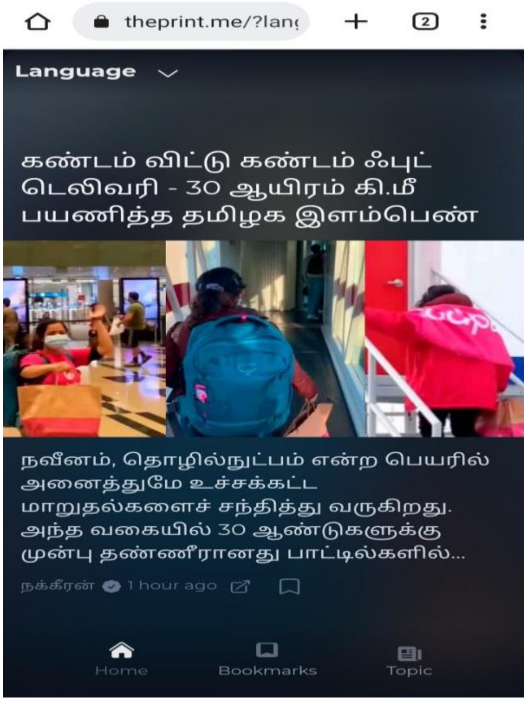
```
from flask import Flask, request, jsonify
from flask_cors import CORS, cross_origin
import os
from os.path import join, dirname
import ibm_db
from dotenv import load_dotenv
from threading import Thread
from PIL import Image
import requests
from io import BytesIO
import blurhash
import numpy
import json


app = Flask(__name__)
cors = CORS(app)
app.config['CORS_HEADERS'] = 'Content-Type'

dotenv_path = join(dirname(__file__), '.env')
load_dotenv(dotenv_path)

connectionstr = os.environ.get('DB2_CONNECTION_STRING')
conn = ibm_db.connect(connectionstr, '', '')
```

```
def userPresent(email=None):
if email:
sql = "SELECT Email FROM User WHERE Email = ?"
stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt, 1, email)
ibm_db.execute(stmt)
account = ibm_db.fetch_assoc(stmt)

if account:
return "true"

return "false"



@app.route("/")
def hello_world():
return "<p>Welcome to news tracker api</p>"



@app.route("/userpresent", methods=['POST'])
def db2():
email = request.json['email']
isPresent = userPresent(email)
return isPresent



@app.route("/createuser", methods=['POST'])
def createuser():
```

```
try:
Thread(target=userTask, args=(
request.json['email'], request.json['name'])).start()
return jsonify(success=True, message="User created")
except:
return jsonify(success=False, error="Missing email or name")


@app.route("/getblurhash", methods=['POST'])
def getblurhash():
url = request.json['url']
response = requests.get(url)
hash = blurhash.encode(numpy.array(Image.open(
BytesIO(response.content)).convert("RGB")))
print(hash)
return jsonify(hash=hash)


@app.route("/bookmark", methods=['POST'])
@cross_origin()
def Bookmark():
try:
Thread(target=bookMarkTask, args=(
request.json['email'], request.json['content'])).start()
return jsonify(success=True, message="Bookmarked")
except:
return jsonify(success=False, error="Missing email or content")


@app.route("/getbookmarks", methods=['POST'])
```

```
def getbookmarks():
email = request.json['email']

sql = "SELECT Content FROM Bookmark WHERE Email = ?"
stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt, 1, email)
ibm_db.execute(stmt)

response = []

bookmarks = ibm_db.fetch_assoc(stmt)

if not bookmarks:
return jsonify(success=True, error="No bookmarks found")

while bookmarks != False:
response.append(bookmarks)
bookmarks = ibm_db.fetch_assoc(stmt)

response = json.dumps(response)
return jsonify(success=True, bookmarks=response)



def bookMarkTask(email, content=None):
sql = "INSERT INTO Bookmark (Email, Content) VALUES(?, ?)"
stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt, 1, email)
ibm_db.bind_param(stmt, 2, content)
ibm_db.execute(stmt)
```

```
def userTask(email, name="):
isPresent = userPresent(email)

if isPresent != "true":
sql = "INSERT INTO User (Name, Email) VALUES (?, ?)"
stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt, 1, name)
ibm_db.bind_param(stmt, 2, email)
ibm_db.execute(stmt)
print('created user')
```



கண்டம் விட்டு கண்டம் ஃபுட் டெலிவரி - 30 ஆயிரம் கி.மீ பயணித்த தமிழக இளம்பெண்

நவீனம், தொழில்நுட்பம் என்ற பெயரில் அனைத்துமே உச்சக்கட்ட மாறுதல்களைச் சந்தித்து வருகிறது. அந்த வகையில் 30 ஆண்டுகளுக்கு முன்பு தண்ணீரானது பாட்டில்களில்...

நக்கீரன் 1 hour ago

8.TESTING

8.1.Test case

The Test cases for the News Tracker application are as follows

- Verify If user can Sign up to the account
- Verify If already signed up user cannot log into the account

- Verify if user is able to see Login/Register when clicked on it
- Verify if user is able to filter articles based on categories
- Verify if user is able to see detailed information when clicked on read more

8.2.User Acceptance Testing

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	10	3	4	2	19
Duplicate	0	1	0	0	1
External	2	0	1	0	3
Fixed	10	3	4	15	32
Not Reproduced	0	0	0	1	1
Skipped	0	0	1	0	1
Won't Fix	1	0	1	0	2
Totals	23	7	11	18	58

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	7	0	0	7
Client Application	35	0	0	35
Security	5	0	0	5
Outsource Shipping	0	0	0	0
Exception Reporting	15	0	0	15
Final Report Output	6	0	0	6
Version Control	2	0	0	2

9.RESULT

9.1.Performance metrics

CPU usage

The Python V3.7.0 is make the best use of the CPU. For every loop the program runs in O(1) time, neglecting the network and communication. The program sleeps for every 1 second for better communication with MQTT. As the program takes O(1) time and the compiler optimizes the program during compilation there is less CPU load for each cycle. The upcoming instructions are on the stack memory, so they can be popped after execution.

Memory usage

The sensor values, networking data are stored in sram of the ESP32 . It's a lot of data because ESP32 has only limited amount of memory (520 KB) .For each memory cycle the exact addresses are overwritten with new values to save memory and optimal execution of the program

Garbage collection

In the server-side garbage collection is done by the React framework.python does not have any garbage collection features. But it is not necessary in this scenario as the memory is used again for storing the data. Any dangling pointer or poorly handled address space is not allocated.

10.ADVANTAGE AND DISADVANTAGE

Advantages

- As the news articles are properly categorised into different sections, user finds it easier to find the right news.
- News articles are displayed in the home page in an order such that the important news always appears on the top.
- The UI of the app is designed in such a way that it is easier for the user to navigate**.**

Disadvantage

- Users are unable to express their opinion by commenting and liking the news articles.

- ❖ Currently the app won't let the user to read news

11.CONCLUSION

The way we consume news has shifted dramatically in the last decade and having a dedicated website is no longer enough. Users expect updates to be immediately available and accessible via multiple devices, and easy to share across their social media networks. News apps have also become increasingly important for users who want to avoid consuming news via social media and digest news from a reliable source.

12.FUTURE SCOPE

News content along with the video it will be more glad to use the application and easily user can understand the subject of the news in a short duration of time(60 seconds).it just like reels.

We plan to provide community based news.

13.APPENDIX

Source code

```
//index page of the app

import Header from "@components/header";

import News from "@components/news";

import { isMobile } from "react-device-detect";

import { Swiper, SwiperSlide } from "swiper/react";

import "swiper/bundle";


import "swiper/css";


import { useEffect, useState } from "react";

import BottomNav from "@components/bottomNav";

import Select from "@components/Select";

import DialogComponent from "@components/Dialog";


export default function IndexPage({ data, next, nextIndex, activeTopic }: any) {

const [space, setSpace] = useState(0);

const [isSent, setIsSent] = useState(false);

const [currentNext, setCurrentNext] = useState("");
const [currentData, setCurrentData] = useState<any>([]);
const [swiperRef, setSwiperRef] = useState();
const [currentIndex, setCurrentIndex] = useState<any>();
const [currentTopic, setCurrentTopic] = useState();

useEffect(() => {
if (!isMobile && typeof window !== "undefined") {
setSpace(-80);
}
}, []);

useEffect(() => {
setCurrentNext(next);
}, [next]);

useEffect(() => {
setCurrentData(data);
}, [data]);

useEffect(() => {
setCurrentIndex(nextIndex);
}, [nextIndex]);

useEffect(() => {
setCurrentTopic(activeTopic);
}, [activeTopic]);

const handleChange = async (e: any) => {
if (isSent) {
return;
}
const reachedEnd = e.realIndex > e.slides.length - 5;
```

```
try {
if (reachedEnd) {
setIsSent(true);
const ni = parseInt(currentIndex) + 16;
const url = window.location.origin;
const response = await fetch(`${url}/api/next`, {
method: "POST",
headers: {
"Content-Type": "application/json",
},
body: JSON.stringify({
url: encodeURIComponent(currentNext),
nextIndex: ni,
activeTopic: currentTopic,
}),
});
const json = await response.json();
setCurrentIndex(ni);
setCurrentTopic(json.activeTopic);

if (json.data) {
setCurrentData((old: []) => [...old, ...json.data]);
setIsSent(false);
}

if (!json.next) {
setIsSent(true);
return;
}

if (json.next) {
setCurrentNext(decodeURIComponent(json.next));
}

// @ts-ignore
swiperRef?.update();
}
} catch (err) {
console.log(err);
}
};

return (
<>
<Header />

<Select />
<Swiper
// @ts-ignore
onSwiper={setSwiperRef}
spaceBetween={space}
direction={"vertical"}
mousewheel={true}
className="mySwiper"
onSlideChange={handleChange}
>
{currentData?.length &&
currentData.map((item: any, i: number) => {
return (
<SwiperSlide key={`${Date.now()}_${item.id}_${i}`}>
<News data={item} />
</SwiperSlide>
);
})}
```

```
</Swiper>

<BottomNav swiperRef={swiperRef} />

<DialogComponent />
</>
);
}

export async function getServerSideProps({ req, res, query }: any) {
const lang = query.lang || "english";
const topic = query.topic || "For You";

res.setHeader(
"Cache-Control",
"public, s-maxage=10, stale-while-revalidate=59"
);

try {
const url =
process.env.NODE_ENV !== "production"
? "http://localhost:3000"
: "https://theprint.me";

const encodedUri = encodeURI(`lang=${lang}&topic=${topic}`);
const response = await fetch(`${url}/api/headlines?${encodedUri}`);
const { data, next, nextIndex, activeTopic } = await response.json();

return { props: { data, next, nextIndex, activeTopic } };
} catch (err) {
console.log(err);
}
```

```
// Pass data to the page via props
}
//bookmarks
import Header from "@components/header";
import News from "@components/news";
import { isMobile } from "react-device-detect";
import { Swiper, SwiperSlide } from "swiper/react";
import "swiper/bundle";

import "swiper/css";

import { useEffect, useState } from "react";
import BottomNav from "@components/bottomNav";
import Select from "@components/Select";
import DialogComponent from "@components/Dialog";
import { unstable_getServerSession } from "next-auth";
import { authOptions } from "./api/auth/[...nextauth]";

export default function IndexPage({ data }: any) {
const [space, setSpace] = useState(0);
const [currentData, setCurrentData] = useState<any>([]);
const [swiperRef, setSwiperRef] = useState();

useEffect(() => {
if (!isMobile && typeof window !== "undefined") {
setSpace(-80);
}
}, []);

useEffect(() => {
// setCurrentData(data);
const parsed = JSON.parse(data);
const filtered = parsed.map((item: any) => JSON.parse(item.CONTENT));

setCurrentData(filtered);
}, [data]);

return data ? (
<>
<Header />

<Select />
<Swiper
// @ts-ignore
onSwiper={setSwiperRef}
spaceBetween={space}
direction={"vertical"}
mousewheel={true}
className="mySwiper"
>
{currentData?.length &&
currentData.map((item: any, i: number) => {
return (
<SwiperSlide key={`${Date.now()}_${item.id}_${i}`}>
<News data={item} />
</SwiperSlide>
);
})}
</Swiper>

<BottomNav swiperRef={swiperRef} />

<DialogComponent />
</>
```

```
) : (
<div>Loading...</div>
);
}

export async function getServerSideProps({ req, res, query }: any) {
res.setHeader(
"Cache-Control",
"public, s-maxage=10, stale-while-revalidate=59"
);

const session = await unstable_getServerSession(req, res, authOptions);

if (!session) {
return {
redirect: {
permanent: false,
destination: "/api/auth/signin",
},
};
}

try {
const response = await fetch(`${process.env.SERVER_URL}getbookmarks`, {
method: "POST",
headers: {
"Content-Type": "application/json",
},
body: JSON.stringify({
email: session.user?.email,
}),
});
```

```
    const data = await response.json();

    if (!data.success)
    return {
    props: { data: null },
    };

    return { props: { data: data.bookmarks } };
    } catch (err) {
    console.log(err);
    }
    }
```

//API

```
import { JSDOM } from "jsdom";
import { NextApiRequest, NextApiResponse } from "next";
import { ALLOWED_ORIGINS } from "../../lib/origins";

const order = ["For You"];

const fetchNParse = async (url: string) => {
try {
const data = await fetch(url);
const html = await data.text();
const dom = new JSDOM(html, { runScripts: "dangerously" });
const response = dom.window.__STATE.topicsList || {};
return response;
} catch (err) {
console.log(err);

return null;
}
};
```

```
function parseTopic(topic = "For You", data: any) {
let topics: any = null;

if (topic === "For You") {
topics = data[0];
} else {
topics = data.find((tp: any) => tp.name === topic);
}

if (topics) {
return {
data: topics?.data?.data.rows || [],
next: topics.data?.data?.nextPageUrl || null,
nextIndex: topics.data?.data?.count,
activeTopic: topics?.topicType,
};
}
}

export default async function getHeadlines(
req: NextApiRequest,
res: NextApiResponse
) {
const { query } = req;
const { lang, topic } = query;
let base_url = process.env.BASE_URL;

const { origin } = req.headers;

if (origin && ALLOWED_ORIGINS.indexOf(origin) === -1) {
return res.status(403).json({ data: [], error: "Forbidden", next: null });
}

res.setHeader("Access-Control-Allow-Origin", origin || "*");

if (typeof lang !== "string")
return res.status(400).json({ error: "Invalid location" });

if (typeof topic !== "string")
return res.status(400).json({ error: "Invalid topic" });

let response = null;

if (topic === "For You") {
base_url = process.env.BASE_URL?.replace("english", lang) || "";
} else {
base_url = process.env.BASE_URL?.replace("for+you", topic) || "";
}

response = await fetchNParse(base_url);
const news = parseTopic(topic, response);
res.status(200).json(news);
}
//next.ts this file show the next feed of the news content
import type { NextApiRequest, NextApiResponse } from "next";
import { ALLOWED_ORIGINS } from "../../lib/origins";

type Data = {
data: [];
next: null | string;
error?: string;
nextIndex?: string;
activeTopic?: string;
```

```
};

export default async function handler(
req: NextApiRequest,
res: NextApiResponse<Data>
) {
try {
const { url, nextIndex, activeTopic } = req.body;

const { origin } = req.headers;

if (origin && ALLOWED_ORIGINS.indexOf(origin) === -1) {
return res.status(403).json({ data: [], error: "Forbidden", next: null });
}

res.setHeader("Access-Control-Allow-Origin", origin || "*");

if (typeof url !== "string")
return res
.status(400)
.json({ error: "Invalid url", data: [], next: null });

const parsedURL = `${process.env.API_URL}?url=${encodeURIComponent(
url
)}&nextIndex=${nextIndex}&activeTopic=${activeTopic}&activeNavIndex=0&topicEngName=${a
ctiveTopic}`;
const response = await fetch(parsedURL);
const json = await response.json();

res.status(200).json({
data: json?.data?.rows || [],
next: json?.url || null,
nextIndex: json?.nextIndex || null,
activeTopic: json?.activeTopic || null,
});
} catch (err) {
console.log(err);
res.status(500);
}
}
```

//server.py this file is used to the fetch the data from db and insert the data to db connect the flask project to db

```
from flask import Flask, request, jsonify
from flask_cors import CORS, cross_origin
import os
from os.path import join, dirname
import ibm_db
from dotenv import load_dotenv
from threading import Thread
from PIL import Image
import requests
from io import BytesIO
import blurhash
import numpy
import json



app = Flask(__name__)
cors = CORS(app)
app.config['CORS_HEADERS'] = 'Content-Type'

dotenv_path = join(dirname(__file__), '.env')
load_dotenv(dotenv_path)

connectionstr = os.environ.get('DB2_CONNECTION_STRING')
conn = ibm_db.connect(connectionstr, '', '')
```

```
def userPresent(email=None):
if email:
sql = "SELECT Email FROM User WHERE Email = ?"
stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt, 1, email)
ibm_db.execute(stmt)
account = ibm_db.fetch_assoc(stmt)

if account:
return "true"

return "false"



@app.route("/")
def hello_world():
return "<p>Welcome to news tracker api</p>"



@app.route("/userpresent", methods=['POST'])
def db2():
email = request.json['email']
isPresent = userPresent(email)
return isPresent



@app.route("/createuser", methods=['POST'])
def createuser():
try:
Thread(target=userTask, args=(
request.json['email'], request.json['name'])).start()
return jsonify(success=True, message="User created")
except:
return jsonify(success=False, error="Missing email or name")


@app.route("/getblurhash", methods=['POST'])
def getblurhash():
url = request.json['url']
response = requests.get(url)
hash = blurhash.encode(numpy.array(Image.open(
BytesIO(response.content)).convert("RGB")))
print(hash)
return jsonify(hash=hash)


@app.route("/bookmark", methods=['POST'])
@cross_origin()
def Bookmark():
try:
Thread(target=bookMarkTask, args=(
request.json['email'], request.json['content'])).start()
return jsonify(success=True, message="Bookmarked")
except:
return jsonify(success=False, error="Missing email or content")


@app.route("/getbookmarks", methods=['POST'])
def getbookmarks():
email = request.json['email']

sql = "SELECT Content FROM Bookmark WHERE Email = ?"
```

```
stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt, 1, email)
ibm_db.execute(stmt)

response = []

bookmarks = ibm_db.fetch_assoc(stmt)

if not bookmarks:
return jsonify(success=True, error="No bookmarks found")

while bookmarks != False:
response.append(bookmarks)
bookmarks = ibm_db.fetch_assoc(stmt)

response = json.dumps(response)
return jsonify(success=True, bookmarks=response)



def bookMarkTask(email, content=None):
sql = "INSERT INTO Bookmark (Email, Content) VALUES(?, ?)"
stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt, 1, email)
ibm_db.bind_param(stmt, 2, content)
ibm_db.execute(stmt)



def userTask(email, name="):
isPresent = userPresent(email)

if isPresent != "true":
sql = "INSERT INTO User (Name, Email) VALUES (?, ?)"
```

```
stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt, 1, name)
ibm_db.bind_param(stmt, 2, email)
ibm_db.execute(stmt)
print('created user')
//global.css
@import
url('https://fonts.googleapis.com/css2?family=Montserrat:wght@400;500;700;900&display=swap');

@tailwind base;
@tailwind components;
@tailwind utilities;

#__next { height: 100% }
body {
min-height: 100vh;
min-height: -webkit-fill-available;
}
html {
height: -webkit-fill-available;
}
html,
body {
position: relative;
height: 100%;
background: linear-gradient(to bottom, #141b29, #0c111b 300px);
overflow: hidden;
font-family: 'Montserrat', sans-serif;
}
.swiper {
width: 100%;
height: 100%;
}
```

```
.swiper-slide {
@apply flex justify-center;
}

.PopoverContent {
transform-origin: var(--radix-popover-content-transform-origin);
animation: scaleIn 0.5s ease-out;
}

@keyframes scaleIn {
from {
opacity: 0;
transform: scale(0);
}
to {
opacity: 1;
transform: scale(1);
}
}

.PopoverContent {
animation-duration: 0.6s;
animation-timing-function: cubic-bezier(0.16, 1, 0.3, 1);
}
.PopoverContent[data-side='top'] {
animation-name: slideUp;
}
.PopoverContent[data-side='bottom'] {
animation-name: slideDown;
}
```

```
[data-radix-popper-content-wrapper] {
z-index: 1 !important;
}



.ScrollAreaRoot {
width: 200px;
height: 225px;
border-radius: 4px;
overflow: hidden;
--scrollbar-size: 10px;
}

.ScrollAreaViewport {
width: 100%;
height: 100%;
border-radius: inherit;
}



.ScrollAreaScrollbar {
display: flex;
user-select: none;
touch-action: none;
padding: 2px;
width: 7px;
transition: background 160ms ease-out;
}

.ScrollAreaScrollbar[data-orientation='horizontal'] {
flex-direction: column;
height: var(--scrollbar-size);
```

```css
}


.ScrollAreaThumb {
flex: 1;
border-radius: var(--scrollbar-size);
position: relative;
}

.DialogOverlay {
background-color: var(--blackA9);
position: fixed;
inset: 0;
animation: overlayShow 150ms cubic-bezier(0.16, 1, 0.3, 1);
}

.DialogContent {
background-color: white;
border-radius: 6px;
box-shadow: hsl(206 22% 7% / 35%) 0px 10px 38px -10px, hsl(206 22% 7% / 20%) 0px 10px 20px -15px;
position: fixed;
top: 50%;
left: 50%;
transform: translate(-50%, -50%);
width: 90vw;
max-width: 450px;
max-height: 85vh;
padding: 25px;
animation: contentShow 150ms cubic-bezier(0.16, 1, 0.3, 1);
}
.DialogContent:focus {
outline: none;
```

```
}

@keyframes slideDown {
from {
opacity: 0;
transform: translateY(-10px);
}
to {
opacity: 1;
transform: translateY(0);
}
}

@keyframes slideUp {
from {
opacity: 0;
transform: translateY(10px);
}
to {
opacity: 1;
transform: translateY(0);
}
}
//util.ts
const documentHeight = () => {
const doc = document.documentElement;
doc.style.setProperty("--doc-height", `${window.innerHeight}px`);
};
export default documentHeight;
//Kubernetes file
apiVersion: apps/v1
kind: Deployment
```

```
metadata:
name: flask-server

spec:
replicas: 3
selector:
matchLabels:
app: flask-server
template:
metadata:
labels:
app: flask-server

spec:
containers:
- name: flask-server
image: icr.io/abishek/flask-server
imagePullPolicy: Always
ports:
- containerPort: 8080
protocol: TCP

---

apiVersion: v1
kind: Service
metadata:
name: flask-server-service
spec:
type: ClusterIP
ports:
- port: 8080
```

```
selector:
app: flask-server

---

apiVersion: networking.k8s.io/v1
kind: Ingress
metadata:
name: flask-server-ingress
annotations:
kubernetes.io/ingress.class: nginx
nginx.ingress.kubernetes.io/ssl-redirect: "false"

spec:
rules:
- http:
paths:
- backend:
service:
name: flask-server-service
port:
number: 8080
path: /
pathType: Prefix
//Dockerfile
FROM python:3.8

WORKDIR /app

COPY requirements.txt requirements.txt
RUN pip install --no-cache-dir -r requirements.txt
```

```
COPY . .


EXPOSE 8080
CMD ["waitress-serve", "--host", "0.0.0.0",  "server:app"]
```

Github link: https://github.com/IBM-EPBL/IBM-Project-21574-1659784969

Video Link: