

Project report

IBM

News Tracker Application

TEAM ID: [PNT2022TMID32908]

IBM-Project-37913-1660364659

Project By

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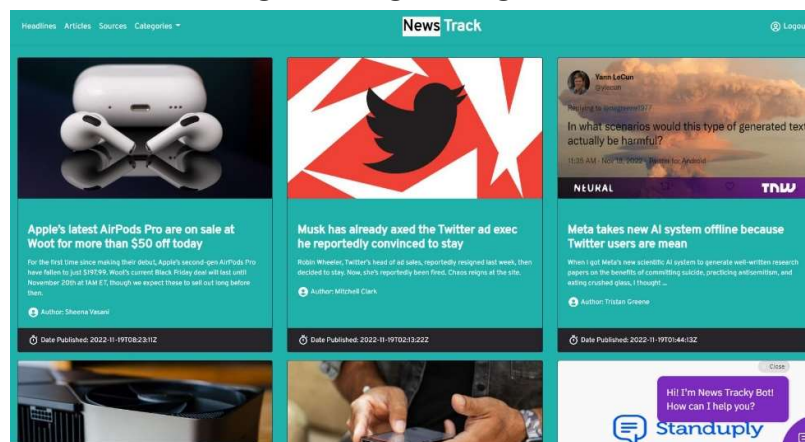
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News Tracker Application

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1. Introduction

1.1 Project Overview

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.

1.2 Purpose

Newspapers are one of the most popular and most needed commodities in our daily life. In today's busy world, reading newspapers has become one of the traditional ways of getting news. News is produced every minute and distributed via television, radio and the Internet, so the news updated the next morning is already outdated. So newspaper and magazine publishers have a hard time keeping up with the pace. Change is needed and publishers must embrace mobile.

2. LITRATURE SURVEY

2.1 Existing problem

We've collected all the relevant negative factors of lack of news tracking statistics, along with results from studies and reports that have analyzed the issue. This guide will give you an unbiased look at why the media reports negative news. We'll provide you with an informed and educated overview of the subject in general.

2.2 Reference

S.No	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 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)
2	Detection and Tracking in News Articles	Sagar Patel, Sanket Suthar, Sandip Patel, Neha Patel	March, 2015	<ol style="list-style-type: none"> 1. Pre-processing 2. Tokenization 3. Stemming/Lemmatization 4. Vector Space Model 5. 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	<p>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.</p>	(PDF) Following the Fed with a News Tracker (researchgate.net)

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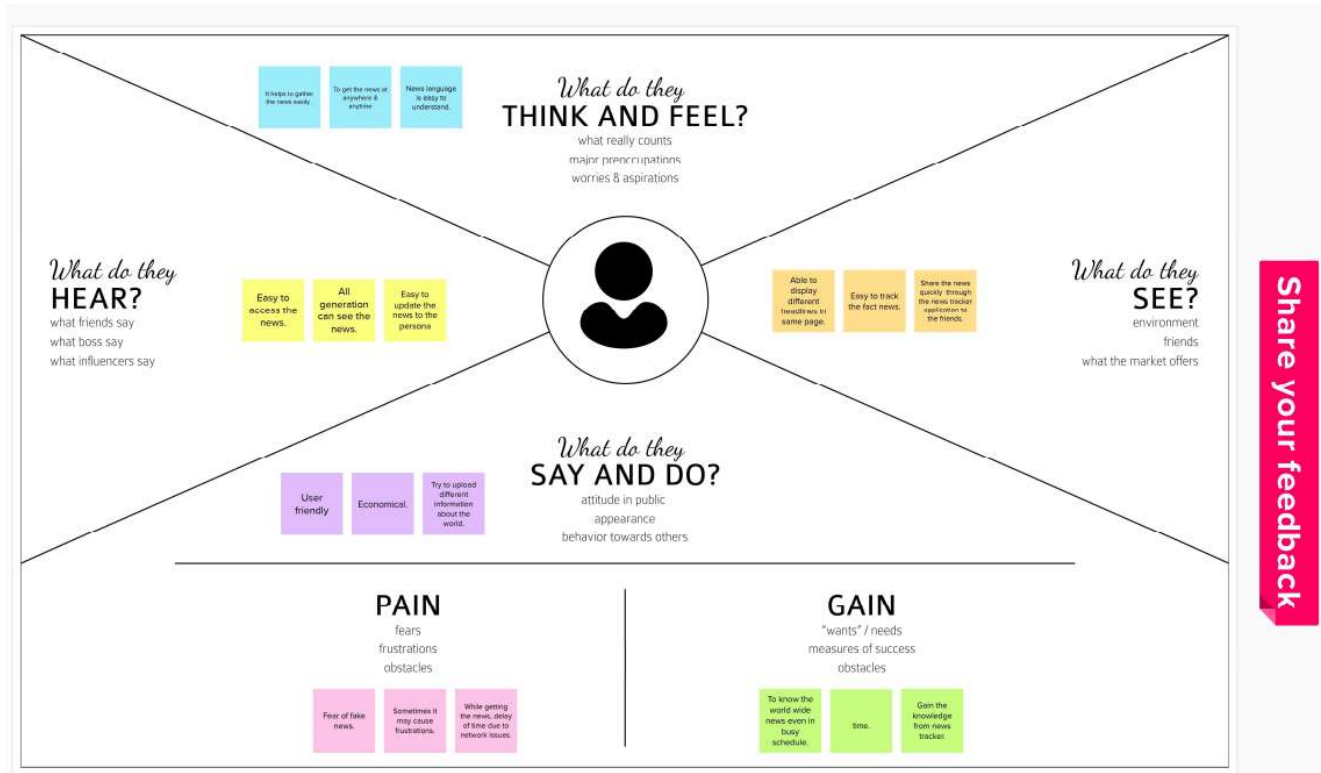
4	An End-to-end Weakly-supervised News Aggregation Framework	Xijin Tang, Xiaohui Huang	June, 2022	<p>The framework combines Snorkel-based weakly-supervised classification, Latent Dirichlet Allocation (LDA) topic modeling, and topic signal detection model to classify and aggregate unlabeled news texts 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 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.</p>	<p>An End-to-end Weakly-supervised News Aggregation Framework Request PDF researchgate.net</p>
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2.3 Problem Statement Definition

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	Common People	To get the news anywhere and anytime	It Shows fake and irrelevant news	It Didn't able to access correct NEWS Platform Resources	Tension
PS-2	Businessman	To collect world wide business information	It didn't able to access correct news	It didn't able to filter and notify important Bussiness NEWS	Frustrated
PS-3	Local People	To access local news instantly	It didn't access the local news	Because of that most of the native peoples didn't share the information in news platform app	Unawareness
PS-4	Foreign People	To access local news as well as global news in their language	But This option is not available	They didn't understand the news from that platform	Confused
PS-5	Common People	The News article phases are very easily understandable by using often usable words	But Many News headlines and articles are used rare verbal phases	They didn't understand the news clearly from that news app	Confused


3.IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas



3.2 Ideation And Brain Storming

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 STATEMENT

To get the trusted news, anywhere and anytime from all around the world that can update and notify instantly that is categorized by user

🧠

Key rules of brainstorming

To run an smooth and productive session

🗣️ Stay in topic.

💡 Encourage wild ideas.

⏸️ Defer judgment.

👂 Listen to others.

🗣️ Go for volume.

👁️ If possible, be visual.

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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!

Balaji



Juhaif Ahamed



Dinesh Kumar



Harish



Juhaif Ahamed



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

CUSTOMIZATION



TIP

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

INNOVATION IDEAS



NECESSARY IDEAS



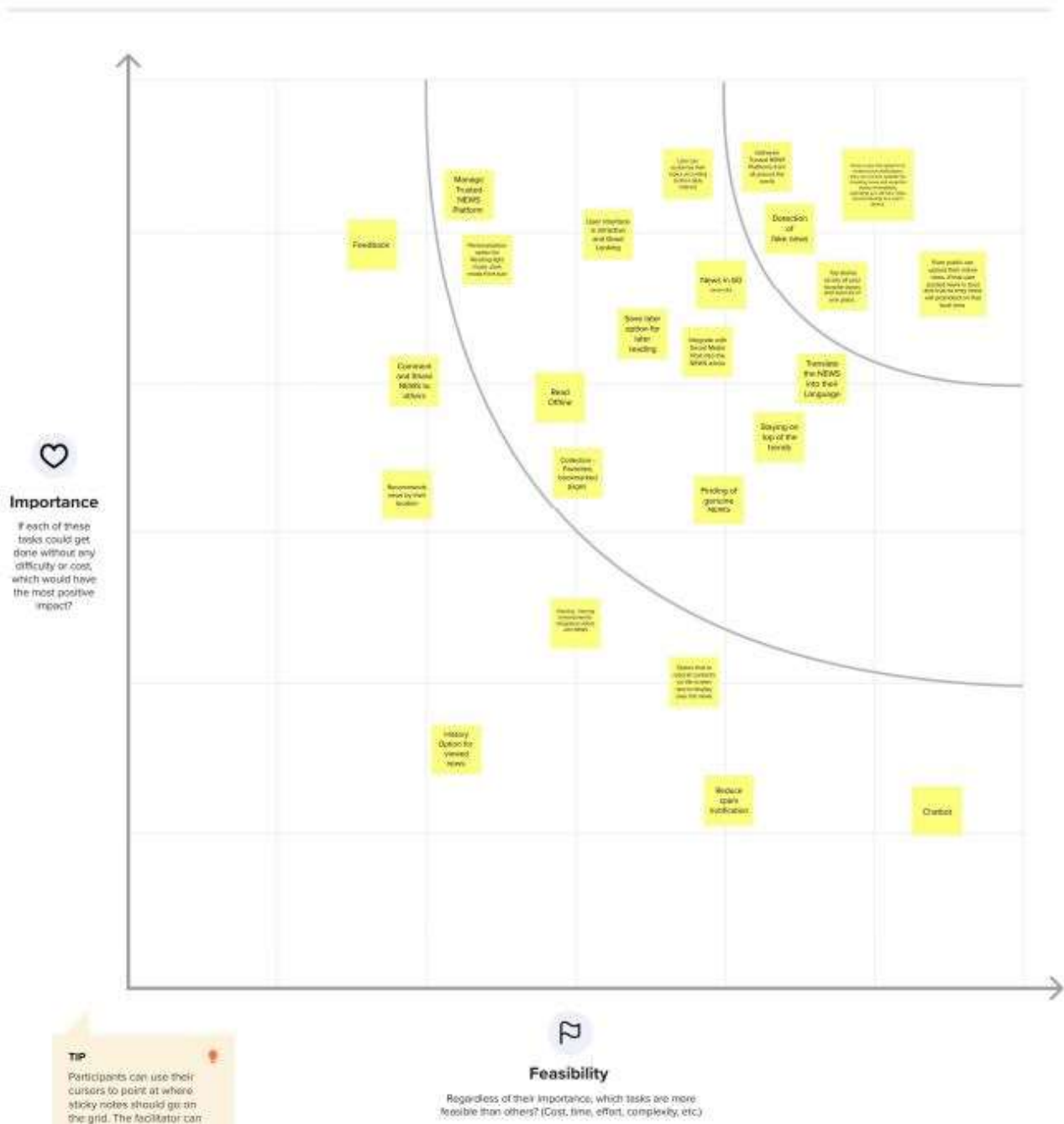
News Tracker Application

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:

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	User needs a way to get a interested marketing in a quick peek of the day. So that we give relevant news where the user more interested on that day and save their time.
2.	Idea / Solution description	The app should include all of the trustworthy sources from across the world and then specify in each article which source has validated this news because I'm assuming that customers can't discern the difference between real and fake news.
3.	Novelty / Uniqueness	<ul style="list-style-type: none">• Saving and downloading the interested articles• Access Both Local and International News instantly• Even Public can Upload their native news, if that user posted news is trust and true their news will promoted on that local area category• Translate the NEWS articles in their native language• User can access and customize their topics by their Interest then that News should be notify 24/7
4.	Social Impact / Customer Satisfaction	When news feed are customized/personalized to the user, the time spend to learn about the day will be minimized and will be completely productive. .For customer Satisfaction ,we Track all kind of news .it will be more Useful to get knowledge in Today's World.
5.	Business Model (Revenue Model)	Our First and most important Business is to deliver a good content or good news to the people apart from that We are going to promote advertisement about good products.

3.4 Problem Solution Fit

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) CS Who is your customer? I.e. working parents of 0-5 y.o. kids News tracker app can be used by all age groups there is no age limitation This app will be helpful to school students to older age groups in knowing the proper and real news updates regularly	6. CUSTOMER CONSTRAINTS CC What constraints prevent your customers from taking action or limit their choices of solutions? I.e. spending power, budget, no cash, network connection, available devices. News tracker app can be used offline It will consume More time It is budget friendly to use for all age groups	5. AVAILABLE SOLUTIONS AS Which solutions are available to the customers when they face the problem 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 notetaking. People may use either newspaper or social media or youtube channels to know the news. The internet and the intermingling of social media with important worldwide events has made it almost impossible to live under a rock. But finding a reliable one-stop shop to engage with your news can be somewhat of a challenge.	Explore AS, differentiate
	2. JOBS-TO-BE-DONE / PROBLEMS J&P Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides. Personalization is not flexible and reliable for user. The problems and pains of the user are in today's fast life it is difficult for users to get news at their move. News push notification news broadcast, Able to automatically schedule news feed for mobile user based on their current and future location. Most of the news app serve news to the user in English language only and in single source.	9. PROBLEM ROOT CAUSE RC What is the real reason that this problem exists? What is the back story behind the need to do this job? I.e. customers have to do it because of the change in regulations. The main root cause of NEWS traker application is to gather the NEWS from Non authorized NEWS Medium or website that cause to spread fake news to people	7. BEHAVIOUR BE What does your customer do to address the problem and get the job done? I.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace) while designing this app,we have already pre-built the "chat with us" option (or)"Feedback"option.so this helps our customer to report their problem with us easily,so that we get sorted out the problem easily.	
Focus on J&P, tap into BE, understand RC	3. TRIGGERS TR What triggers customers to act? I.e. seeing their neighbour installing solar panels; reading about a more efficient solution in the news. Desire to update their knowledge by knowing about what goes on around them,at the Local,National and International Levels.By seeing about their intrest like polities,sports etc.	10. YOUR SOLUTION SL If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality. If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour. This app helps you to query for all information about Indices Commodities, Currencies, FutureRates, Bonds,etc as on official websites. It helps the user to read thenews in their own national or international language. we create a scalable, responsive and user-friendly newstracker application. It fetches different news sources all around the world so user can select different countries news in which they are interested.	8. CHANNELS of BEHAVIOUR CH 8.1 ONLINE What kind of actions do customers take online? Extract online channels from #7 8.2 OFFLINE What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development. Online:The users searching more information online by means of many websites which has to be provided in the app . Offline:The user downloads many NEWS articles whose information has to be stores in our app that can be access by user	Identify strong TR & EM
	4. EMOTIONS: BEFORE / AFTER EM How do customers feel when they face a problem or a job and afterwards? I.e. lost, insecure > confident, in control - use it in your communication strategy & design. User can tensed to know the complete information of the particular news and can get boredom to get the old issues of printed newspaper so they prefer news website to read an more ellorate news and get old news in their fingertip			

4.REQUIREMENT ANALYSIS

4.1 Functional requirement

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Installation	User can Browse the app from the website
FR-2	User Registration	Registration through Form Registration through Gmail
FR-3	User Confirmation	Confirmation via Email Confirmation via OTP
FR-4	User Login	User should login the app with the user's name and password

4.2 Non-Functional requirements

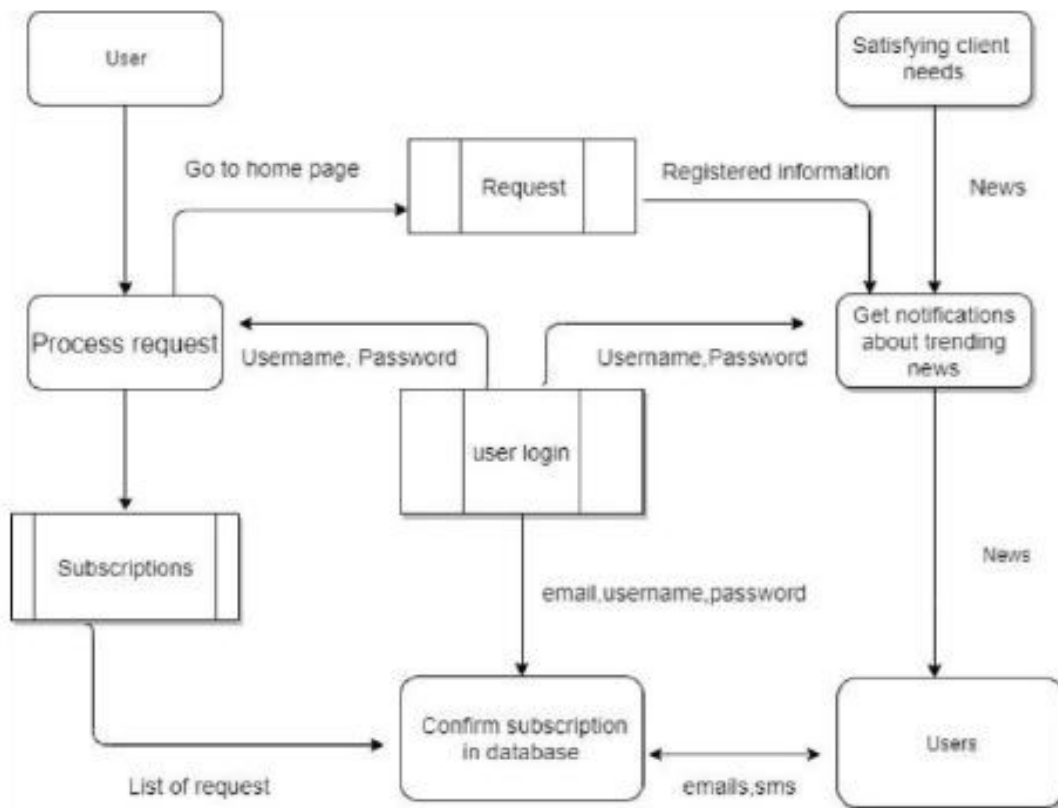
Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Everyone can understand the process of using the app easily by the commands given in the app.
NFR-2	Security	This can be access only by the authorized API. so Security can be improved and No fake news can be shared.
NFR-3	Performance	The updation of trending news occurs without any interruption. So, it performance is good
NFR-4	Availability	This application will be available to the all the user who are using this application

5 PROJECT DESIGN

5.1 Data Flow Diagrams



5.2 Solution & Technical Architecture

Table 1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user can interact with the application to know about the trending news	HTML, CSS, JavaScript/ Angular Js/ ReactJs etc.
2.	Application Logic-1	The application contains this resource gives you basic understanding of Flask	Flask
3.	Application Logic-2	The application contains the news sub-division like geographical news, economic news and society news	IBM Watson STT service
4.	Application Logic-3	The user can view the growth of the economy in industry through graph	IBM Watson Assistant
5.	Database	Update of trending news are stored in the MySQL database	MySQL, NoSQL, etc.
6.	Cloud Database	With the use of cloud, media coverage issue cannot be occurred	IBM DB2, IBM Cloudant etc.

Table 2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask is flexible and doesn't require to use any particular project or code layout used in this application	Python-Flask
2.	Security Implementations	This can be accessed only by the journalist. So, it is a high security	Container Registry, Kubernetes Cluster.
3.	Scalable Architecture	News Tracker is a socio-economic access because it helps to know about the daily activity of the world	Container Registry, Kubernetes Cluster.
4.	Availability	This application will be available to all the users who are using this application	Container Registry, Kubernetes Cluster.
5.	Performance	The update of trending news occurs without any interruption. So, its performance is good	Kubernetes Cluster.

5.3 User Stories

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
	Login	USN-3	As a user, I can log into the application by entering email & password	I can access the Dashboard and the application.	High	Sprint-1
Customer (Web user)	Upload Photo	USN-4	As a <u>user</u> , I can upload the food photo.	I can get the nutrition details.	High	Sprint-1
Administrator	User details	USN-5	As a <u>user</u> , I can fill the Details.	I can get whether the scanned food is suitable or not.	High	Sprint-2
	Push notification	USN-6	As a user, I will search the food items.	I can get the notification, related to my search.	High	Sprint-3
	Shown the nutrition details	USN-7	As a user, I can scan the food.	I can get the nutrition details of the scanned food.	High	Sprint-4
	Receipe shown	USN-8	As a user I want to get the receipe for the scanned food.	I can get the receipe about the food.	Low	Sprint-4

Use the below template to list all the user stories for the product.

6.PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration(Admin and Customer)	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	3	High	Juhaif Ahamed
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	5	High	Dinesh Kumar
Sprint-1		USN-3	As a user, I can register for the application through Facebook	1	Low	Harish
Sprint-1		USN-4	As a user, I can register for the application through Gmail	2	Medium	Balaji
Sprint-1	Login (Admin and Customer)	USN-5	As a user, I can log into the application by entering email & password	1	High	Juhaif Ahamed
Sprint-2	Dashboard(Admin and Customer)	USN-6	As a user I should be able to navigate and access all the features hassle free	5	High	Juhaif, Balaji
Sprint-2	Layout	USN-7	As a user I should be able to access the portal with different devices with the same comfort	3	High	Dinesh, Harish
Sprint-3	Data Store, Retrieval and Authentication	USN-8	Get Data from API and store as JSON in DB2	5	High	Balaji, Dinesh
Sprint-3		USN-9	Get bin data from API and store in DFS	3	High	Juhaif, Harish
Sprint-3	Local News Dashboard	USN-10	Create a Option of post and authorize the news by User's location	2	High	Juhaif, Balaji
Sprint-4	User Segregation	USN-11	As a CC executive I should be able to	3	Low	Harish

News Tracker Application

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
	and data access		uniquely identify the customer and offer help			
Sprint-4	Change code	USN-12	As a administrator I should be able to modify code according to the future requirements.	2	Medium	Dinesh
Sprint-4	Monitor the system And Testing	USN-13	As a administrator I should be able to monitor the cloud system and fix errors before customer.	1	High	Balaji
Sprint-4	Depolyment with Docker	USN-14	As a User,I will deploy the entire Application using Docker.	2	Medium	Juhaif
Sprint-4	Orchest with Kubernetes	USN-15	As a User,I will allocate the server nodes and balance the work loads in server.	2	Medium	Juhaif

6.2 Sprint Delivery Schedule

Project Tracker, Velocity & Burndown Chart: (4 Marks)

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	12	6 Days	24 Oct 2022	29 Oct 2022	12	29 Oct 2022
Sprint-2	8	6 Days	31 Oct 2022	05 Nov 2022	8	05 Nov 2022
Sprint-3	10	6 Days	07 Nov 2022	12 Nov 2022	10	12 Nov 2022
Sprint-4	10	6 Days	14 Nov 2022	19 Nov 2022	10	19 Nov 2022

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

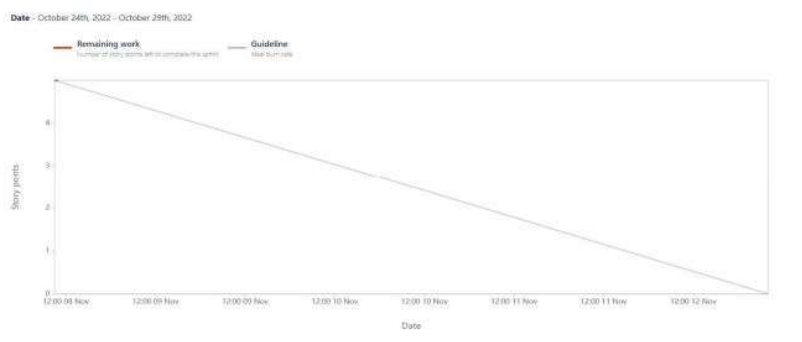
Average Velocity of Sprint-1 = $12/6 = 2.0$

Average Velocity of Sprint-2 = $8/6 = 1.3$

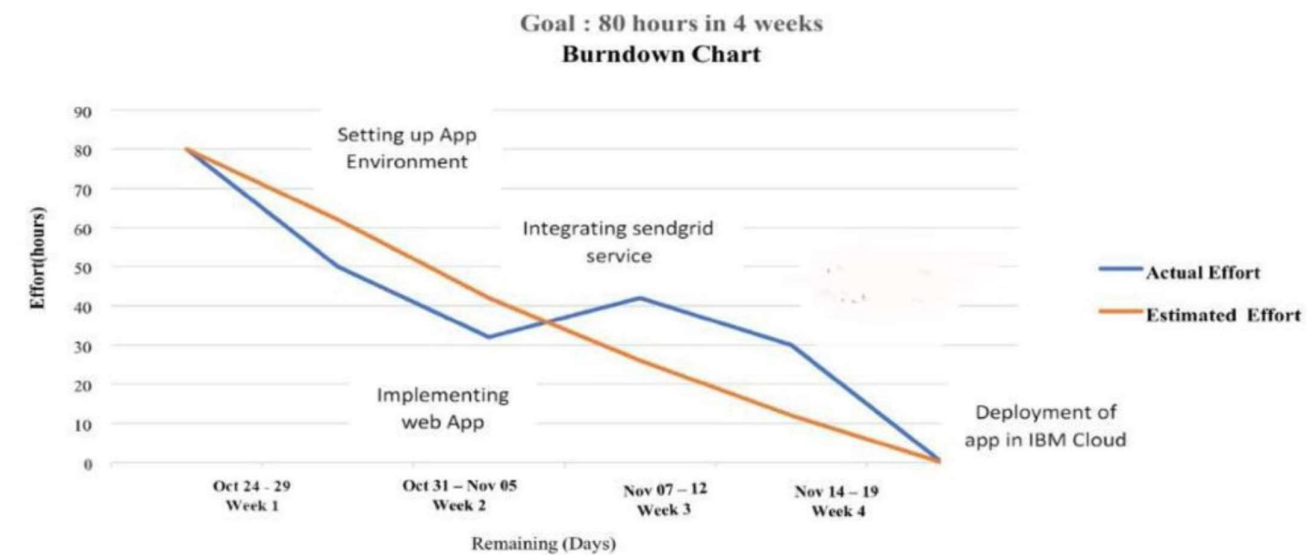
Average Velocity of Sprint-3 = $10/6 = 1.6$

Average Velocity of Sprint-4 = $10/6 = 1.6$

Burndown Chart:



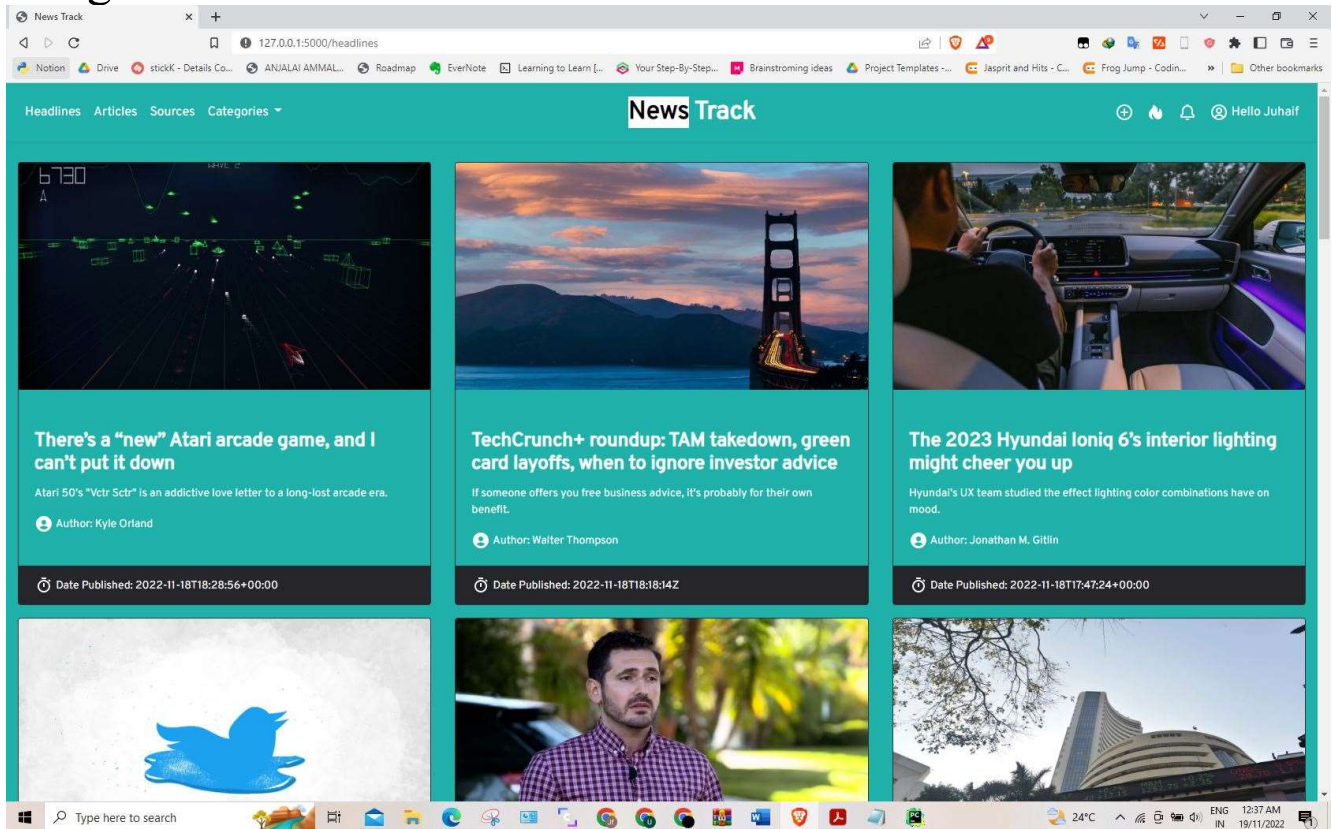
6.3 Reports from JIRA



7.CODING & SOLUTION

7.1 Feature 1


Access All Local and International News Around the word by categories



News Tracker Application

News Track

Headlines Articles Sources Categories




Oil prices slide 3% as supply fears recede - Reuters.com

Oil dropped by more than \$2 a barrel on Friday, on track for a second weekly decline, due to concern about weakened demand in China and further increases to U.S. interest rates.

Author: None

Date Published: 2022-11-18T18:39:00Z



GRAVITAS Making Sense of the NEWS


FDA APPROVES DIABETES TREATMENT

Gravitas: FDA approves life-changing therapy for Diabetes - WION

The FDA has approved a life-changing therapy for Diabetes. It says an antibody called Teplizumab can delay the onset of Type 1 Diabetes. Priyanka Sharma repo...

Author: None

Date Published: 2022-11-18T18:33:58Z




Indonesia's economy could benefit from higher commodity prices, says economist - CNBC International TV

Anthony Nafte of CLSA says Indonesia's commodity-driven economy could do "reasonably well" as a disruption of coal supply from Russia would lead to China buy...


Author: None

Date Published: 2022-11-18T18:30:02Z




SEP 500 3,953.87 +7.31 [+0.19%] YTD (-17.04%)

https://www.youtube.com/watch?v=J4mm0de-L...




14 Waret



News Track

Headlines Articles Sources Categories




Titans offensive coordinator Todd Downing charged with DUI, speeding hours after win over Packers - CBS Sports

Downing was pulled over in Williamson County in Tennessee on Friday morning

Author:

Date Published: 2022-11-18T18:33:00Z




ALL EYES ON ON PANDYA IND vs NZ: WHAT TO EXPECT?

India vs New Zealand Series Preview | All Eyes on Hardik Pandya | Cricket Canvas - Hindustan Times

Crashing out of the 2022 T20 WC Semi-finals, both India and New Zealand look to regroup before the upcoming ODI WC and the next T20 WC. India steps in with a...

Author: None

Date Published: 2022-11-18T18:22:54Z




Ireland chasing southern-hemisphere hat-trick against Australia - The Guardian


Ireland will complete a clean sweep of southern-hemisphere giants in a calendar year if they beat Australia in Dublin

Author: Michael Aylwin


Date Published: 2022-11-18T18:07:00Z



Budweiser



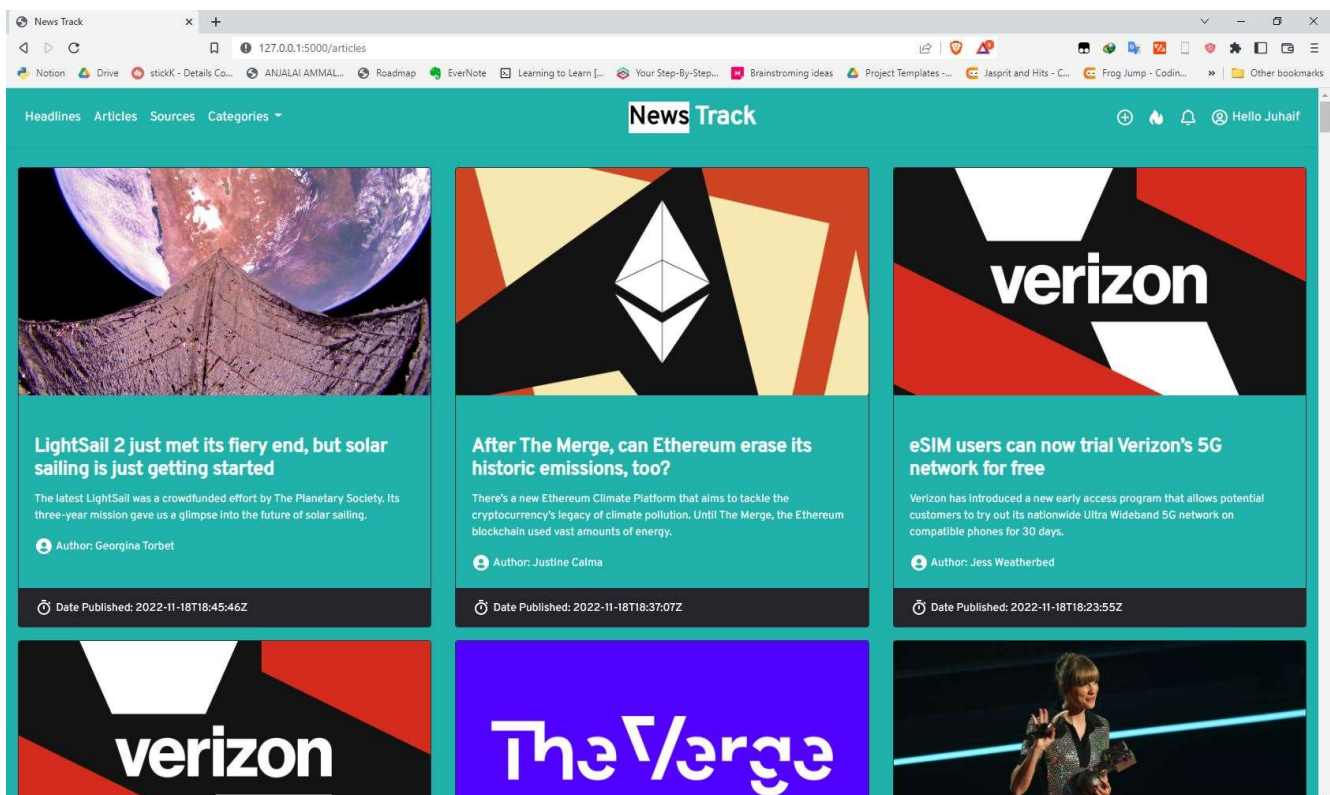
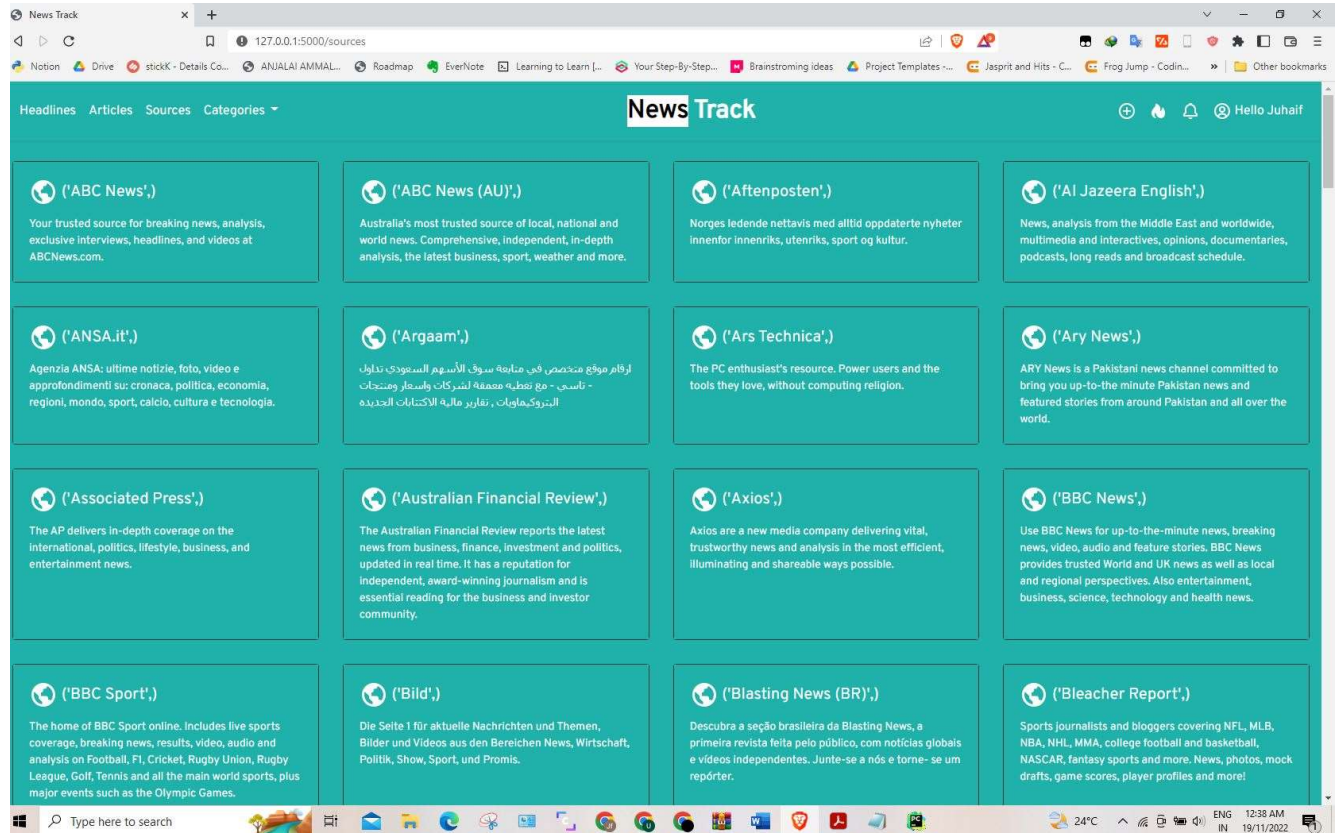
FIESTA FABRICS THE SAENZ TRIO



FIFA WORLD CUP HEAD TO HEAD

7.2 Feature 2

Trusted News Sources only accessed by using NewsAPI and We can View some Trending Articles from Popular Websites like as Verge, Forbes etc



8. TESTING

8.1 TEST CASE

				Date	18-Nov-22								
				Team ID	PNT2022TMD52968								
				Project Name	News Tracker Application								
				Maximum Marks	4 marks								
Test case ID	Feature Type	Component	Test Scenario	Pre-Requsite	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Commnents	TC for Automation(Y/N)	BUG ID	Executed By
1	Functional	Login Page	Verify user is able to Login into the Application		1) Open the News tracker application. 2) Login with user Credentials 3) Verify logged in to user account	Email: jfad@gmail.com Password: 1234	Login Successful	Working as expected	Pass		N		Juhaif Ahamed
2	Functional	Signup Page	Verify user is able to Signup in the Application		1) Open the news tracker 2) Enter the Details and Create a new User 3) Verify if user is created and inserted into DB Table	Email: jfadad@gmail.com Password: 1234	Account Created Successfully	Working as expected	Pass		N		Juhaif Ahamed
3	Functional	Dashboard page	Verify if all the user details are stored in Database		1) Open the News tracker application. 2) Enter the Details and Create a new User 3) Verify if user is created and inserted into DB Table	Username: jfadad@gmail.com password: 1234	User should navigate to user account homepage	Working as expected	Pass				Balaji
4	Functional	Login page	Verify user is able to log into application with Invalid credentials		1. Enter URL and click go 2. Click on Sign IN button 3. Enter Invalid username/email in Email text box 4. Enter valid password in password text box 5. Click on login button	Username: balaji@gmail.com password: 592001	Application should show 'Incorrect email or password' validation message.	Working as expected	Pass				Balaji
5	Functional	Login page	Verify user is able to log into application with Invalid credentials		1. Enter URL and click go 2. Click on Sign IN button 3. Enter Invalid username/email in Email text box 4. Enter valid password in password text box 5. Click on login button	Username: harish@gmail.com password: 32002	Application should show 'Incorrect email or password' validation message.	Working as expected	Pass				Harish

8.2 User Acceptance Testing

1. PURPOSE OF DOCUMENT

The purpose of this document is to briefly explain the test coverage and open issues of the News Tracker Application project at the time of the release to User Acceptance Testing(UAT).

2. DEFECT ANALYSIS

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved.

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	3	1	2	1	7
Duplicate	1	0	0	0	1
External	1	0	0	1	2
Fixed	2	1	1	1	5
Not Reproduced	0	0	0	0	1
Skipped	0	0	0	0	0
Won't Fix	0	0	0	0	0
Totals	7	2	3	3	16

3. TEST CASE ANALYSIS

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



Section	Total Cases	Not Tested	Fail	Pass
Login Page	4	0	0	4
Registration Page	1	0	0	1
Home Page	2	0	0	2



9. ADVANTAGES:

1. Viewers can get their news straight off their smartphone or tablet computer.
2. News is at their fingertips in an instant. An online newspaper can be read more elaborate than a printed newspaper.
3. You can read the Popular News Articles too very easily at the click of the mouse.
4. Access the News By Categories

DISADVANTAGES:

1. It can be limited by time.
2. It may rely too heavily on personalities, emotions, opinions... not facts.
3. It can shortchange complex stories or avoid them altogether.

10. CONCLUSION

The Motivation and scope behind this project are to connect people through this application and provide a medium to share their views on the topic/news/information. Then, People with the same interest can interact with each other. However, they can even share more information on the topic. This app while cross-checks the redundancy in the information along with the false and misleading information, which later results in panic in the people.

11. FUTURE SCOPE:

Location feature with automation can be implemented which means as user move from one city to other local news will change as per it. Offline Reading can be improve will more efficient way on full articles. Data quality check needed. If API can't reach to certain article source it gives null value which can cause problem in JSON parsing .

12. APPENDIX

SOURCE CODE:

main.py:

```
from app import app

if __name__ == "__main__":
    app.run(debug=True)
```

__init__.py:

```
from flask import Flask

app = Flask(__name__)

from app import views
```

views.py:

```
from app import app
import ibm_db
from flask import session, flash, redirect, render_template, request, url_for
from .request import (businessArticles, entArticles, get_news_source,
                      healthArticles, publishedArticles, randomArticles,
                      scienceArticles, sportArticles, techArticles,
                      topHeadlines)

conn = ibm_db.connect(
    'DATABASE=bludb;'
    'HOSTNAME=19af6446-6171-4641-8aba-9dcff8e1b6ff.c1ogj3sd0tgu0lqde00.databases.appdomain.cloud;'
    'PORT=30699;'
    'SECURITY=SSL;'
    'SSLServerCertificate=DigiCertGlobalRootCA.crt;'
    'UID=vdw12720;'
    'PWD=2C3yBJCDvrFURLPQ;', ' ', ' '
)
```


News Tracker Application

global account

```
@app.route('/', methods=['GET', 'POST'])
def login():
    if request.method == 'POST':
        # getting user data
        email = request.form.get('email')
        password = request.form.get('password')
        sql_check_query = "SELECT * FROM user WHERE email = ?"
        stmt = ibm_db.prepare(conn, sql_check_query)
        ibm_db.bind_param(stmt, 1, email)
        ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)
        print(account)
        if account:
            # email id exists
            # checking if the password is correct
            if not account['PASSWORD'] == password:
                flash('Invalid password', category='error')

            else:
                # user entered the correct password
                # redirecting the user to the dashboard
                session['user_id'] = account['EMAIL']
                return redirect(url_for('home'))

        else:
            # email id does not exist in the database
            flash('Email invalid... Try Again', category='error')

    return render_template('auth/login.html')

return render_template('auth/login.html')
# return render_template('login.html')

@app.route('/register', methods=['GET', 'POST'])
def register():
    if request.method == 'POST':
        # getting user data
        email = request.form.get('email')
        password = request.form.get('password')
        # checking: user already exists or not
        sql_check_query = "SELECT * FROM user WHERE email = ?"
        stmt = ibm_db.prepare(conn, sql_check_query)
        ibm_db.bind_param(stmt, 1, email)
        ibm_db.execute(stmt)

        account = ibm_db.fetch_assoc(stmt)
        # email id does not exist in the database
        if not account:
            # inserting the data into the database
            sql_insert_query = "INSERT INTO user VALUES (?, ?)"
            stmt = ibm_db.prepare(conn, sql_insert_query)
            ibm_db.bind_param(stmt, 1, email)
            ibm_db.bind_param(stmt, 2, password)
            ibm_db.execute(stmt)

            # user data inserted into the database
            # redirecting to login page
```

News Tracker Application

```
        flash('User created successfully! Please Login', category='success')
        return redirect('/')

    else:
        flash('Email id already exists! Try another one', category='error')

    return render_template('auth/register.html')

return render_template('auth/register.html')
# return render_template('register.html')

@app.route('/home', methods=['GET', 'POST'])
def home():
    articles = publishedArticles()

    todays_news = articles[0]
    top_headlines = articles[1]
    business_articles = articles[2]
    tech_articles = articles[3]
    entertainment_articles = articles[4]
    science_articles = articles[5]
    sport_articles = articles[6]
    health_articles = articles[7]

    return render_template('home.html',
                           todays_news = todays_news,
                           top_headlines = top_headlines,
                           business_articles = business_articles,
                           tech_articles = tech_articles,
                           entertainment_articles = entertainment_articles,
                           science_articles = science_articles,
                           sport_articles = sport_articles,
                           health_articles = health_articles,
                           account = session['user_id'])

@app.route('/headlines')
def headlines():
    headlines = topHeadlines()

    return render_template('headlines.html', headlines = headlines, account = session['user_id'])

@app.route('/articles')
def articles():
    random = randomArticles()

    return render_template('articles.html', random = random, account = session['user_id'])

@app.route('/sources')
def sources():
    newsSource = get_news_source()

    return render_template('sources.html', newsSource = newsSource, account = session['user_id'])

@app.route('/category/business')
def business():
    sources = businessArticles()

    return render_template('business.html', sources = sources, account = session['user_id'])
```

News Tracker Application

```
@app.route('/category/tech')
def tech():
    sources = techArticles()

    return render_template('tech.html', sources = sources, account = session['user_id'])

@app.route('/category/entertainment')
def entertainment():
    sources = entArticles()

    return render_template('entertainment.html', sources = sources, account = session['user_id'])

@app.route('/category/science')
def science():
    sources = scienceArticles()

    return render_template('science.html', sources = sources, account = session['user_id'])

@app.route('/category/sports')
def sports():
    sources = sportArticles()

    return render_template('sport.html', sources = sources, account = session['user_id'])

@app.route('/category/health')
def health():
    sources = healthArticles()

    return render_template('health.html', sources = sources, account = session['user_id'])
```

request.py:

```
from app.models import Articles
from app.models import Sources
from newsapi import NewsApiClient
from app.config import Config
import urllib.request,json
```

```
api_key=None
base_url=None
base_url_for_everything=None
base_url_top_headlines=None
base_source_list=None
```

```
all_types_articles = []
```

```
def news_sorter(all_articles):
```

```
    source = []
    title = []
    desc = []
    author = []
    img = []
    p_date = []
    url = []
```

```
    for i in range(len(all_articles)):
```

```
        article = all_articles[i]
```

News Tracker Application

```
source.append(article['source'])
title.append(article['title'])
desc.append(article['description'])
author.append(article['author'])
img.append(article['urlToImage'])
p_date.append(article['publishedAt'])
url.append(article['url'])

article_object = Articles(source, title, desc, author, img, p_date, url)
all_types_articles.append(article_object)
contents = zip(source, title, desc, author, img, p_date, url)

return contents

def publishedArticles():
    newsapi = NewsApiClient(api_key= Config.API_KEY)
    news= []

    #todays news

    get_articles = newsapi.get_everything(sources= 'cnn, reuters, cnbc, the-verge, gizmodo, the-next-web, techradar,
recode, ars-technica')
    all_articles = get_articles['articles']

    output = news_sorter(all_articles)
    news.append(output)

    #top headlines

    get_articles = newsapi.get_top_headlines(sources= 'cnn, reuters, cnbc, techcrunch, the-verge, gizmodo, the-next-
web, techradar, recode, ars-technica')
    all_articles = get_articles['articles']

    output = news_sorter(all_articles)
    news.append(output)

    #business articles

    get_articles = newsapi.get_top_headlines(category='business')
    all_articles = get_articles['articles']

    output = news_sorter(all_articles)
    news.append(output)

    #tech articles

    get_articles = newsapi.get_top_headlines(category='technology')
    all_articles = get_articles['articles']

    output = news_sorter(all_articles)
    news.append(output)

    #entertainment_articles

    get_articles = newsapi.get_top_headlines(category='entertainment')
    all_articles = get_articles['articles']

    output = news_sorter(all_articles)
    news.append(output)
```

News Tracker Application

```
#science_articles

science_articles = newsapi.get_top_headlines(category='science')
all_articles = science_articles['articles']

output = news_sorter(all_articles)
news.append(output)

#sport articles

sport_articles = newsapi.get_top_headlines(category='sports')
all_articles = sport_articles['articles']

output = news_sorter(all_articles)
news.append(output)

#health articles

get_articles = newsapi.get_top_headlines(category='health')
all_articles = get_articles['articles']

output = news_sorter(all_articles)
news.append(output)

return news

def topHeadlines():
    newsapi = NewsApiClient(api_key= Config.API_KEY)
    top_headlines = newsapi.get_top_headlines(sources= 'cnn, reuters, cnbc, techcrunch, the-verge, gizmodo, the-
next-web, techradar, recode, ars-technica')
    all_headlines = top_headlines['articles']

    return news_sorter(all_headlines)

def randomArticles():
    newsapi = NewsApiClient(api_key= Config.API_KEY)
    random_articles = newsapi.get_everything(sources= 'the-verge, gizmodo, the-next-web, recode, ars-technica')
    all_articles = random_articles['articles']

    return news_sorter(all_articles)

def businessArticles():
    newsapi = NewsApiClient(api_key= Config.API_KEY)
    business_articles = newsapi.get_top_headlines(category='business')
    all_articles = business_articles['articles']

    return news_sorter(all_articles)

def techArticles():
    newsapi = NewsApiClient(api_key= Config.API_KEY)
    tech_articles = newsapi.get_top_headlines(category='technology')
    all_articles = tech_articles['articles']

    return news_sorter(all_articles)

def entArticles():
    newsapi = NewsApiClient(api_key= Config.API_KEY)
    ent_articles = newsapi.get_top_headlines(category='entertainment')
```

News Tracker Application

```
all_articles = ent_articles['articles']

return news_sorter(all_articles)

def scienceArticles():
    newsapi = NewsApiClient(api_key= Config.API_KEY)
    science_articles = newsapi.get_top_headlines(category='science')
    all_articles = science_articles['articles']

    return news_sorter(all_articles)

def sportArticles():
    newsapi = NewsApiClient(api_key= Config.API_KEY)
    sport_articles = newsapi.get_top_headlines(category='sports')
    all_articles = sport_articles['articles']

    return news_sorter(all_articles)

def healthArticles():
    newsapi = NewsApiClient(api_key= Config.API_KEY)
    health_articles = newsapi.get_top_headlines(category='health')
    all_articles = health_articles['articles']

    return news_sorter(all_articles)

def get_news_source():
    """
    Function that gets the json response to our url request
    """
    get_news_source_url = 'https://newsapi.org/v2/sources?apiKey=' + Config.API_KEY
    with urllib.request.urlopen(get_news_source_url) as url:
        get_news_source_data = url.read()
        get_news_source_response = json.loads(get_news_source_data)
        news_source_results = None

    if get_news_source_response['sources']:
        news_source_results_list = get_news_source_response['sources']
        news_source_results = process_sources(news_source_results_list)

    return news_source_results

def process_sources(source_list):
    """
    function that process the news articles and transform them to a list of objects
    """
    news_source_result = []
    for news_source_item in source_list:
        name = news_source_item.get('name')
        description = news_source_item.get('description')
        url = news_source_item.get('url')

        if name:
            news_source_object = Sources(name, description,url)
            news_source_result.append(news_source_object)
    return news_source_result
```

News Tracker Application

models.py:

```
class Sources:
    def __init__(self, name, description, url):
        self.name=name,
        self.description=description
        self.url=url

class Articles:
    """Define article model"""
    def __init__(self, source, author, title, description, url, urlToImage, publishedAt):
        self.source = source
        self.author = author
        self.title = title
        self.description = description
        self.url = url
        self.urlToImage = urlToImage
        self.publishedAt = publishedAt
```

config.py:

```
class Config:

    NEWS_BASE_URL_SOURCES = 'https://newsapi.org/v2/top-headlines/sources?apiKey={}'
    NEWS_BASE_EVERYTHING_URL = 'https://newsapi.org/v2/everything?domains={} &apiKey={}'
    NEWS_BASE_HEADLINES_URL = 'https://newsapi.org/v2/top-headlines?country=us&apiKey={}'
    NEWS_BASE_SOURCE = 'https://newsapi.org/v2/top-headlines?sources={} &apiKey={}'
    API_KEY = " f1a683b7df544ace8de3d9ce54790eb1"

class ProdConfig(Config):
    pass

class DevConfig(Config):
    DEBUG = True

config_options= {
    'development': DevConfig,
    'production': ProdConfig
}
```

GitHub Link:

<https://github.com/IBM-EPBL/IBM-Project-37913-1660364659>

Project Demo Link

<https://drive.google.com/file/d/1xszyGxWAdPILN2vtRcWiwjM067opd9Do/view?usp=sharing>