

PROJECT REPORT

TEAM ID	PNT2022TMID27286
PROJECT NAME	NEWS TRACKER APPLICATION
TEAM MEMBERS	Rishabh k mishra, Pritish kumar singh Ruchi kashyap,vinal jeet

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1. INTRODUCTION

1.1 PROJECT OVERVIEW

News Tracker is a full stack web application which allows users to register along with their favorite topics, upon login the app displays the news based on the user's interest. The news displayed in the app is based on the News catcher 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 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

Breaking NEWS Detection and Tracking in Twitter:

Twitter has been used as one of the communication channels for spreading breaking news. We purpose a method to collect, group, rank and track breaking news in Twitter. Users can discover breaking news from the Twitter timeline. This provides a convenient way for people to follow breaking news and stay informed with real-time updates.

Android News App:

As world's technology is rapidly growing, we have fast connection and network to instantly connect to another person. Day to day use in mobile, tablets and laptop is increasing, most of the people already have these facilities. In this fast and information-oriented world we need to stay updated with every incident and news too. This News app is android mobile application where user have access to latest news from 120+ newspapers from 50+ countries. The main focus of this application is to connect news articles from all around the world and deliver it to user as fast as possible in best visualize way.

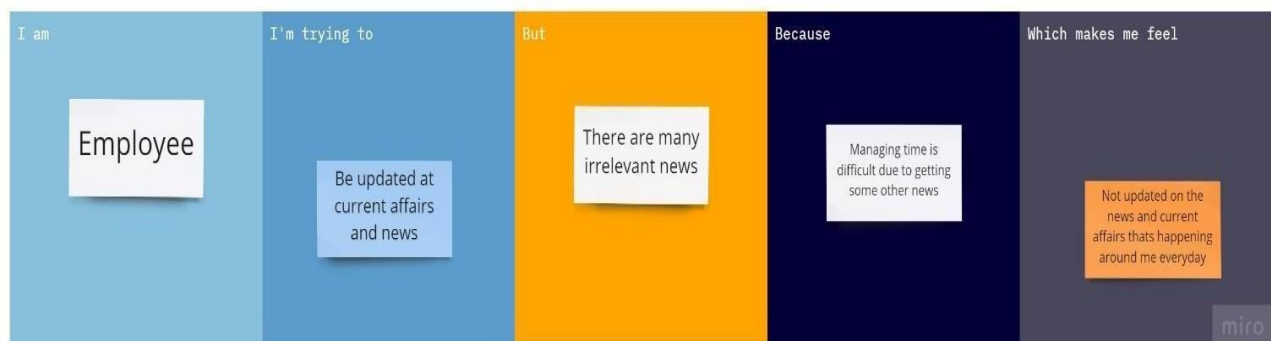
2.1 EXISTING SOLUTION

NewsBreak is a popular website to read ongoing and past news via the internet browsers. The website works by aggregating news from various sources and presents them in a likeable manner for the users to read it. The website also offers the ability for users to sign up to the so said website and record their progress, manage profiles, number of news read, bookmark news, commenting on news ends and so on.

2.2 REFERENCES

S.No	Paper Title	Author(s)	Month/ Year	Method/Implementation technique(s)	Resource Link
1	Exploring mobile news reading interactions for news app personalisation	Marios Constantinides, John Dowell, David Johnson, Sylvain Malacria	August, 2015	1. Identification of news reader types Interaction logging 2. and classification study Deployment and data collection Predicting News 3. reader types Adaptive UI	(PDF) Exploring mobile news reading interactions for news app personalisation (researchgate.net)
2	Detection and Tracking in News Articles	Sagar Patel, Sanket Suthar, Sandip Patel, Neha Patel	March, 2015	1. Preprocessing Tokenization 2. Stemming/Lemmatization Vector Space Model 3. Topic tracking	(PDF) Topic Detection and Tracking in News Articles (researchgate.net)
3	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	(PDF) Following the Fed with a News Tracker (researchgate.net)

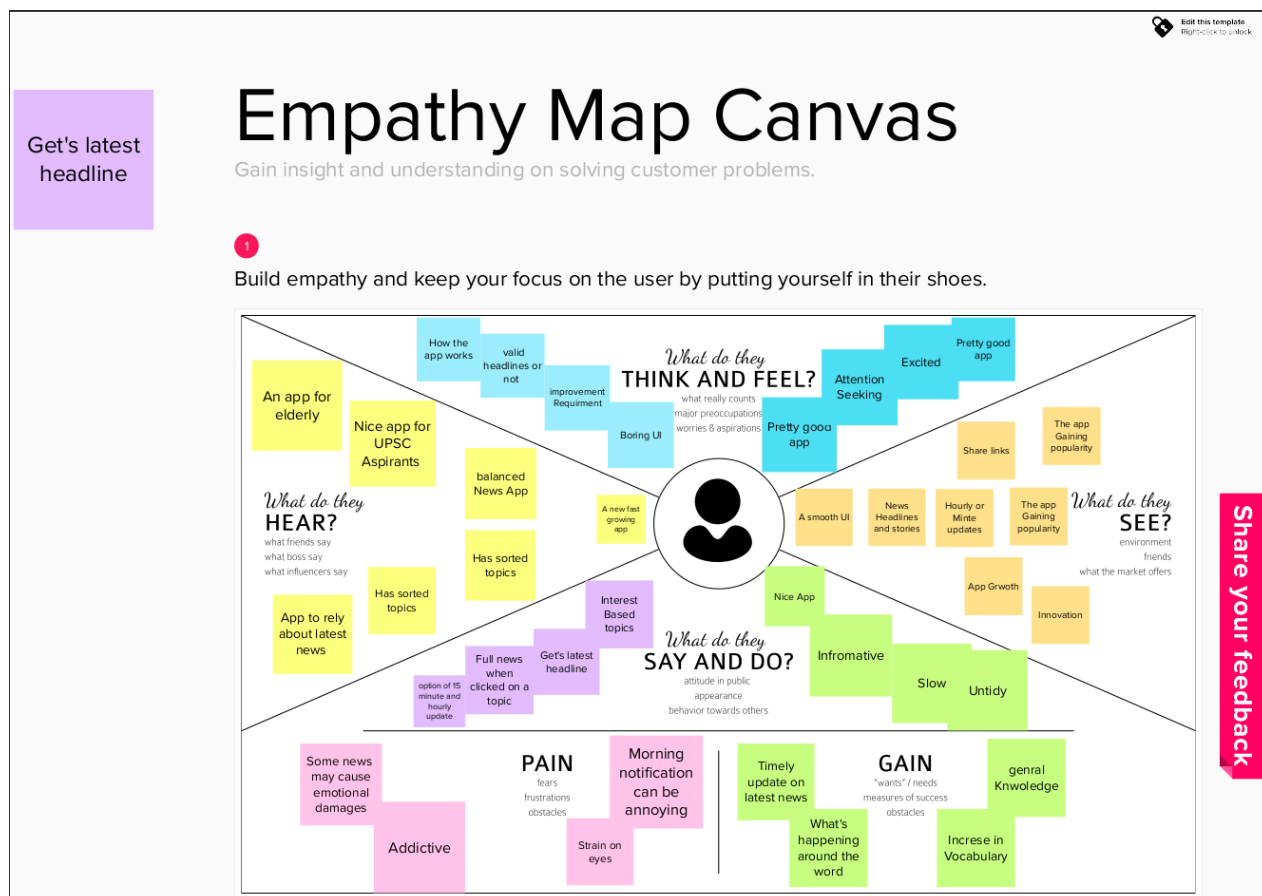
2.3 PROBLEM STATEMENT DEFINATION



Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1 24/7 Working people find it hard for reading the news	Monish is an Employee who wants to read newspaper, without any hassle while travelling because he doesn't want to carry the physical newspaper	I am looking for the easier method to read news.	I am unable to find the time to read news.	I am unable to find the time to read news.	I feel being not updated with the news and current affairs that revolving around me
PS-2 Finding the right content about specific news topics in single platform is challenging	Arun is an HR who want get updated in the company recruitments and business-related news in a single application or website.	I am looking for the right website or Application which update and notify me in every aspect.	I am unable to find the time to read news.	I am unable to find the time to read news.	I feel redirected to some other news which consumes a lot time by giving me irrelevant data

3.IDEATION AND PROPOSED PHASE

3.1 EMPATHY MAP



3.2 IDEATION AND BRAINSTORMING

Brainstorm & idea prioritization

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

- 10 minutes to prepare
- 10 minutes to brainstorm
- 10 minutes to prioritize

10 people recommended

10 minutes to prepare

10 minutes to brainstorm

10 minutes to prioritize

Before you collaborate

A lot of ideas are generated in a long session. Here's what you need to do to get going.

- 10 minutes
- 10 minutes
- 10 minutes

10 minutes to prepare

10 minutes to brainstorm

10 minutes to prioritize

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.

10 minutes

10 minutes

10 minutes

Brainstorm

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

10 minutes

10 minutes

10 minutes

Group ideas

Take some time to group your ideas while clustering similar or related ideas as you go. In the last 10 minutes, give each cluster a sentence that says: "If a cluster is larger than one idea, it's not an idea. It's a problem. It's a problem. It's a problem."

10 minutes

10 minutes

10 minutes

Prioritize

Take some time to be on the same page about which important meeting. Place your ideas on this grid to determine which ideas are important and which are feasible.

10 minutes

10 minutes

10 minutes

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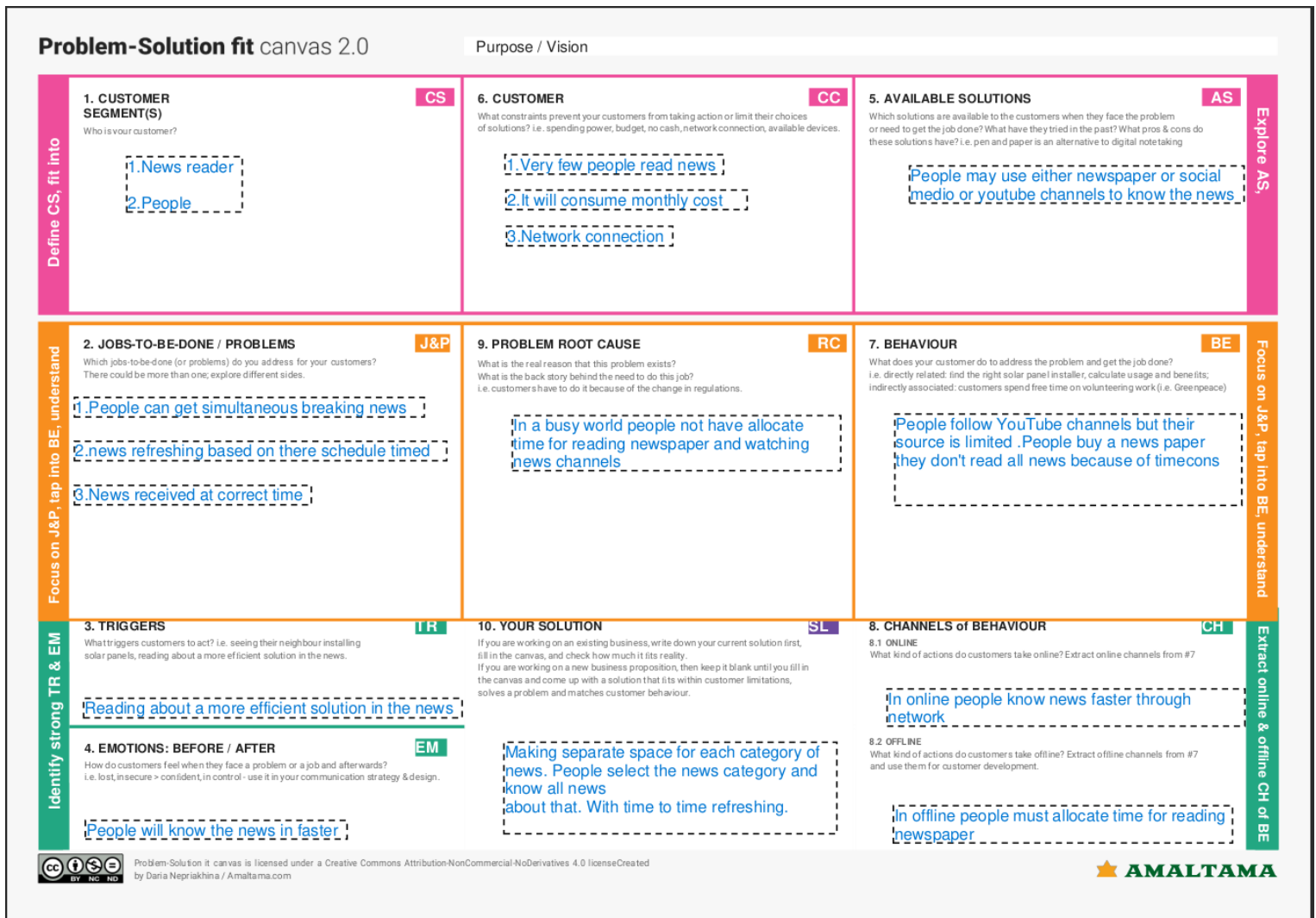
3.3 PROPOSED SOLUTION

Sr No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The user needs a way to get relevant news based on his choices so that the user does not have to spend a lot of time on searching news. News is filled with ads and spams annoys and irritates the user and affects the user experience.
2.	Idea / Solution description	<ul style="list-style-type: none">● Improve app speed and usage● Automatic speech recognition● User privacy and data security● Create own Wishlist● Authorized news● Compact with mobile platform
3.	Novelty / Uniqueness	This has features that enables the user to view news about the happenings in and around their location. This will be given the most priority as it is important to every person to be aware of recent happenings. The tracker app does not have annoying ads.
4.	Social Impact / Customer Satisfaction	The user will not have to spend a lot of time in searching for the relevant news. The customer will be finally able to view news without ads. Since we are using the News API, the news will be reliable and accurate. The customer can be aware of recent happenings.
5.	Business Model (Revenue Model)	The revenue stream can be from the news channels and news sites whose news will be published in this application. Based on the number of users who view a particular news, the news channel that published that news article will have to pay a small amount as commission. <ul style="list-style-type: none">▪ Multiplatform Support▪ Design consistent experience
6.	Scalability of the Solution	Since the web application is deployed on IBM cloud, it can handle multiple users at a time. The user will go through a seamless experience and it enables them to view the news according to their interests and choices. Users from all age category can use the application and the news can also be filtered according to their age.

3.4 PROBLEM SOLUTION FIT

4.REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENTS



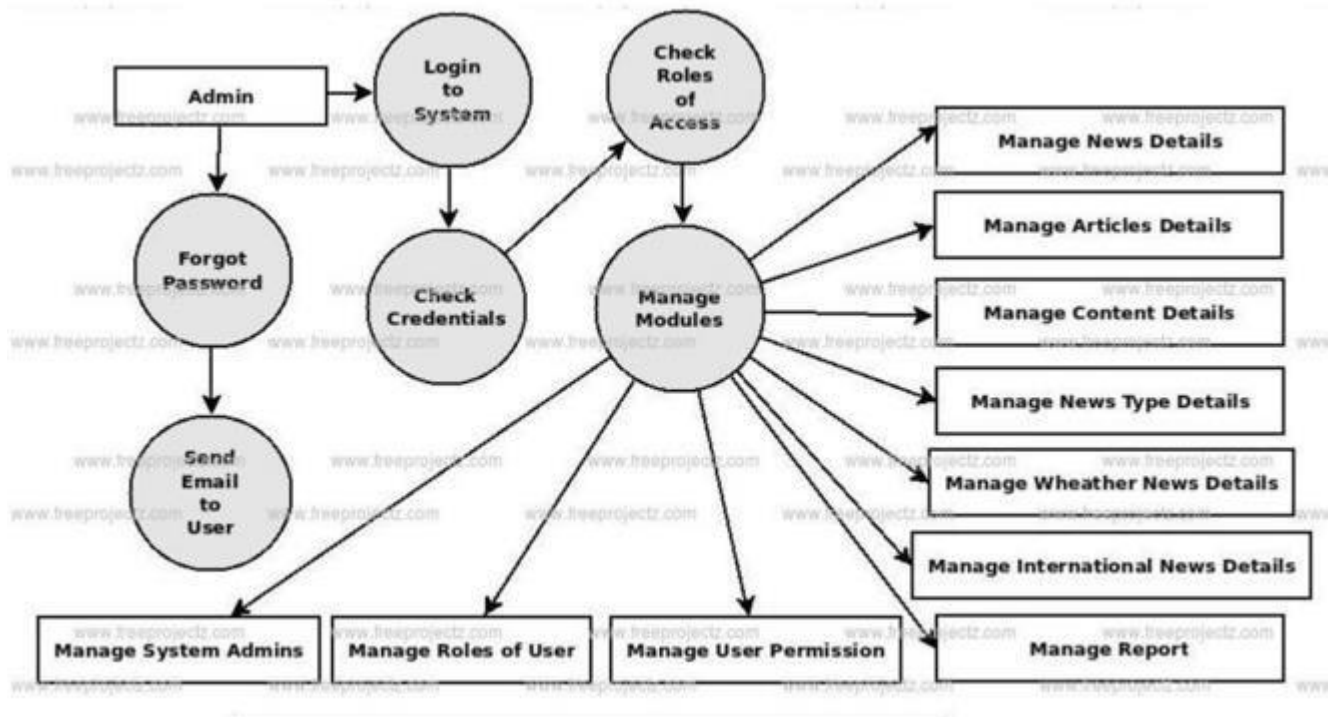
FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Installation	User can install the app from google play store, App store and from website.
FR-2	User Registration	Registration through Form Registration through Gmail Registration through Mobile number.
FR-3	User Confirmation	Confirmation via Email Confirmation via OTP
FR-4	User login	User should login the app with the User's name or email and password.
FR-5	User Information	User can include their information in preferred topics so that they could be recommended by the application.

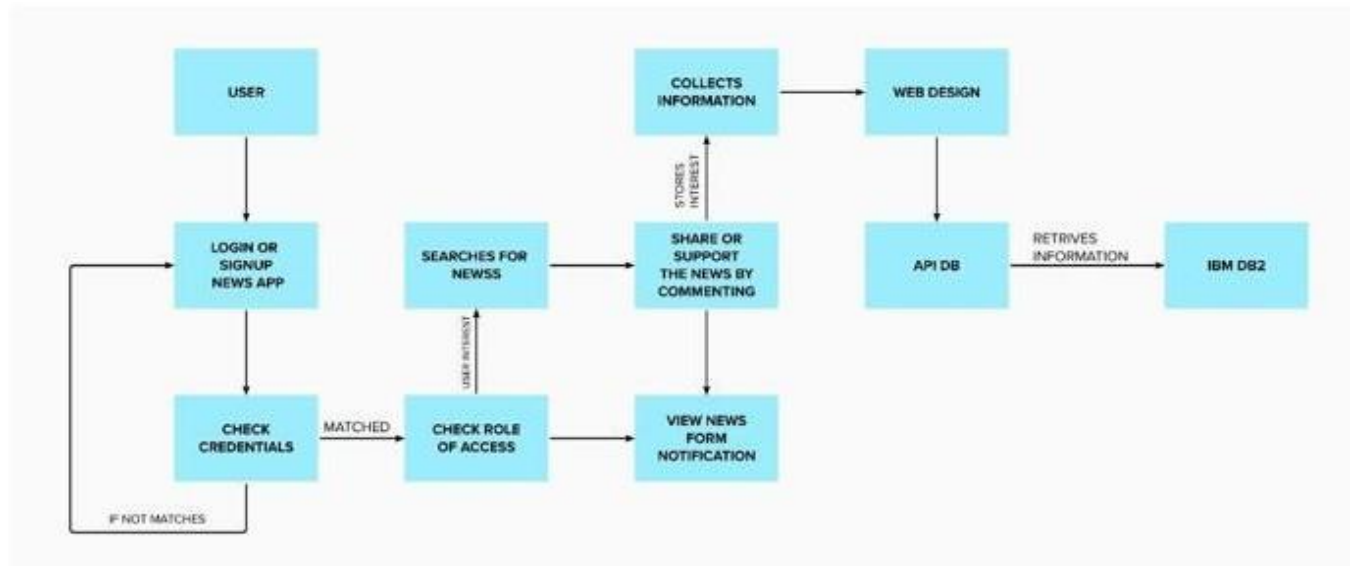
4.2 NON-FUNCTIONAL REQUIREMENTS

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	This app is user friendly app, where users can clear their queries with the chatbot.
NFR-2	Security	This app is secured app, where users information is encrypted properly.
NFR-3	Reliability	This app can be accessed anywhere and anytime. User can download the news offline.
NFR-4	Performance	The app is well tested and hence the performance of the app is great.
NFR-5	Availability	Chatbot is available in this app to rectify the queries of the users. Variety of news is provided by this app. More sub categories are available.

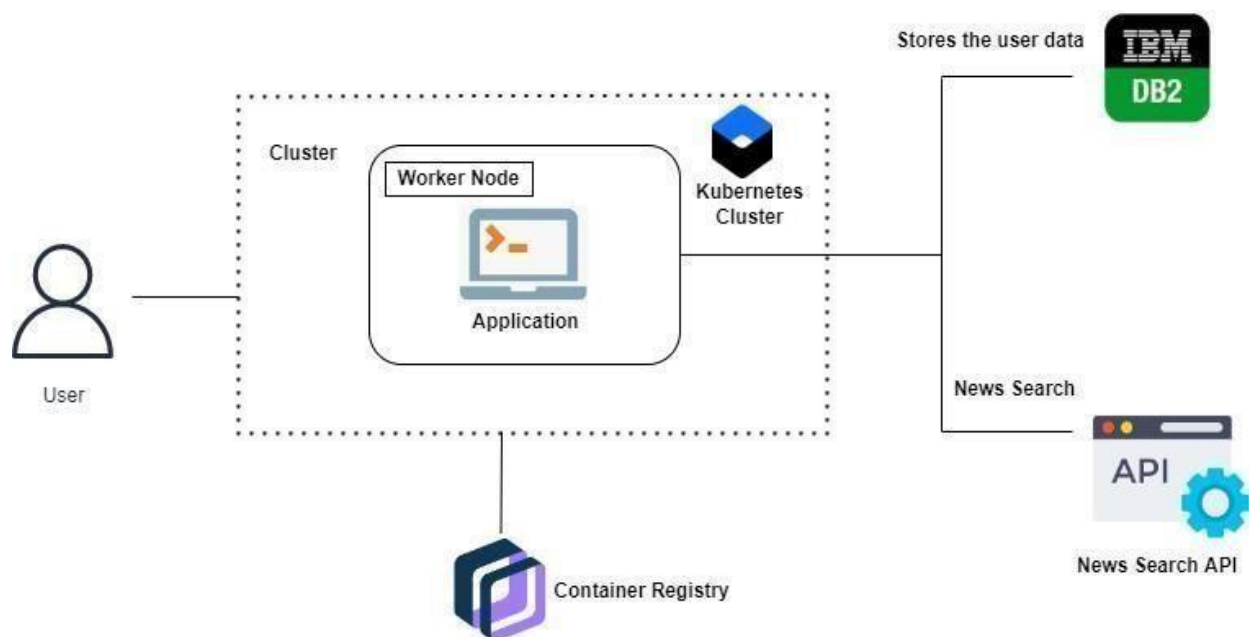
5.PROJECT DESIGN

5.1 DATA FLOW GRAPH





5.2 SOLUTION AND TECHNICAL ARCHITECTURE



5.3 USER STORIES

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria
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
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login
		USN-4	As a user, I can register for the application through Gmail	I can receive password to mail.
	Login	USN-5	As a user, I can log into the application by entering email & password	I can receive confirmation mail.
	Dashboard	USN-6	The news portal and shows the recent news as Breaking NEWS	I can Open and view the news portal.
Customer (Web user)	Search Bar	USN-7	User searches for news based on their own interest.	I can view the related news and can watch videos.
		USN-8	The news can be viewed that is appearing on the dashboard.	On the dashboard. I shall click on the news wanted and can open it.
Administrator	Server	USN-9	Provides correct news available from the database.	Provide the correct news from the database and fake news will be rejected
		USN-10	Provide live news with video and audio contents.	I can get the news in which I am interested.

6.PROJECT PLANNING AND SCHEDULING

6.1 SPRINT PLANNING AND ESTIMATION

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	7	High
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	6	High
Sprint-1	Login	USN-3	As a user, I can log into the application by entering email & password.	7	High
Sprint-2	Dashboard	USN-4	As a user I should be able to navigate and access all the features hassle free	10	High
Sprint-2	Layout	USN-5	As a user I should be able to access the portal with different devices with the same comfort	10	High
Sprint-3	Data Store and retrieval	USN-6	Get Data from API and store as JSON in DB2	15	High
Sprint-3		USN-7	Get bin data from API and store in DFS	5	Medium
Sprint-4	User Segregation and data access	USN-8	As a CC executive I should be able to uniquely identify the customer and offer help	8	High
Sprint-4	Change code	USN-9	As a administrator I should be able to modify code according to the future requirements.	5	Medium
Sprint-4	Monitor the system	USN-10	As a administrator I should be able to monitor the cloud system and fix errors before customer.	7	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

7.CODING AND SOLUTION

7.1 FEATURE 1

Weather report

```
@app.route('/weather', methods=['GET', 'POST'])
def weather():
    if request.method == 'POST':
        new_city = request.form.get('city')
        if new_city:
            query = "INSERT INTO weather (city) VALUES('"+new_city+"');"
            stmt = ibm_db.prepare(connection,query)
            ibm_db.execute(stmt)

    url =
'http://api.openweathermap.org/data/2.5/weather?q={} &units=imperial&appid=2a78921b9bffc
ab5e471564c6a553385'
    query = "SELECT * FROM weather"
    stmt = ibm_db.prepare(connection,query)
    ibm_db.execute(stmt)
    cities = ibm_db.fetch_assoc(stmt)
    weather_data = []
    r = requests.get(url.format(cities['CITY'])).json()

    weather = {
        'city': cities['CITY'],
        'temperature': r['main']['temp'],
        'description': r['weather'][0]['description'],
        'icon': r['weather'][0]['icon'],
    }
    weather_data.append(weather)
    print(weather_data)
    return render_template('weather.html', weather_data=weather_data)
```

7.2 FEATURE 2

News generation

```
@app.route('/news')
def home():
    api_key = 'b62e986d019b416fbc1f506b4167852b'

    newsapi = NewsApiClient(api_key=api_key)

    top_headlines = newsapi.get_top_headlines(sources="bbc-news")
    all_articles = newsapi.get_everything(sources="bbc-news")

    t_articles = top_headlines['articles']
    a_articles = all_articles['articles']

    news = []
    desc = []
    img = []
    p_date = []
    url = []

    for i in range(len(t_articles)):
        main_article = t_articles[i]

        news.append(main_article['title'])
        desc.append(main_article['description'])
        img.append(main_article['urlToImage'])
        p_date.append(main_article['publishedAt'])
        url.append(main_article['url'])

        contents = zip(news, desc, img, p_date, url)

    news_all = []
    desc_all = []
    img_all = []
    p_date_all = []
    url_all = []

    for j in range(len(a_articles)):
        main_all_articles = a_articles[j]

        news_all.append(main_all_articles['title'])
        desc_all.append(main_all_articles['description'])
        img_all.append(main_all_articles['urlToImage'])
        p_date_all.append(main_all_articles['publishedAt'])
        url_all.append(main_all_articles['url'])

        all = zip(news_all, desc_all, img_all, p_date_all, url_all)

    return render_template('home.html', contents=contents, all=all)
```

8.TESTING

8.1 TEST CASES

This report shows the number of test cases that have passed, failed, untested

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	8	0	0	8
Client Application	23	0	0	23
Security	3	0	0	3
Outsource Shipping	2	0	0	2
Exception Reporting	6	0	0	6
Final Report Output	6	0	0	6
Version Control	1	0	0	1

8.2

9. ADVANTAGES

- NEWS at their fingertips in an instant
- Online newspaper can read more elaborate than a printed newspaper
- Its ad free
- It can be accessed anywhere and anytime

10. DISADVANTAGES

- May contain some unwanted contents
- It may rely too much on personalities, emotions and not facts
- It is only API based

11. 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.

12. FUTURE SCOPE

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

13. APPENDIX

- I. Source Code (Github) - <https://github.com/IBM-EPBL/IBM-Project-20518-1659723753>
- II. Live Page URL – <http://169.51.203.11:30007/>
- III. Demo link - https://drive.google.com/drive/folders/1sbStS0W_ysSk6Hn6x20l57eqBcywpZs4?usp=sharing