

NEWS TRACKER APPLICATION

USING CLOUD

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

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

Submitted by

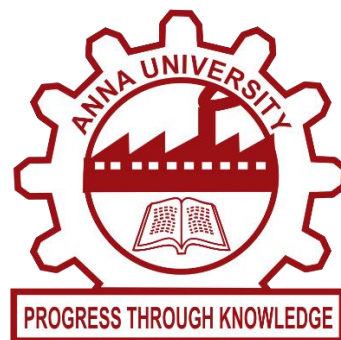
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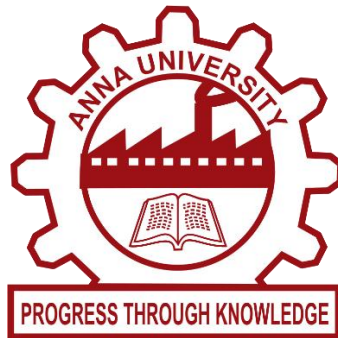


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BONAFIDE CERTIFICATE

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ABSTRACT

The main objective of the project is to provide people a Web Application through which people can access all types of news and information. Through this application, any user can gain technical knowledge of the world with just one click ahead. User does not have to visit multiple sites for different related information. All information is going to be in one place. Sometimes, people even spread fake news, which circulates and spread more like a disease of false information in WhatsApp and other social media. Various myths are also likely to spread as soon as possible which gives more harm than good to the people. 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.

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NEWS TRACKER APPLICATION

1.INTRODUCTION

NewsCafe Web Application is all about providing a seamless reading experience to the app users on their fingertips. The on-demand news feed application will not only keep the readers updated but also open up new revenue streams for you.

1.1 Project overview

As news is increasingly accessed on smartphones and tablets, the need for personalizing news app interactions is apparent. We report a series of studies addressing key issues in the development of adaptive news app interfaces. We first surveyed users' news reading preferences and behaviour; analysis revealed three primary types of reader. We then implemented and deployed an web news app that logs users' interactions with the app. We used the logs to train a classifier and showed that it is able to reliably recognize a user according to their reader type. Finally we evaluated alternative, adaptive user interfaces for each reader type. The evaluation demonstrates the differential benefit of the adaptation for different users of the news app and the feasibility of adaptive interfaces for news apps.

1.2 Purpose

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 by newspaper 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, Sports, etc.... as on official websites.

2. LITERATURE SURVEY

2.1 Existing problem

As our daily life become very busy it is very tough to spend time for reading news paper, articles or watching news channels. In the existing application the UI of the news app will be conjoined by many advertisement and it is very uneasy to find the selected category of news.

2.2 References

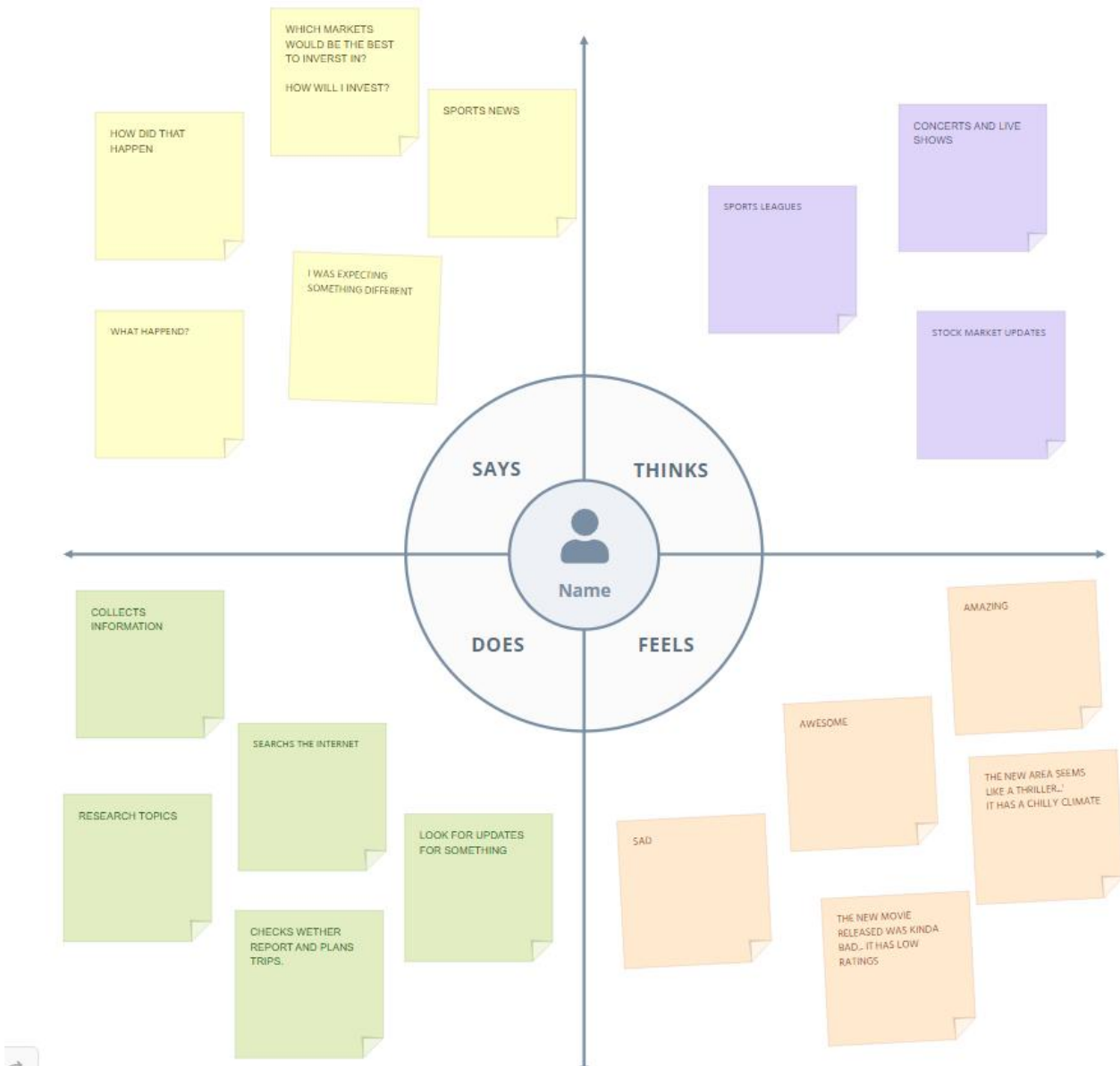
SI. No	Title	Authors	Year	Technique	Merits	Demerits
1	Challenges and Issues on Online News Management	Wael M.S. Yafooz Siti Z.Z. Abidin Nasiroh Omar	2011	Tree edit distance Document object model Visual wrapper	Searching of news based on HTML tag, template of news.	Daily change in HTML content and template cannot analyse the original content.
2	News Event Detection and Tracking Based on Stream of Online News	Yajie Qi Li Zhou Huayou Si JianWan Ting Jin	2017	Single-pass clustering algorithm for event detection and tracking	Extraction of news content on particular field by searching keywords.	In some cases it can't analyze the keyword brings original news or not
3	Effects of Incidental Brief Exposure to News on News Knowledge While Scrolling Through Videos	Masanori Takano Yuki Ogawa Fumiaki Taka Soichiro Morishita	2021	Using Video shorts for news. Video Intelligent API	Every people can easily understand the news by watching the video content.	Videos may be in multiple aspect ratio, cluttered, textured background

2.3 Problem Statement Definition

Day to day use in mobile, tablets and laptop is increasing, it leads to reduce newspaper reading habit. In this fast and information oriented world we need to stay updated with every incidents and news too. Reading news in the busy schedule is not possible with a physical newspaper. To read news in such a way that we don't have to worry about ever buying physical newspapers or carrying it when needed. To overcome this digital news is the best way to be updated every time. An Application hosted on the internet which could be accessed from any device that is connected to the Internet.

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas



3.2 Ideation & Brainstorming

Ram Kishore J

Audio & Video
Element

Short &
Precise

Push
Notification

Up-to-date

Connecting
people globally

Breaking
Headlines

Varun Krishna K B

Top News -
Stories of the
day

Live Videos

Economic
Crisis

Interesting
Facts

Search and
filters

Stock
Updates

Shinumon S B

Inappropriate
contents

Educate readers
on Current
affairs

News with real
time update

News app
without spam

Fake News

Customer
Feedback

SriJanani C B

Gaining World
Knowledge

Identify
irrelevant
Solution

Medical News

Health News

Monitor
Powerful
Persons

Awareness

3.3 Proposed Solution

S.NO	PARAMETERS	DESCRIPTION
1.	Problem statement (problems to be solved)	Day to day use in mobile, tablets and laptop is increasing, it leads to reduce newspaper reading habit. In this fast and information oriented world we need to stay updated with every incidents and news too. Reading news in the busy schedule is not possible with a physical newspaper. To read news in such a way that we don't have to worry about ever buying physical newspapers or carrying it when needed. To overcome this digital news is the best way to be updated every time. An Application hosted on the internet which could be accessed from any device that is connected to the Internet.
2.	Idea/solution description	<ul style="list-style-type: none">● One platform delivers news based on user needs in the form of images, texts and videos.● We allow users to connect globally by posting their opinions or comments about the social news.
3.	Novelty/Uniqueness	We Push the important breaking news based on user need and delivers the news in the form of short videos.
4.	Social Impact/Customer satisfaction	User will be satisfied by watching the short video news based on their preferences.
5.	Business Model (Revenue)	Premium user can get ad-free news. Generating news can be monetized
6.	Scalability of the solution	Easy to access from everywhere in the world. Storage and Networking can be scaled using cloud computing.

3.4 Problem Solution fit

Define CS, fit into CC	<div>1. CUSTOMER SEGMENT(S)<div>CS</div></div> <div>All the age group, who need to know the recent updates of the world news, weather updates, interesting facts and so on....</div>	<div>6. CUSTOMER CONSTRAINTS<div>CC</div></div> <div><ul style="list-style-type: none">Customer may not have time to read the newspaper or watch news channel.There is no interaction globally in traditional way of reading news.</div>	<div>5. AVAILABLE SOLUTIONS<div>AS</div></div> <div>Customers will have time to time update on news. In past customers tried newspaper, but it is not possible to get updates instantly and based on customers preference.</div> <div>Pros : Customers can read and watch the live news. They can comment their opinion or comments over the news.</div> <div>Cons : Reading habit will be reduced, customer will spend more time on screen.</div>	Explore AS, differentiate
	<div>2. JOBS-TO-BE-DONE / PROBLEMS<div>J&P</div></div> <div><ul style="list-style-type: none">Reading newspaper is time consuming task and it is not much possible in this busy world.User may read uninterested topics.User may wish to put some comments on the news globally.User cannot reach out the local news instantly through regular methods</div>	<div>9. PROBLEM ROOT CAUSE<div>RC</div></div> <div><ul style="list-style-type: none">Time constrain is the root cause for this problem.Making of newspaper affect the environment too.</div>	<div>7. BEHAVIOUR<div>BE</div></div> <div><ul style="list-style-type: none">User need to register in our web application.categorise their area of interestChoose the push notifications that should be more important based on topics</div>	
<div>3. TRIGGERS<div>TR</div></div> <div>Users will be triggered by the easy access of news, connecting globally by interacting.</div>	<div>10. YOUR SOLUTION<div>SL</div></div> <div>In our application we categorize the news and topics based on user preference, instant updates to the user, interacting globally and giving stand in some social cause through posting their comments</div>	<div>8. CHANNELS of BEHAVIOUR<div>CH</div></div> <div>8.1 ONLINE</div> <div>Users can categorize the news based on their wish and interact globally</div> <div>8.2 OFFLINE</div> <div>Users can download the news content and watch or read the news offline .</div>	Extract online & offline CH of BE	
<div>4. EMOTIONS: BEFORE / AFTER<div>EM</div></div> <div>Unaware of updates > All the updates were in their palm</div>				

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 Gmail
FR-2	User Confirmation	Confirmation via Email
FR-3	Searching	Searching news by search bar Showing the trending news on search
FR-4	Real Time News	For getting news he/she must need to search the news in the given search bar, Which will collect the news according to his search from the online sources like blog, e-news paper,Articles etc
FR-5	User Friendly	Real time news through News APIs Read and Write comments on timeline
FR-6	User features	User can choose the category of news.

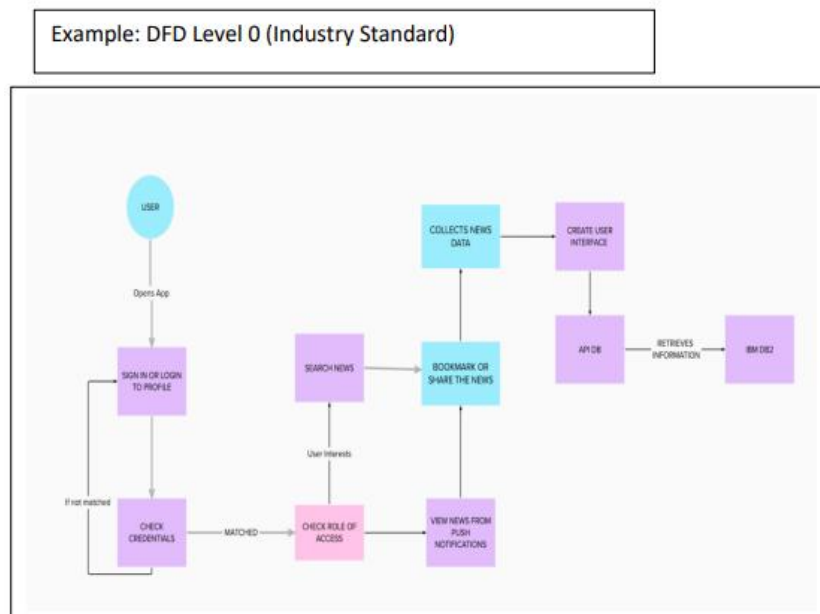
4.2 Non-functional Requirements:

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

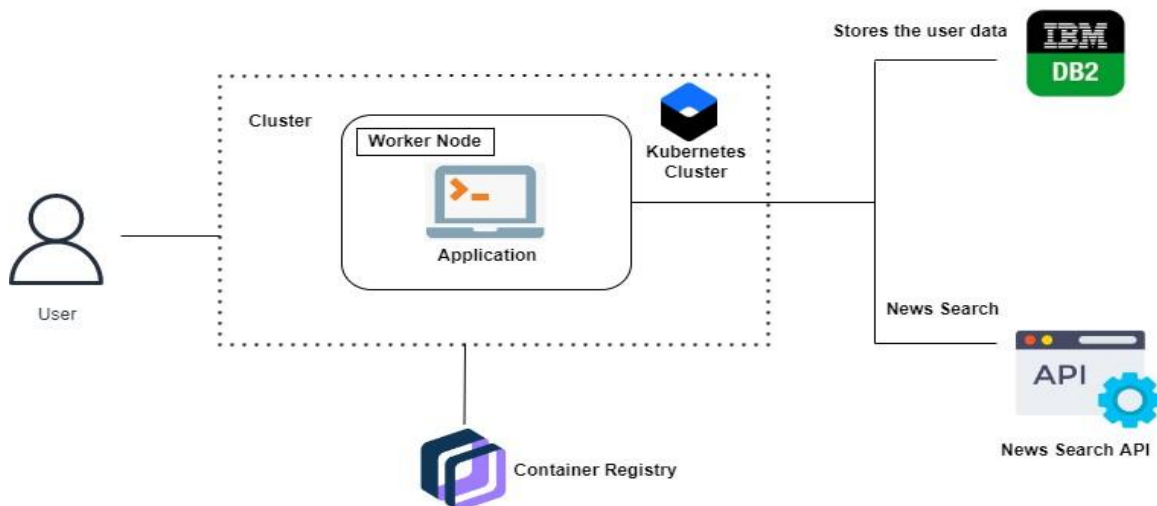
FR No.	Non-Functional Requirement	Description
NFR-1	Usability	User can view breaking news on news feed. Users can search and filter their news category
NFR-2	Security	User Authentication and Password Management. Personal Profiles are not shared to third party.
NFR-3	Reliability	Instant breaking news at any time.
NFR-4	Performance	Shows user most relevant content Users can interact globally to give their stand.
NFR-5	Availability	24/7 news service
NFR-6	Scalability	Allows users to share news feed, videos, images to their social media.

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 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	I can receive password from mail.	Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password	I can receive confirmation mail.	High	Sprint-1
	Dashboard	USN-6	The news portal fetches for the most recent news and shows it as "Breaking News".	I can open and view the "Breaking News"	Low	Sprint-2
Customer (Webuser)	Search Bar	USN-7	User search data based on their personal interests	I can view the related content for the search data	High	Sprint-1
		USN-8	The news is showed with a sample snapshot and mini description and user can open and read the article.	I can view the news details and can open to see whole article	High	Sprint-1
Administrator	Server	USN-9	Provides the exact news from the database.	I can see the latest news getting refreshed.	Medium	Sprint-1
		USN-10	Provides live news with video and audio content.	I can see news much clearly with this feature	High	Sprint-1

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	As a user, I can register for the application by entering my email, password, and confirming my password.	2	High	Ram Kishore J
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	ShinuMon S B
Sprint-2		USN-3	As a user, I can register for the application through Mobile Number.	3	Medium	Varun Krishna K B
Sprint-1		USN-4	As a user, I can register for the application through Gmail	3	Medium	ShinuMon S B
Sprint-1	Login	USN-5	As a user, I can log into the application by entering email & password	3	High	Srijanani C B
Sprint-2	Dashboard	USN-6	Shows the recent NEWS and Breaking NEWS.	5	Medium	Varun Krishna K B
Sprint-3	Search Bar	USN-7	User searches for News based on their own interest.	3	High	Srijanani C B
Sprint-4	Server	USN-8	Provides correct NEWS available from the database.	8	Medium	Ram Kishore J
Sprint-4		USN-9	Provide live news content.	5	High	Varun Krishna K B

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	7 Days	22 Oct 2022	29 Oct 2022	8	29 Oct 2022
Sprint-2	20	7 Days	29 Oct 2022	05 Nov 2022	4	05 Nov 2022
Sprint-3	20	7 Days	05 Nov 2022	12 Nov 2022	5	12 Nov 2022
Sprint-4	20	7 Days	12 Nov 2022	19 Nov 2022	4	19 Nov 2022

7. CODING & SOLUTIONING

7.1 Feature 1

main.py

```
from flask import Flask, render_template, request, redirect, url_for, session, flash
import requests
from flask_mysql import MySQL
import ibm_db
import random
app = Flask(__name__)
app.secret_key = '1a2b3c4d5e'

conn = ibm_db.connect(
    'DATABASE=bludb;'
    'HOSTNAME=b70af05b-76e4-4bca-a1f5-23dbb4c6a74e.clogj3sd0tgut0lqde00.databases.appdomain.cloud;'
    'PORT=32716;'
    'SECURITY=SSL;'
    'SSLServerCertificate=DigiCertGlobalRootCA.crt;'
    'UID=rcv18228;'
    'PWD=PSEaguZ3EINJmR9F;', '', ''
)

@app.route('/', methods=['GET', 'POST'])
def login():
    # Output message if something goes wrong...
    # Check if "username" and "password" POST requests exist (user submitted form)
    if request.method == 'POST':
        # getting user data
        email = request.form.get('username')
        password = request.form.get('password')
        sql_check_query = "SELECT * FROM user WHERE username = ?"
        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['USERNAME'] = account['USERNAME']
            session['loggedin'] = True
            return redirect('/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')
@app.route('/register', methods=['GET', 'POST'])
def register():
    # Check if "username", "password" and "email" POST requests exist (user submitted form)
    if request.method == 'POST':
        # getting user data
```

```

email = request.form.get('email')
password = request.form.get('password')
username = request.form.get('username')
# 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.bind_param(stmt, 3, username)
    ibm_db.execute(stmt)

    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')

```

Templates:

index.html

```

<!DOCTYPE html>
<html lang="zxx">
  <head>
    <!-- Required meta tags -->
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <meta http-equiv="X-UA-Compatible" content="ie=edge" />
    <title>News Cafe </title>
    <!-- plugin css for this page -->
    <link
      rel="stylesheet"
      href="{{ url_for('static', filename='assets/vendors/mdi/css/materialdesignicons.min.css') }}"
    />
    <link rel="stylesheet" href="{{ url_for('static', filename='assets/vendors/aos/dist/aos.css/aos.css') }}"
  />

    <!-- End plugin css for this page -->
    <link rel="shortcut icon" href="assets/images/favicon.png" />

```

```

    <!-- inject:css -->
    <link rel="stylesheet" href="{{ url_for('static', filename='assets/css/style.css') }}"
    <!-- endinject -->
  </head>

```

```

<body>
  <div class="container-scroller">
    <div class="main-panel">
      <!-- partial:partials/_navbar.html -->
      <header id="header">
        <div class="container">
          <nav class="navbar navbar-expand-lg navbar-light">

```

```

<div class="navbar-top">
  <div class="d-flex justify-content-between align-items-center">
    </ul>
  </div>
</div>
<div class="navbar-bottom">
  <div class="d-flex justify-content-between align-items-center">
    <div>
      <a class="nav-link" href="#" style="text-transform: uppercase;font-size: 25px;color:
#fff;font-weight: 600;font-stretch: normal;font-style: normal;line-height: 1.31;letter-spacing: normal;padding:
0px 15px;"
        >NEWSCAFE</a>
    </div>
    <div>
      <button
        class="navbar-toggler"
        type="button"
        data-target="#navbarSupportedContent"
        aria-controls="navbarSupportedContent"
        aria-expanded="false"
        aria-label="Toggle navigation"
      >
        <span class="navbar-toggler-icon"></span>
      </button>
      <div
        class="navbar-collapse justify-content-center collapse"
        id="navbarSupportedContent"
      >
        <ul
          class="navbar-nav d-lg-flex justify-content-between align-items-center"
        >
          <li>
            <button class="navbar-close">
              <i class="mdi mdi-close"></i>
            </button>
          </li>
          <li class="nav-item active">
            <a class="nav-link" href="/home">Home</a>
          </li>
          {% for category in categories %}
          <li class="nav-item">
            <a class="nav-link" href="?query={{ category }}">{{ category }}</a>
          </li>
          {% endfor %}
        </ul>
      </div>
    </div>
  </div>
</div>
</nav>
</div>
</header>

```

```

<div class="content-wrapper">
  <div class="container">
    <div class="row" data-aos="fade-up">
      <div class="col-xl-8 stretch-card grid-margin">
        <div class="position-relative">
          

```

```

<div class="banner-content" style="position: relative;bottom: 30%;">
  <!-- <div class="badge badge-danger fs-12 font-weight-bold mb-3">

  </div> -->
  <h1 class="mb-2">{{ first_article.title }}</h1>
  <div class="fs-12">
    <span class="mr-2">Photo</span>
  </div>
</div>
</div>
</div>

```

```

<div class="col-xl-4 stretch-card grid-margin">
  <div class="card bg-dark text-white">
    <div class="card-body">
      <h2>Latest news</h2>

```

```

{% for data in three_articles %}
<div
  class="d-flex border-bottom-blue pt-3 pb-4 align-items-center justify-content-between"
>
  <div class="pr-3">
    <h5>{{ data.title }}</h5>
    <div class="fs-12">
      <span class="mr-2">Photo </span>
    </div>
  </div>
  <div class="rotate-img">
    
  </div>
</div>
{% endfor %}

```

```

{% endfor %}

```

```

</div>
</div>
</div>
</div>
<div class="row" data-aos="fade-up">
  <div class="col-lg-3 stretch-card grid-margin">
    <div class="card">
      <div class="card-body">
        <h2>Category</h2>
        <ul class="vertical-menu">
          {% for category in NewsCategory %}
            <li><a href="?query={{ category }}">{{ category }}</a></li>
          {% endfor %}
        </ul>
      </div>
    </div>
  </div>
  <div class="col-lg-9 stretch-card grid-margin">
    <div class="card">
      <div class="card-body">

```

```

{% for articles in data.articles %}
<div class="row">

```

```

        <div class="col-sm-4 grid-margin">
            <div class="position-relative">
                <div class="rotate-img">
                    
                </div>
                <div class="badge-positioned">
                    <span class="badge badge-danger font-weight-bold"
                        >Flash news</span>
                </div>
            </div>
        </div>
        <div class="col-sm-8 grid-margin">
            <h2 class="mb-2 font-weight-600">
                {{ articles.title }}
            </h2>
            <div class="fs-13 mb-2">
                <span class="mr-2">Photo </span>
            </div>
            <p class="mb-0">
                {{ articles.description }}
            </p>
        </div>
    </div>
    {% endfor %}

```

```

    </div>
</div>
</div>
</div>

<!-- partial:partials/_footer.html -->
<footer>
    <div class="footer-top">
        <div class="container">
            <div class="row">
                <div class="col-sm-5">
                    <a class="nav-link" href="#" style="text-transform: uppercase;font-size: 25px;color:
#fff;font-weight: 600;font-stretch: normal;font-style: normal;line-height: 1.31;letter-spacing: normal;padding:
0px 15px;"
                        >NEWSCAFE</a>
                    <h5 class="font-weight-normal mt-4 mb-5">
                        Newspaper is your news, entertainment, music fashion website. We
                        provide you with the latest news and top headlines straight from
                        the entertainment industry.
                    </h5>
                </div>
                <div class="col-sm-3">
                    <h3 class="font-weight-bold mb-3">CATEGORIES</h3>
                    {% for category in categories %}
                    <div class="footer-border-bottom pb-2">
                        <div class="d-flex justify-content-between align-items-center">
                            <a href="?query={{ category }}"><h5 class="mb-0 font-weight-600">{{ category }}</h5></a>
                            <div class="count">1</div>
                        </div>
                    </div>
                    {% endfor %}
                </div>
            </div>
        </div>
    </div>
</div>

```



```

        <input type="text" name="username" placeholder="Username" id="username" required>
        <label for="password">
            <i class="fas fa-lock"></i>
        </label>
        <input type="password" name="password" placeholder="Password" id="password" required>
        <div class="msg">{{ msg }}</div>
        <input type="submit" value="Login">
    </form>
</div>
{% endblock %}

```

register.html

```

{% extends 'auth/auth_layout.html' %}
{% block title %} {{ title }} {% endblock %}
{% block content%}

<div class="register">
    {% include "includes/alert.html" %}
    <h1>Register</h1>
    <div class="links">
        <a href="{{ url_for('login') }}">Login</a>
        <a href="{{ url_for('register') }}" class="active">Register</a>
    </div>
    <form action="{{ url_for('register') }}" method="post" autocomplete="off">
        <label for="username">
            <i class="fas fa-user"></i>
        </label>
        <input type="text" name="username" placeholder="Username" id="username" required>
        <label for="password">
            <i class="fas fa-lock"></i>
        </label>
        <input type="password" name="password" placeholder="Password" id="password" required>
        <label for="email">
            <i class="fas fa-envelope"></i>
        </label>
        <input type="email" name="email" placeholder="Email" id="email" required>
        <div class="msg">{{ msg }}</div>
        <input type="submit" value="Register">
    </form>
</div>
{% endblock %}

```


8. TESTING

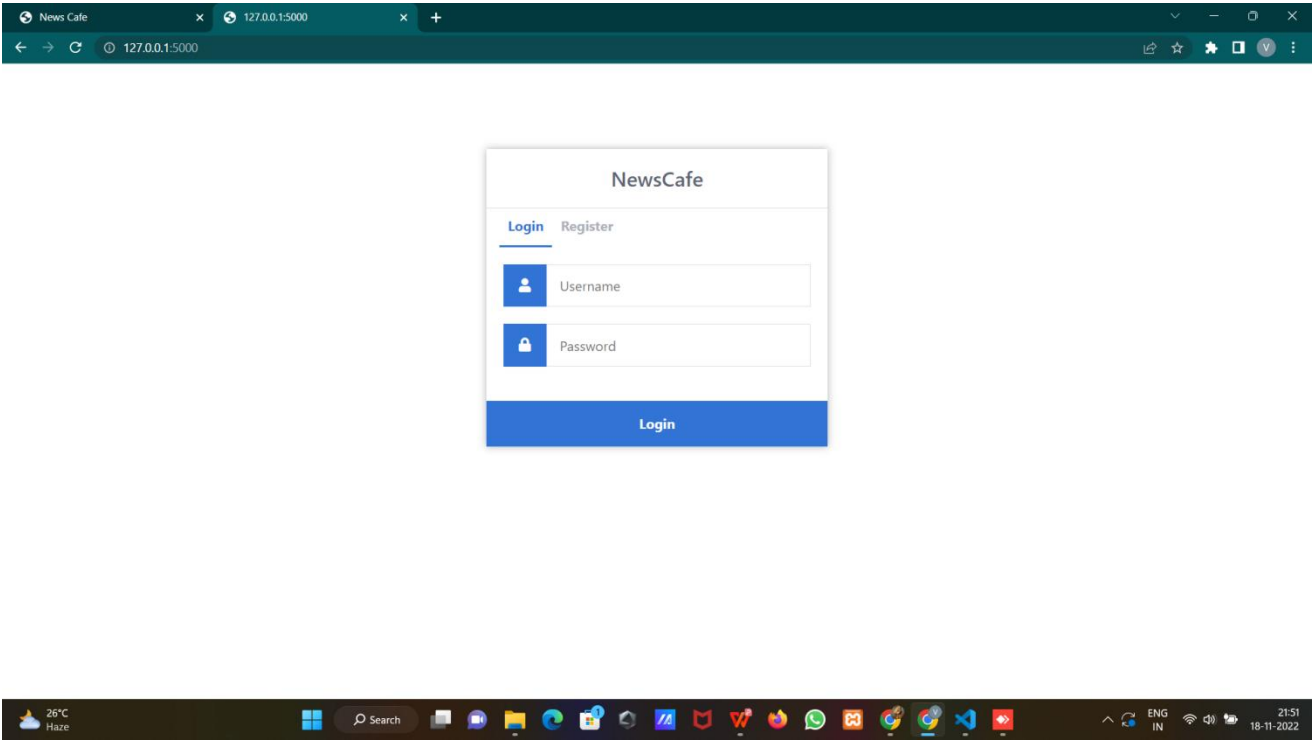
8.1 Test Cases

Test case	feature	component	Test scenario	Expected result	Actual result	status	comments	bug	Executed by
Register	functional	Login page	Verify user can see the register option	Can visible	Yes visible	Pass	Successful	-	Varun Krishna K B
Sign up	functional	Login page	Verify user can see the sign up option	Can visible	Yes visible	Pass	Successful	-	Shinu Mon S B
Fetch news	functional	Home page	Verify user can get the news	Can visible	Yes visible	Pass	Successful	-	Ram Kishore J
Types of news available in fetch news page	functional	Home page	Types of news available	Can visible	Yes visible	Pass	Successful	-	Srijanani C B

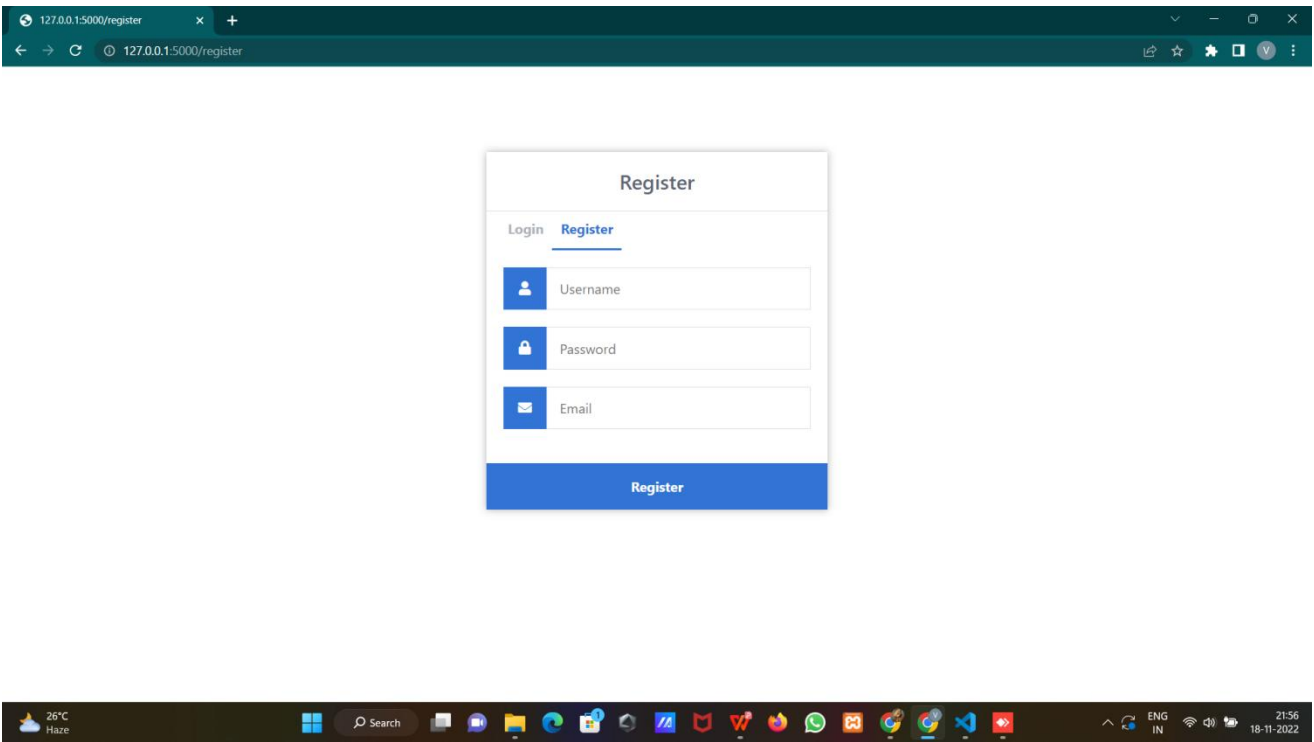
9. RESULTS

9.1 Performance Metrics

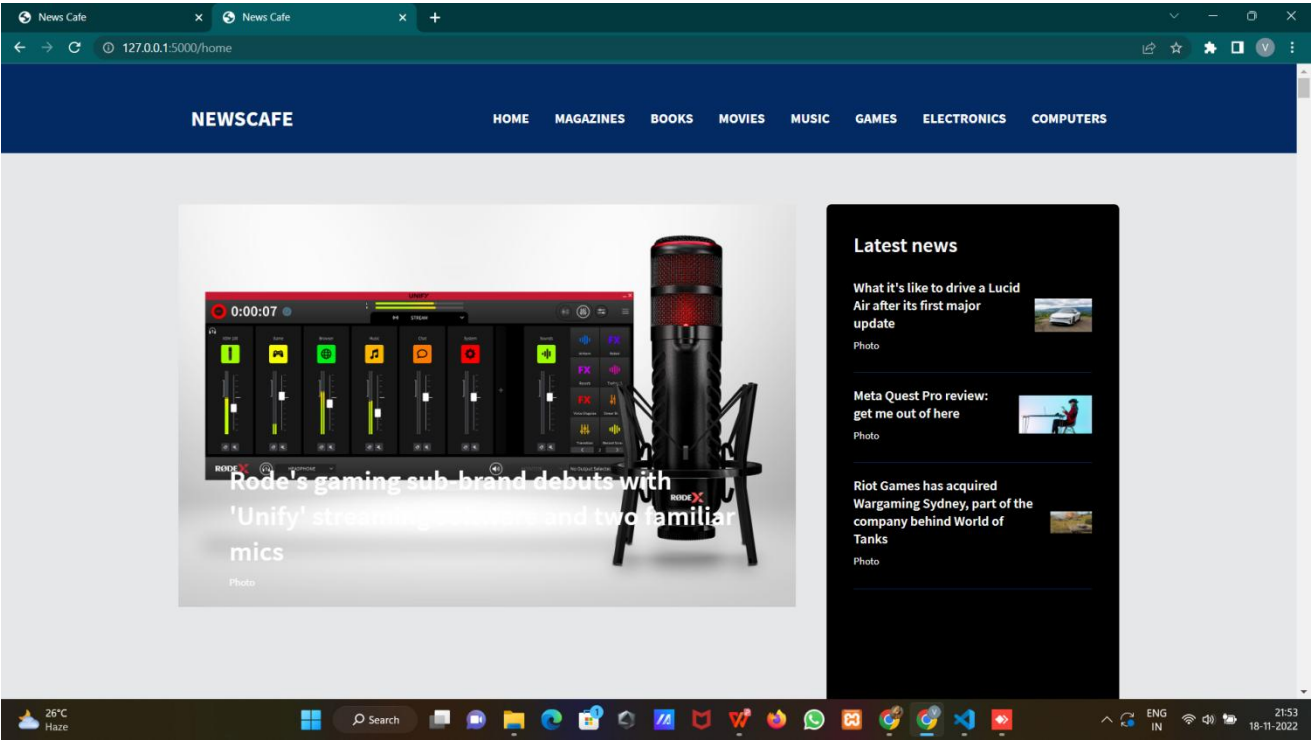
Login:



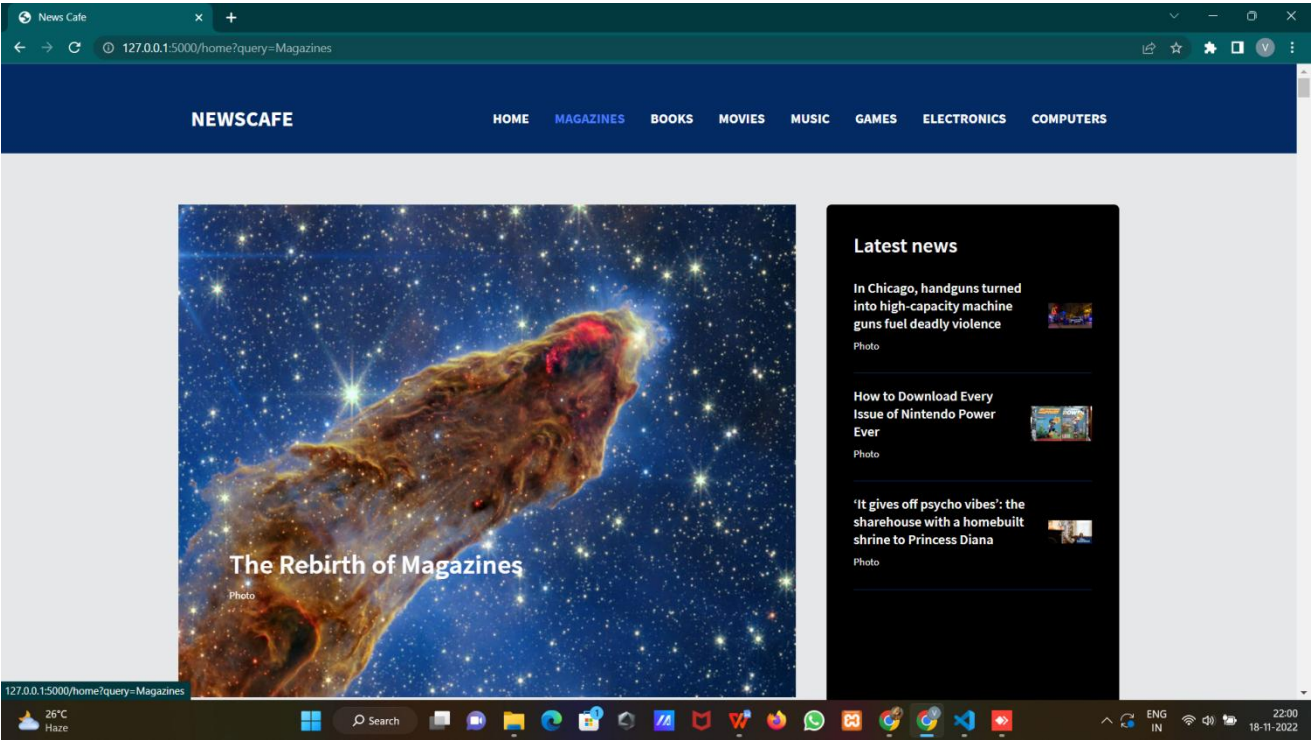
Register:



Home page:



Magazine:



10. ADVANTAGES & DISADVANTAGES

Advantages:-

- In this app news is already categorization.
- Easily accessible and portable.
- Better user experience.
- Apps help you convert visitors to loyal readers.
- This app helps you to get global news updates instantly.
- To explore and discover trending news and topics.
- News feeds for you based on your interest.

Disadvantages:-

- Sometimes the news gives brief information.
- Fake news may mislead the readers.

11. CONCLUSION

We had analyzed the need of news readers and created a feasible and friendly user interface. Our web app categorize every news for the ease of access to the users. User can choose the category they wish to know the updates. News we retrieved in the WebCafe is only from the reputed News Websites. In Future we will update the news in the form of videos too and user can interact by posting their comments.

12. FUTURE SCOPE

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.

13.APPENDIX

Source Code

GitHub

<https://github.com/IBM-EPBL/IBM-Project-39972-1660573394.git>

Project demo link

<https://youtu.be/JyatLRPYfGY>