NEWS TRACKER APPPLICATION

USING CLOUD

A Project report submitted in partial fulfilment of 7th semester in degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

Submitted by

Team ID: PNT2022TMID19523

PRADEEP P	732219CS084
KAVIN AG	732219CS051
DHYAN APARNA M	732219CS022
PANDI DURAI M	732219CS079

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

NANDHA ENGINEERING COLLEGE, ERODE-52
(AUTONOMOUS)

NOV-2022

NANDHA ENGINEERING COLLEGE, ERODE-52
(AUTONOMOUS)

BONAFIDE CERTIFICATE

Certified that this project report "**NEWS TRACKER APPLICATION"** is the bonafide record work done by **Mr PRADEEP P**(732219CS084), **Mr KAVIN AG** (732219CS051), **Ms DHYAN APARNA M** (732219CS022), **Mr PANDI DURAI M** (732219CS079) for **IBM-NALAIYATHIRAN** in **VII** semester of **B.E.,** degree course **in Computer Science and Engineering** branch during the academic year of 2022 - 2023.

Staff-In charge	**Evaluator**
MS PADMA .E	MS ABILA ANJU .O

Head of the Department
Dr.D.VANATHI

ACKNOWLEDGEMENT

    We are highly grateful to thank our Project coordinator MS PADMA .E and our Project Evaluator MS ABILA ANJU.O Department of Computer Science and Engineering, Nandha Engineering College, Erode for the coordinating us throughout this Project.

    We are very much indebted to thank all the faculty members of Department of Computer Science and Engineering in our Institute, for their excellent moral support and suggestions to complete our Project work successfully.

PRADEEP P
DHYAN APARNA M
KAVIN AG
PANDI DURAI M

ABSTRACT

As world's technology is rapidly growing we have fast connection and network to instantly connect to other person. Day to day use in mobile, tablets and laptop is increasing, most of the people already have this facilities. In this fast and information oriented world we need to stay updated with every incidents 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.

TABLE OF FIGURES

News Tracker Application

1. INTRODUCTION

This app is a news application. This application will show the news about the world. This is better than old conventional newspapers as you can see news anytime and anywhere now. This will also have live updates. This app will have some other features like adding your own news as an editor and people can see your published news too.

1.1 Project overview

The purpose of the project is to develop an application which will display news articles and videos verified and approved at backend .User can browse news articles and videos through various categories. App will enable user to view news details, images, and video .Users can also bookmark any news article/video for future use.The application will have three type of user's at backend one will be admin manager with having full access to backend features including user and content management. Whereas the other two users will be reporters and editors will have limited access to backend features.The reporters will be creating news articles and videos on the other hand editors will have responsibility to approve and publish the articles and videos added by reporters. Both users will be added to the system by admin.

1.2 Purpose

In this fast moving world where people find little time to spend with their own family, it is difficult to find time to read newspaper and stay updated with the current affairs. Reading newspaper might sometimes be time taking considering the size of the article. Sometimes people give the article a skip due to lethargy if it is too long. Information through listening and visuals is quickly perceived compared to reading. To make things easier, the NewsApp andoid application can be used to scan the headlines from the newspaper and fetch relevant videos from the world wide web.

2.LITERATURE SURVEY

2.1 Existing problem

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.

2.2 References

Like articles, websites, blogs.

https://techvidvan.com/tutorials/android-news-app-project-source-code/

https://www.ripublication.com/

2.3 Problem Statement Definition

- The manual system of newspaper involves all the clerical work, which is a cumbersome and complicated job. In today's fast life it is difficult for users to get news at their move.

- The user needs a way to organize the news on daily basis so that he can cope up with daily events inhis tight schedule.

- The user wants to read news only about particular topics so that he can be informed about his interest.

- The user wants to get informed from only certified news outlets .

- The user needs a way to search about the news on topics he wants to.

- The user wants to know the news about his surrounding using GPS location.

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas

3.2 Ideation & Brainstorming

PRADEEP P

CREATE USER ACCOUNT	SIMPLE AND INTERACTIVE UI	TRANSPORT TIMINGS
CONSUMPTION OF DATA IS LESS	BOOKMARK NEWS	RECOMMENDED NEWS WILL BE DISPLAYED
PAID PROMOTIONS	NEWS PROVIDED FROM TRUSTED SOURCES	TRACK AS MANY WEBSITES AS YOU WANT

DHYAN APARNA M

PROVIDES JOB DESCRIPTION	INFORMATION WILL BE SECURE	THOUGHT FOR THE DAY IS DISPLAYED ON APP FOR POSITIVITY
VIDEO COVERAGE WILL BE PROVIDED	TIPS FOR STUDENTS TO IMPROVE	USERS CAN POST COMMENTS
ALL OS IS SUPPORTED	PUSH NOTIFICATION	TECH GADGET NEWS

PANDI DURAI M

SHARING OPTIONS	USERS CAN DOWNLOAD THE NEWS CONTENTS	NEWS AVAILABLE IN ALL LANGUAGES
NEWS WILL BE PROVIDED BASED ON USERS BROWSING	MOVIE REVIEWS	DOWNLOADED NEWS CAN BE USED IN OFFLINE PURPOSES
LISTEN TO PODCASTS	DAILY HOROSCOPE	ARTICLES ABOUT ACHIEVERS IN VARIOUS STREAMS

KAVIN AG

MARKETING TRENDS	ALL IN ONE APP	ACCURATE WEATHER FORECAST
OFFER WALLS	FREE OF COST	WORLDWIDE NEWS
BREAKING NEWS WILL BE NOTIFIED AS POP UP MENU	FILTER CONTENTS	USERS CAN BROWSE DATES AND EVENTS

3.3 Proposed Solution

S.NO	PARAMETERS	DESCRIPTION
1.	Problem statement (problems to be solved	To help customer to access NEWS using CloudApplication.
2.	Idea/solution description	Making the customer to access news in few touch, providing authorized news, cloud based app, With tons of features to make it exciting
3.	Novelty/Uniqueness	Profile based account, like and share, downloadblogs, links to original publishers are provided.
4.	Social Impact/Customer satisfaction	Customer Satisfaction, Customer can follow NEWSpublishers, like and share feature.
5.	Business Model (Revenue)	Showing ad, Showing a particular publishers NEWS and blogs.
6.	Scalability of the solution	Enabling the system to scalable according to thecustomers need

3.3 Problem Solution fit

1. CUSTOMER SEGMENT(S) `CS`

- Marketing people
- General people
- Digital makeover lover

6. CUSTOMER CONSTRAINTS `CC`

- Account security ?
- Ability to adapt to different orientation ?

5. AVAILABLE SOLUTIONS `AS`

When a user is not online due to some reason should have to access to the internet. Whenever the user is online the news content is downloaded in the cache memory of the app, this is how a user can access to the content offline.The option of filtering the content based on different category

2. JOBS–TO–BE–DONE / PROBLEMS

- decide what, where and when to change for better performance
- want to keep financial details private and prevent leakage

9. PROBLEM ROOT CAUSE `RC`

At this digital age, people are captivated by smartphones or other mobile devices. They want all necessitous info to be found at their fingertips.

7. BEHAVIOUR `BE`

People need real–time news and updates immediately so the news app has a very bright future. A news app that provides a dynamic experience will get a huge success.

3. TRIGGERS `TR`

News app triggers to describe automatically specific news or event faster and more targeted

4. EMOTIONS: BEFORE / AFTER `EM`

Before – User can't get news up to date and wont be able to react to those news
After – User can post their comments and find categories and individual articles

10. YOUR SOLUTION `SL`

Evident that developing a news app helps you stand out among all competitors. The aforesaid aspects let a news app promote an online magazine and as a result, the app reaches out and attracts many people from all across the world.

8.CHANNELS of BEHAVIOUR `CH`

8.1 ONLINE
  User can access all kind of news in many forms

8.2 OFFLINE
  User can view news in offline mode

4. REQUIREMENT ANALYSIS

4.1 Functional requirement

Following are the functional requirements of the proposed solution.

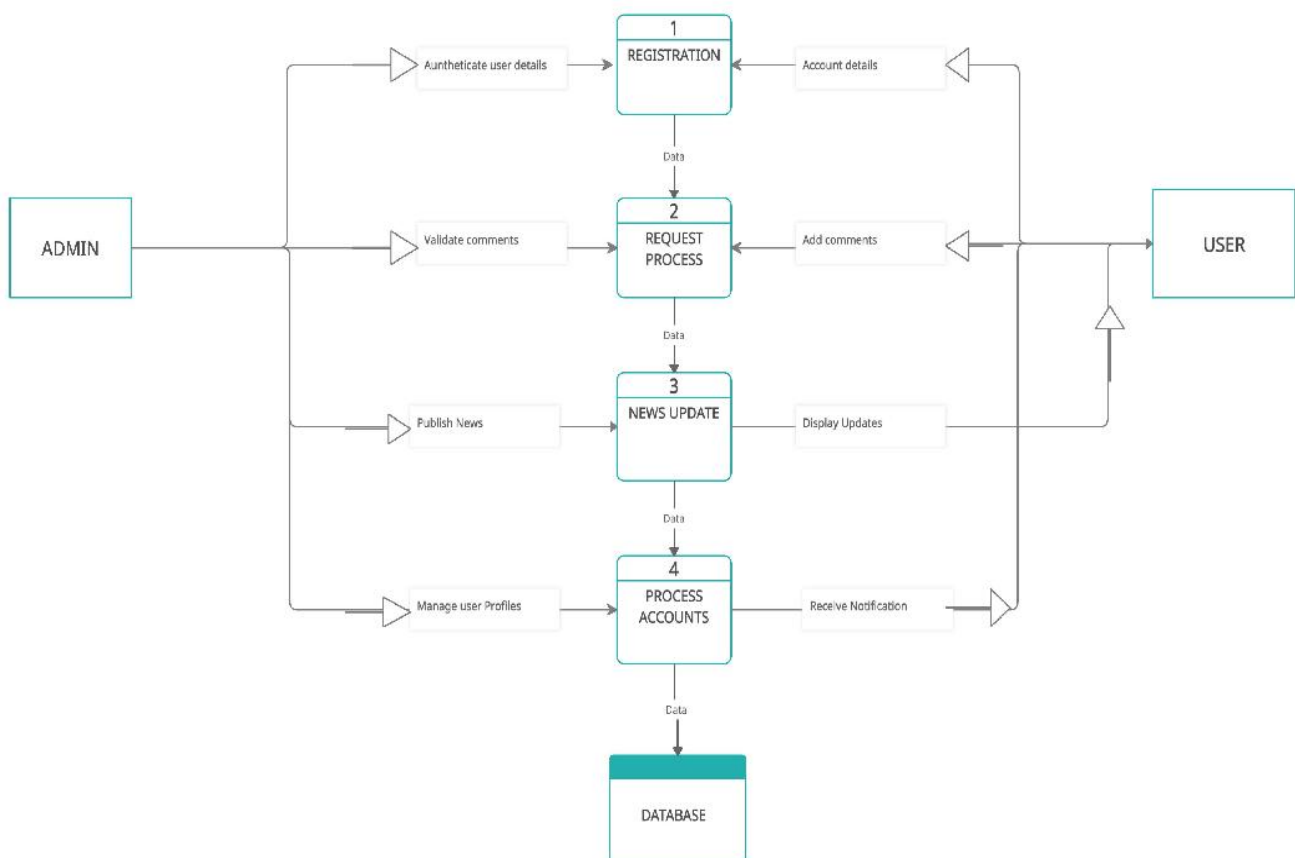| FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through online application Registration through Gmail Registration through website
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	login	Login through browser directly by entering username and password Login through email
FR-4	User account details	Updating personal data of his/her Profile
FR-5	User interaction	View the related news by subscripted or requested page
FR-6	Logout	Save last visit contents and Sign out

4.2 Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	This app is easy of use interface which is handy and End user can receive push notification.So that users would not want to miss the latest news.
NFR-2	**Security**	This app ensures user's data should be secure and must not be leaked to an outsider.How well are the system and its data protected against attacks
NFR-3	**Reliability**	How often does the system experience critical failures? How much time does it take to fix the issue when it arises ?Check the percentage of the probability of failure, or failure rate, to determine the reliability of a system.
NFR-4	**Performance**	Explains how long a user must wait before the target operation happens (the page renders.) given the overall number of users at the moment. But it's not always like that. Performance requirements may describe background processes invisible to user

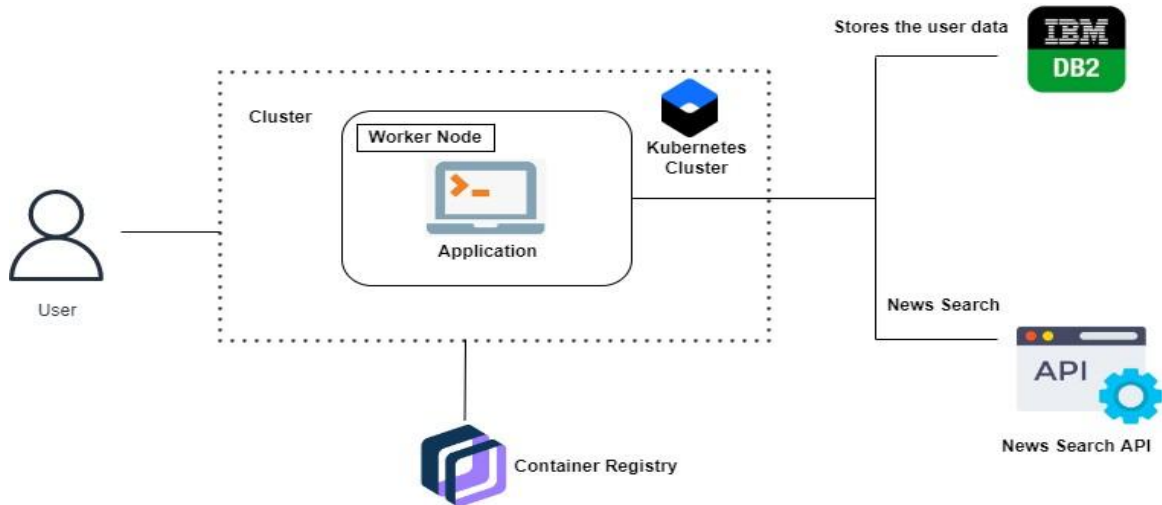| NFR-5 | **Availability** | Availability describes how likely the system is accessible to a user at a given point in time. |
| NFR-6 | **Scalability** | This app defines scalability is the ability of the application to handle an increase in workload without performance degradion, or its ability to quickly enlarge. |

5. PROJECT DESIGN

5.1 Data Flow Diagrams

5.2   Solution & Technical 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 sign up with google	I can register & access the dashboard with Gmail or in Browser Login	Medium	Sprint-1
Customer (Web user)	Login	USN-4	As a user, I can log into the application by entering email & password	I can view all types of informations through this application	High	Sprint-1
	Dashboard	USN-5	As a user , I can edit Profile to update my personal data	I can view that personal data got updated	High	Sprint-2
		USN-6	I want to read news based on my filter contents	News contents are filtered based on user	Medium	Sprint-2

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer Care Executive	Help	USN-7	Get weekly report of user reviews	I can monitor the effectiveness of user review	High	Sprint-2
Administrator	Admin access	USN-8	As a system admin i want to able to configure user settings so that i can controll access	Access controll by system admin initiated	High	Sprint-2

6. **PROJECT PLANNING & SCHEDULING**

6.1 Sprint Planning & Estimation

TITLE	DESCRIPTION	DATE
Prepare Empathy Map	Prepare Empathy Map Canvas to capture the user Pains & Gains, Prepare list of problem statements	10 Sept 2022
Ideation Brain Storming	List the by organizing the brainstorming session and prioritize the top 3 ideas based on the feasibility & importance.	15 Sept 2022
Proposed Solution	Prepare the proposed solution document, which includes the novelty, feasibility of idea, business model, social impact, scalability of solution, etc.	23 Sept 2022
Problem Solution Fit	Prepare problem solution fit document	28 Sept 2022
Solution Architecture	Prepare solution architecture document.	5 October 2022
Customer Journey	Prepare the customer journey maps to understand the user interactions & experiences with the application (entry to exit).	7 October 2022
Solution Requirement	Prepare the functional requirement document	8 October 2022

Data Flow Diagrams	Draw the data flow diagramsand submit for review.	10 October 2022
Technology Architecture	Prepare the technology architecture diagram.	15 October 2022
Prepare Milestone &Activity List	Prepare the milestones & activity list of the project.	26 October 2022
Project Development - Delivery of Sprint-1, 2, 3& 4	Develop & submit the developed code by testing it.	14 November 2022

6.2 Sprint Delivery Schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	5	High	Pandi Durai M, Dhyan Aparna M
Sprint-1		USN-3	As a user, I can register for the application By choosing google account as well.	5	Medium	Kavin AG, Pradeep P
Sprint-1	Login	USN-4	As a user, I can login into the application by entering email & password	5	High	Pradeep P, Dhyan Aparna M
Sprint-2	Dashboard	USN-5	As a user, I can choose the interest and choices of news I want to see for the first time in dashboard.	10	High	Pandi Durai M, Pradeep P
Sprint-2	Dashboard User Interface	USN - 11	Administrator designing the user interface	10	Medium	Dhyan Aparna M, Kavin AG
Sprint-3		USN-6	As a user I can go through the feed of news filtered according to my wish.	10	High	Pandi Durai M, Pradeep P
Sprint-3		USN-7	As a user, I can logout my account in settings.	10	Medium	Pandi Durai M, Kavin AG
Sprint-4		USN-8	As a user, I can update my interest and choice in account settings.	10	Medium	Kavin AG, Dhyan Aparna M
Sprint-4	Chat bot / Query	USN-9	Solve issues brought up by client	5	Medium	Pradeep P, Pandi Durai M
Sprint-4		USN-10	Roll out updates and bug fixes	5	High	Kavin AG, Dhyan Aparna M

6.3 REPORT FROM JIRA

----

7. CODING & SOLUTIONING

```
from flask import Flask, render_template,request,flash,redirect,url_for,session
from newsapi import NewsApiClient
import ibm_db
import requests
from flask_sqlalchemy import SQLAlchemy




app = Flask(__name__)
app.app_context().push()
```

```python
app.config['DEBUG'] = True
app.config['SQLALCHEMY_DATABASE_URI'] = 'sqlite:///weather.db'

db = SQLAlchemy(app)

class City(db.Model):
    id = db.Column(db.Integer, primary_key=True)
    name = db.Column(db.String(50), nullable=False)

app.secret_key='a'

connection = ibm_db.connect("DATABASE=bludb ; HOSTNAME=54a2f15b-5c0f-46df-8954-
7e38e612c2bd.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud; PORT= 32733; SECURITY=SSL
SSLServerertificate=/Users/pradeep/PycharmProjects/Flask SQLite/certificate.crt;
UID=ssr73017; PWD=zQUhCA8HIIVl8nxT;",'','' )


@app.route('/')
def index():
    return render_template('index.html')




@app.route('/register', methods=['GET', 'POST'])
def register():
 if request.method == 'POST':
     try:
      username = request.form['username']
      mail = request.form['mail']
      contact = request.form['contact']
      password = request.form['password']
      query = "INSERT INTO USERS VALUES(?,?,?,?)"
      stmt = ibm_db.prepare(connection, query)
      ibm_db.bind_param(stmt, 1, username)
      ibm_db.bind_param(stmt, 2, mail)
      ibm_db.bind_param(stmt, 3, contact)
      ibm_db.bind_param(stmt, 4, password)
      ibm_db.execute(stmt)
      flash("Registered  Successfully","success")
     except:
         flash("Error in Insert Operation", "danger")
     finally:
         return redirect(url_for("index"))
         con.close()
 return render_template('register.html')




@app.route('/login', methods=['GET', 'POST'])
def login():
 global userid
 if request.method == "POST":
    username = request.form['username']
    password = request.form['password']
    query = "SELECT * FROM USERS where username=? and password=?"
    stmt = ibm_db.prepare(connection, query)
    ibm_db.bind_param(stmt, 1, username)
    ibm_db.bind_param(stmt, 2, password)
    ibm_db.execute(stmt)
    account = ibm_db.fetch_assoc(stmt)
    if account:
        session['Loggedin'] = True
        session['id'] = account['USERNAME']
```

```python
            session['username'] = account['USERNAME']
            return redirect("/news")
    else:
        flash("Oops Username and Password Mismatch", "danger")
        return redirect(url_for("index"))


@app.route("/news")
def home():
    api_key = '25560f3cf53c433c9807c60595b373a6'

    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_article['url'])

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

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


@app.route('/weather', methods=['GET', 'POST'])
def weather():
    if request.method == 'POST':
        new_city = request.form.get('city')

        if new_city:
            new_city_obj = City(name=new_city)

            db.session.add(new_city_obj)
```

```python
            db.session.commit()

    cities = City.query.all()

    url =
'http://api.openweathermap.org/data/2.5/weather?q={}&units=imperial&appid=2a78921b9bff
cab5e471564c6a553385'

    weather_data = []

    for city in cities:
        r = requests.get(url.format(city.name)).json()

        weather = {
            'city': city.name,
            'temperature': r['main']['temp'],
            'description': r['weather'][0]['description'],
            'icon': r['weather'][0]['icon'],
        }

        weather_data.append(weather)

    return render_template('weather.html', weather_data=weather_data)




@app.route('/logout')
def logout():
    session.clear()
    return redirect(url_for("index"))

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

8. TESTING

8.1 Test Cases

Test case

Test case	feature	component	Test scenario	Expected result	Actual result	status	comments	bug	Executed by
LOGIN	Functional	Login page	Verify user can see the login in option	can visible	Yes visible	pass	successful	-	PRADEEP
Sign up	Functional	Register page	Verify user has the option to sign up	Can visible	Yes visible	pass	Successful	-	DHYAN APARNA, PANDI DURAI
password mismatch checking	Functional	Login page	Verify user has entered correct password	verified	returned to actual page	pass	Successful	-	KAVIN PRADEEP

Fetch news	Functional	dash board	Verify user can get the news	News will be feed to the app	404 error	Fail	unsuccessful	App integeration problem	APARNA, PANDI DURAI
Types of news available in the fetch newspage	Functional	news page	Types of news available	Weather, Sport, Economy.	Hover buttons will be shown.	Yes	successful	-	PRADEEP

Result:

News tracker application using cloud is developed and executed at the level of completed progress .

10. <u>ADVANTAGES & DISADVANTAGES</u>

Advantages:-

- ✓ This app constitutes a good user interface which is appealing and much interesting and easy to use.
- ✓ Permit the users to share and display certain news on the social media.
- ✓ These apps provide the latest videos and coverages of news on the device.
- ✓ The user gets the details about the weather conditions with the applications

Disadvantages:-

- ✓ one needs to have internet connection in order to access the news
- ✓ Pop up advertisements and other advertisements which can appear anytime
- ✓ Website could crash if lots of people try accessing them for a major news story

11. <u>CONCLUSION</u>

The present system involves all the clerical work, which is a cumbersome and complicated job. In today's fast life it is difficult for users to get news at their move. So, this system can be of great help as anyone can read the news on the internet whenever they get time. We have demonstrated a method for monitoring users' news reading behaviour In the future we will further explore the design of adaptive interfaces, in order to be in a position to demonstrate a complete adaptive mobile news framework providing automatic personalisation of news apps.

12. 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.

13. APPENDIX

GitHub

https://github.com/IBM-EPBL/IBM-Project-31825-1660205386

Project demo link

Our project runs on local host we can't share or use the site

we attached source code through the link below

https://docs.google.com/document/d/1tYjRuHOQoZQU7-NAUQTp0-yuIEmQKASrwI3_LzpUfmc/edit?usp=sharing