

NEWS TRACKER APPLICATION

1. INTRODUCTION

1.1 PROJECT OVERVIEW:

News is one of the primary source of gaining information about the actions and events that happen all around. It may be an event that happened in the past, happening now or going to happen in the future. In the present days where there is a rapid increase in the development and adaptability of technologies throughout all the demographic of people, it is necessary to provide news in such a way that it is interconnected with the current technological trends. 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.... as on official websites.

Digital news continues to evolve, encouraged by a various innovations in recent time, from groundbreaking new technologies like virtual reality and automated reporting to experiments on social platforms that have altered campaign coverage. Topic detection and tracking is challenging topic in information retrieval technology that can be used in the text mining. In topic detection we finding the most important topics in a collection of news articles. Our approach combines a variety of learning techniques. Topic detection is an unsupervised task and topic tracking is supervised task. We are going to use agglomerative clustering to create

topic clusters and KNN classifier for tracking topics. To identify the serious news, we identify the clusters that fall into same category.

The corpus considered the news from a large number of internet news sites from across the world like Times of India and CNN, and of various subscription news wires. Thus the collection of different news from different source has same events. Newspapers normally receive the news from various news agencies with very few changes. Thus the corpus of news articles contains the same events written by different journalists which must be eliminated from the collection.

1.2 PURPOSE:

This will help the users to share news on various platforms such as Twitter and Face book. This will not only give an amazing user experience and also will also increase the views. A news application is a big interactive database that tells a news story. Think of it like you would any other piece of journalism. It just uses software instead of words and pictures.

LITERATURE SURVEY

2.1 EXISTING PROBLEM:

News break is a popular website to read ongoing and past news via the internet browsers. The website works by aggregating news from various sources and presents them in a likeable manner for the users to read it. The website also offers the ability for users to sign up to the son said website and record their progress, manage profiles, no. of news read, bookmark news, commenting on news ends and so on.

S. No	Paper Title	Author(s)	Month /Year	Method/Implementation technique(s)	Resource Link
1	Exploring mobile news reading interactions for news app personalisation	Marios Constantinides, John Dowell, David 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 newsapp 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 NewsTracker	Michael William McCracken	January, 2012	The paper is not a technical paper but is essentially a statistical paper on how should one conclude whether the data have come in stronger, weaker or as expected. This is based on the CitiGroup U.S Economic Surprise Index.	(PDF) Following the Fed with a NewsTracker (researchgate.net)
4	An End-to-end Weakly-supervised News Aggregation Framework	Xijin Tang, Xiaohui Huang	June, 2022	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	An End-to-end Weakly-supervised News Aggregation Framework Request PDF (researchgate.net)

				<p>manual tagging.</p> <p>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</p>	
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2.2 REFERENCES:

1. Kumar: Text Data Pre-processing and Dimensionality Reduction Techniques for Document Clustering Sri Sivani College of Engineering Sri Sivani College of Engineering, vol. 1, no. 5, pp. 1–6 (2012)
2. Saha, Ankan, and Vikas Sindhwani: Learning evolving and emerging topics in social media: a dynamic nmf approach with temporal regularization. In Proceedings of the fifth ACM international conference on Web search and data

mining, pp. 693-702. ACM (2012)

3. Acun, A. Ba, O. Ekin, M. İ. Saraç, and F. Can: Topic Tracking Using Chronological Term Ranking, vol. 25 (2011)

4. Pouliquen, R. Steinberger, C. Ignat, E. Käsper, and I. Temnikova: Multilingual and cross-lingual news topic tracking (1998)

5. Elkan: Text mining and topic models The multinomial distribution (2013)

6. Aksoy, F. Can, and S. Kocberber: Novelty Detection for Topic Tracking, vol. 63, no. 4, pp. 777–795 (2012)

7. Juha Makkonen : Semantic Classes in Topic Detection and Tracking (2009)

8. Cieri, D. Graff, M. Liberman, N. Martey, and S. Strassel: Large , Multilingual , Broadcast News Corpora For Cooperative Research in Topic Detection And Tracking : The TDT-2 and TDT-3 Corpus Efforts, no. January 1998 (1999)

9. Eichmann, David, Miguel Ruiz, Padmini Srinivasan, Nick Street, Chris Culy, and Filippo Menczer: A cluster-based approach to tracking, detection and segmentation of broadcast news. In Proceedings of the DARPA Broadcast News Workshop, pp. 69-76. (1999).

10. Perez-Tellez, Fernando, David Pinto, John Cardiff, and Paolo Rosso: Clustering weblogs on the basis of a topic detection method. In Mexican Conference on Pattern Recognition, pp. 342-351. Springer Berlin Heidelberg (2010)

2.3 PROBLEM STATEMENT DEFINITION:

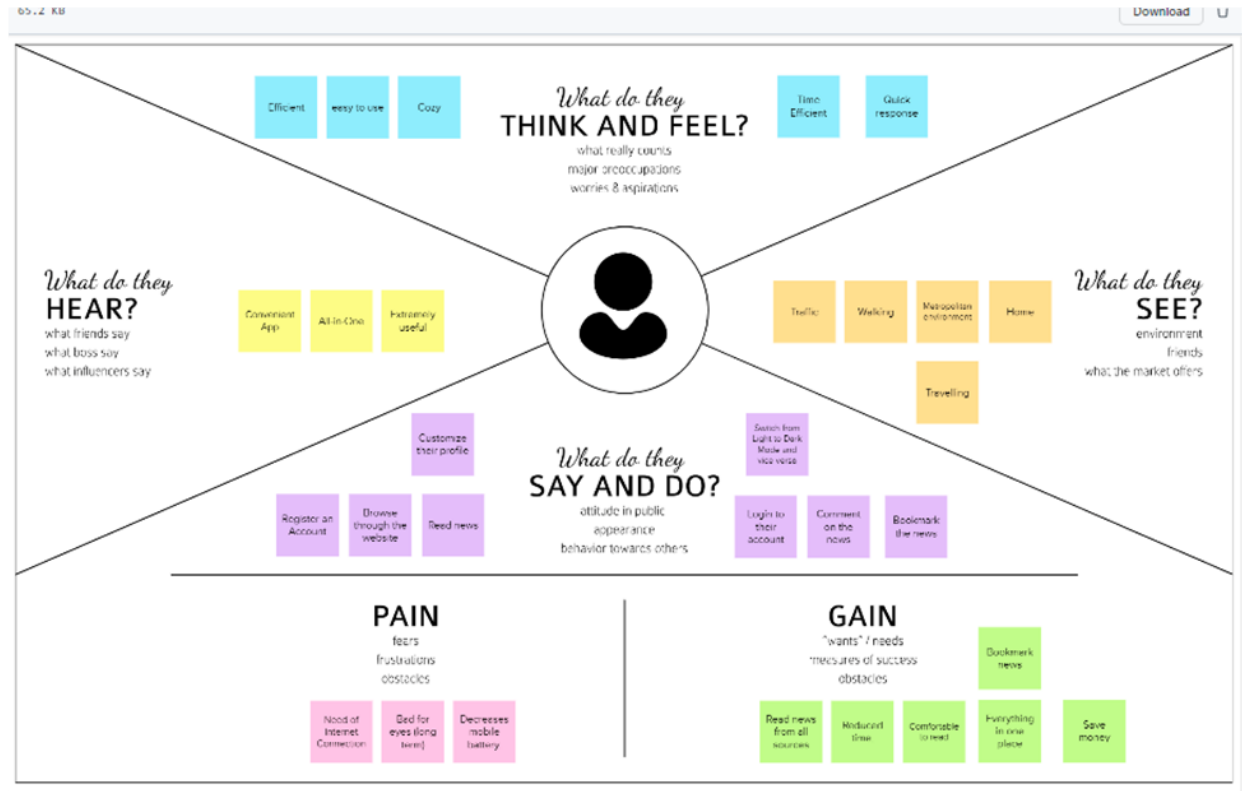
- Create a problem statement to understand your customer's point of view. The Customer Problem Statement template helps you focus on what matters to create experiences people will love.
- A well-articulated customer problem statement allows you and your team to find the ideal solution for the challenges your customers face. Throughout the process, you'll also be able to empathize with your customers, which helps you better understand how they perceive your product or service.

I am	Describe customer with 3-4 key characteristics - who are they?	Describe the customer and their attributes here
I'm trying to	List their outcome or "job" the care about - what are they trying to achieve?	List the thing they are trying to achieve here
but	Describe what problems or barriers stand in the way - what bothers them most?	Describe the problems or barriers that get in the way here
because	Enter the "root cause" of why the problem or barrier exists - what needs to be solved?	Describe the reason the problems or barriers exist
which makes me feel	Describe the emotions from the customer's point of view - how does it impact them emotionally?	Describe the emotions the result from experiencing the problems or barriers

I am	I'm trying to	but	Because	Which makes me feel
a traveler	book flights on my phone	it takes a long time	The website is not responsive and doesn't have a mobile version	Frustrated

IDEATION & PROPOSED SOLUTION

3.1 EMPATHY MAP CANVAS:




3.2 IDEATION & BRAINSTORMING:

- Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.
- 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.


Step-1: Team Gathering, Collaboration and Select the Problem Statement




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

How might we [your problem statement]?



Key rules of brainstorming

To run a smooth and productive session

 Stay in topic.	 Encourage wild ideas.
 Defer judgment.	 Listen to others.
 Go for volume.	 If possible, be visual.

STEP-2: BRAINSTORM, IDEA LISTING AND GROUPING

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!

Amar



Yuktesh



Person 3



Person 4



Person 5



Person 6



Person 7



Person 8



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 can break it up into smaller sub-groups.

🕒 20 minutes

Person 4

TIP

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

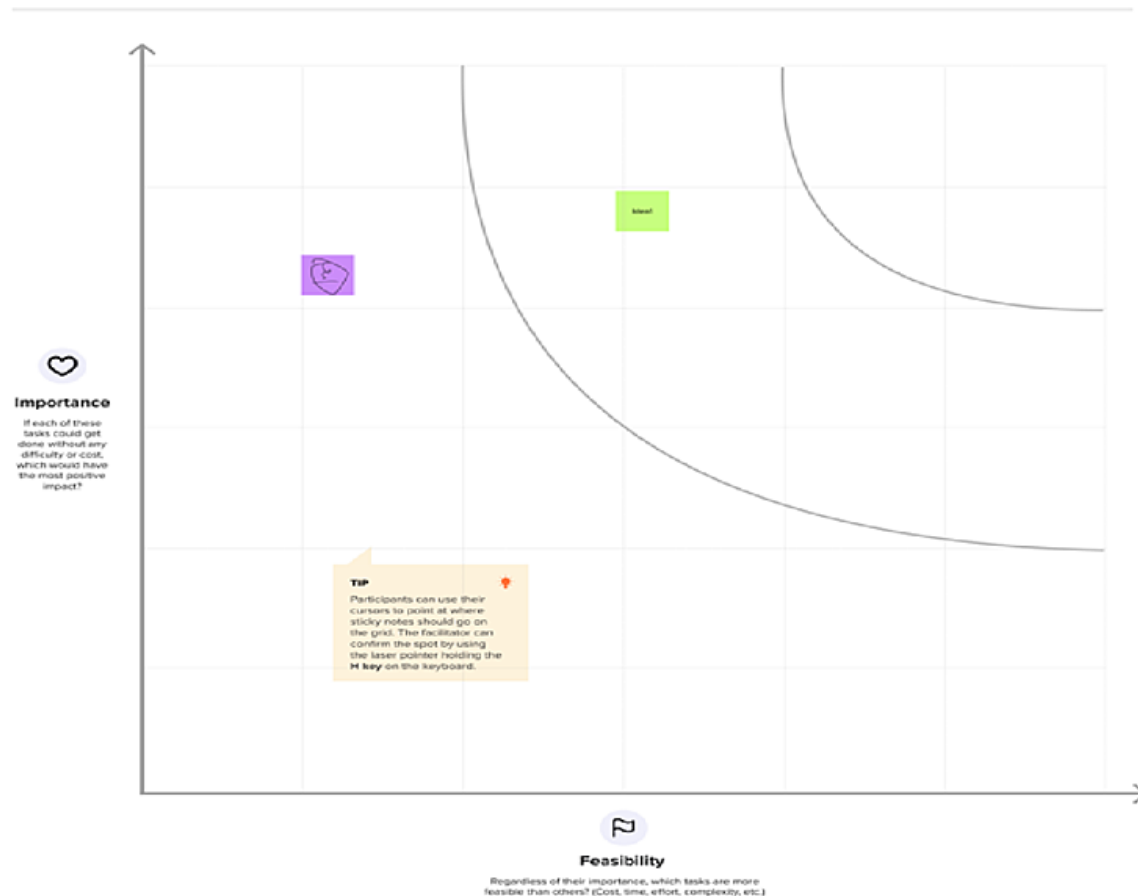
STEP-3: IDEA PRIORITIZATION

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:

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

S.N O.	PARAMETER	DESCRIPTION
1.	Problem Statement (Problem to be solved)	Forest fires are considered as one of the most widespread hazards in a forested landscape. They have a serious threat to forest and its flora and fauna. Unplanned and abrupt forest fires are a major cause of forest degradation, while a controlled fire to manage and check the spread of unwanted forest fires serves as the action to improve the forest. So therefore, we've to detect prevention measure which should be taken to identify the fire prone areas and the tools which needed to be developed to minimize the loss and as well as implement forest fire committee to work for the reduction of damage caused. A forest fire risk prediction algorithm, based on support vector machines, is presented. The algorithm depends on previous weather conditions in order to predict the fire hazard level of a day.

2.	Idea / Solution description	<p>Our solution aims at collecting the vast range of dataset to test and train the model regularly by using CNN where the system can detect immediately if any ignition of fire is found, where the video can be surveyed by satellite. Then Cloudant DB is brought to use where the large amount of data is stored and fetched which acts as a server. Open CV acts as a tool for processing videos which are captured. To send alerts to forest committee Twilio API is used where alerts are passed on detection. Watson Assistant also a chatbot tool which can help you monitor if any guide is needed.</p>
3.	Novelty / Uniqueness	<p>Existing system uses electronic sensors to detect forest fire and smoke. The change in temperature indicates the presence of forest fire and smoke in a region which can be detected by the sensors using radiation heat. As forests are in remote area it's difficult for installation and maintenance of sensors. Our proposed system depends on using AI to make it cheaper and easier for the forest management. Accuracy and timely prediction using AI, CNN and API made it possible.</p>
4.	Social Impact / Customer Satisfaction	<p>Forest fires are dangerous for the existence of life as they carry wildlife and natural resources which gives life to various living bodies. Thus, fires are occurred expectedly or unexpectedly which has to be prevented as earlier as we can. Therefore, forest management should be active enough to be aware and keeping an eye to</p>

		check the forest fields regularly. As, what we save, saves us should be the
		social awareness to be brought to the people. The proposed solution meets the customer satisfaction needs as it provides immediate alerts as soon as any fire is spotted which helps the forest committee to take actions sooner.
5.	Business Model (Revenue Model)	A working model which gets the live captures from satellite needed to be implemented, where the camera can monitor continuously the forest area and a working trained model which can automatically show up if any spark, fire or smoke is detected. The model has to be trained widely using large datasets which can be fed into databases and feedbacks can be retrieved. Thus, video processing is the main motive for detection of forest fires, then forest management team should be present to monitor the live video and to get ready to prevent fire from further extension if any alert is produced from the trained model. Thus, this proposed model can be implanted at fire-prone area to provide quick responses and practice prevention methods.

6.	Scalability of the Solution	<p>The device should be compatible with a minimum of 4GB</p> <p>RAM to support usage of various software like Anaconda Navigator for python and data science. Testing and training undergo using latest technology like Tensor Flow and Keras. Importantly satellite needed to be accessed repeatedly via camera and the data generated have to be processed by Open CV and further it should be connected with a alerting system and a messaging interface to send notifications.</p>
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3.4 PROBLEM SOLUTION FIT:

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) Who is your customer? i.e. working parents of 0-5 y.o. kids The forest resources which plays a vital role in sustaining lives on the earth, therefore to preserve them from unexpected outbreak of fire and smoke. The forest management team do need this device in fire prone areas.	6. CUSTOMER CONSTRAINTS 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. Climatic changes and the greenhouses gases are the reasons behind the destruction. Along with this the human factor to greedily use resources also play a vital reason for the forest fires.	5. AVAILABLE SOLUTIONS 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 Existing systems uses optical sensors for detecting forest fires. As fire is detected the sensors sends signal to the office of forest management. Among with that satellites are used to detect IR rays spotted in forest lands.	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. The main problem that exists is weather and climate by releasing large number of carbon dioxide, carbon monoxide and fine particulate matter into the atmosphere. Resulting, air pollution can cause varying range of health issues, including respiratory and cardiovascular problems.	9. PROBLEM ROOT CAUSE 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 reasons possible are: 1. Due to natural causes- Lightning 2. Man-made causes- Naked flame, cigarette, electric spark Thus, <u>continous</u> care and monitoring is needed to preservenatural resources to save lives.	7. 3 HAV OU 1 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) When fire is detected the system which is implemented to monitor the forests sets the alarm to ring, that is it gives the signal through which fire management team and the forest committee tries to call off the fire. Thus, the aim is to recognise the fire as early as possible to prevent spread of fire which will cause further damage and it'll become difficult to control.	

Activate Windows
Go to PC settings to

Identify strong TR & EM	3. TRIGGERS TR <small>What triggers customers to act? (e.g. seeing their neighbour use useless panels, reading about a more efficient solution in the news.</small> The unconscious behaviour towards burned cigarette left, chances of leaving the campfire remained burnt and it can cause spread due to presence of vast dry grass spread across and electric supply being disrupted.	10. YOUR SOLUTION SU <small>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.</small> <small>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.</small> To minimize these losses, we have proposed a solution to detect early detection of forest fires by using CCTV camera surveillance, which can detect fire in indoor and outdoor activities. Thus instant alerts has to be sent to the forest management office so that they can take further actions to disrupt the damage caused by the fire.	8. CHANNELS of BEHAVIOUR CH <small>ONLINE What kind of actions do customers take online? Extract online channels from it?</small> Type your text <small>OFFLINE What kind of actions do customers take offline? Extract offline channels from it and use them for customer development.</small>	Identify strong TR & EM
	4. EMOTIONS: BEFORE / AFTER EM <small>How do customers feel when they face a problem or a job and afterwards? (e.g. lost, insecure => confident, in control - use it in your communication strategy & design.</small> Wildfires can cause lot of stress since the factor that influence their direction and intensity are unpredictable and can change at anytime. People who have lived through wildfires can face dramatic mood swings, anxiety and mood-swings.		Online Detection: Thus the chatbot or the API can connect through internet to feed you with the current status of the forest. Offline Detection: Thus, the forest management can send notice to the nearby residential areas or the media can bring the awareness through news, radio.	

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 Form Registration through Gmail Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP

4.2 NON-FUNCTIONAL REQUIREMENT:

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

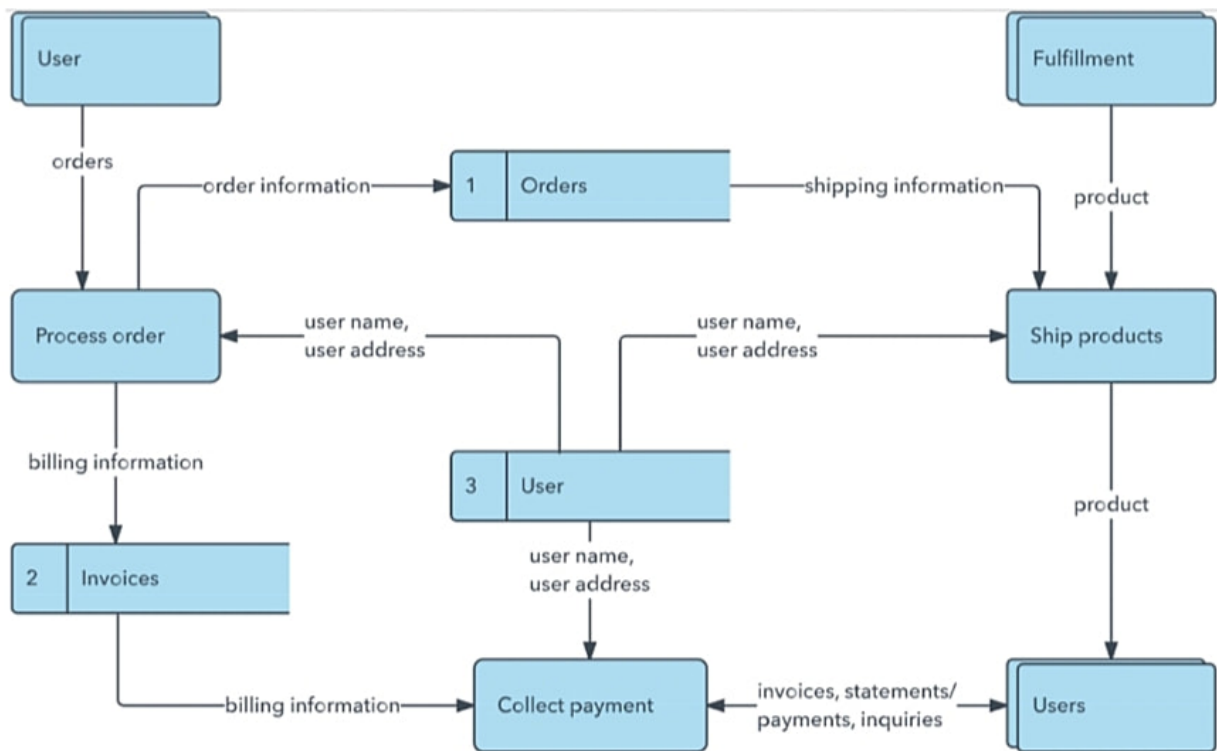
FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Definition of Usability. Usability is a quality attribute that assesses how easy user interfaces are to use . The word "usability" also refers to methods for improving ease-of-use during the design process
NFR-2	Security	Overall, security officers are tasked with securing the premises and personnel by staying on patrol, monitoring surveillance equipment, performing building inspections, guarding entry points, and verifying visitors.
NFR-3	Reliability	Reliability refers to how consistently a method measures something . If the same result can be consistently achieved by using the same methods under the same circumstances, the measurement is considered reliable
NFR-4	Performance	Performance is defined as acting, singing, playing an instrument or otherwise showing a craft to a group of people. An example of performance is a symphony playing at a town hall . The definition of performance is how effective something or someone is at doing a good job

NFR-5	Availability	The definition of availability is whether someone or something can be accessed or used . An example of availability is when a classmate can meet to discuss a project on a certain date.
NFR-6	Scalability	Scalability is the measure of a system's ability to increase or decrease in performance and cost in response to changes in application and system processing demands.

5. PROJECT DESIGN

5.1 DATA FLOW DIAGRAMS:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

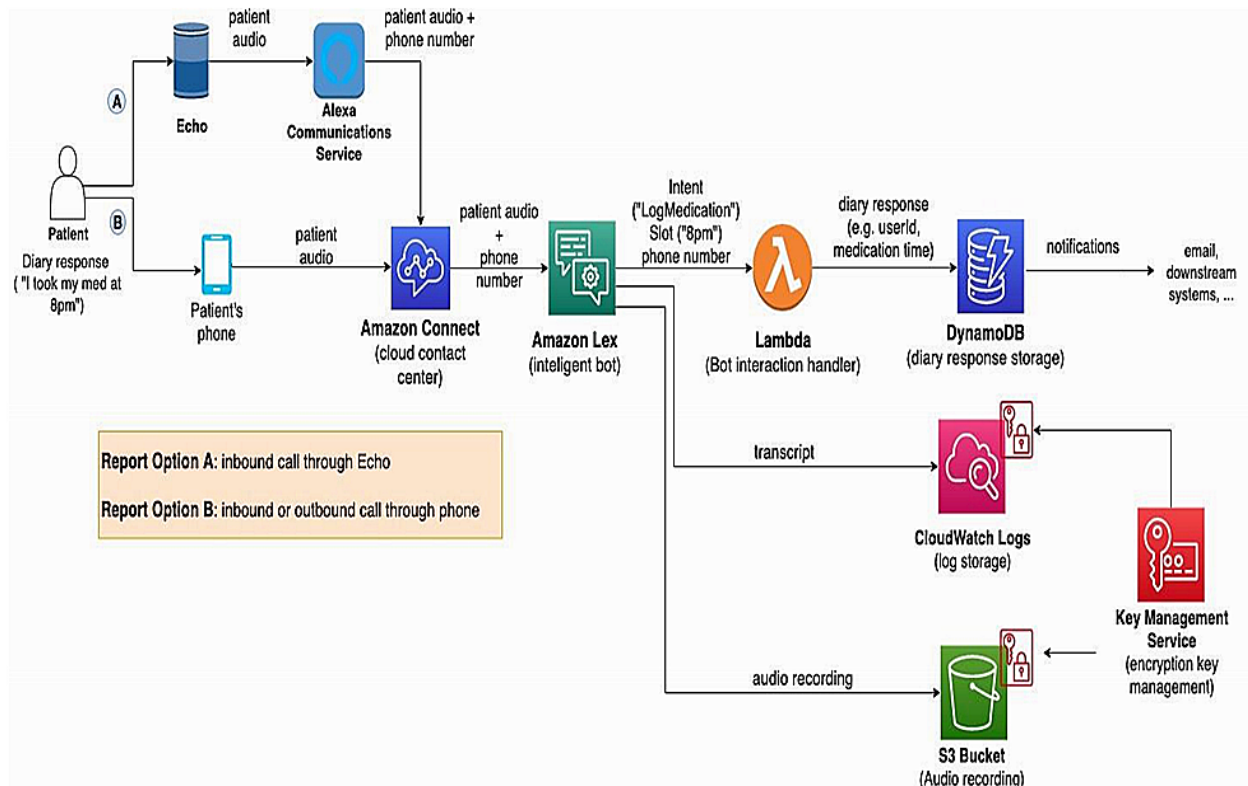


5.2 SOLUTION & TECHNICAL ARCHITECTURE:

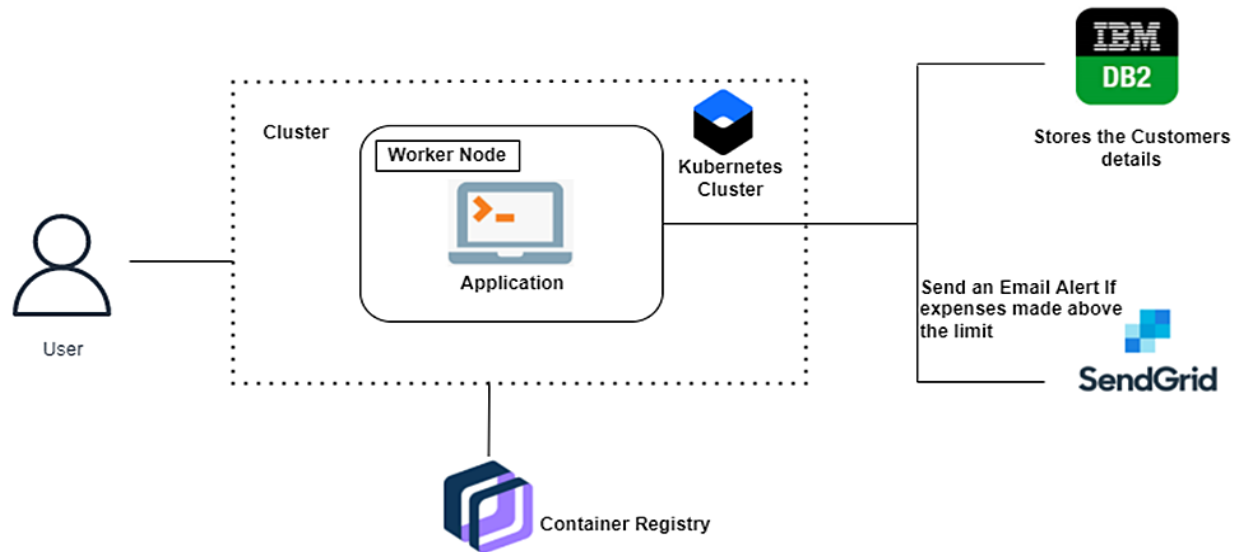
SOLUTION ARCHITECTURE:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

1. Find the best tech solution to solve existing business problems.
2. Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
3. Define features, development phases, and solution requirements.
4. Provide specifications according to which the solution is defined, managed, and delivered.



TECHNICAL ARCHITECTURE:



5.3 USER STORIES:

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

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail		Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password		High	Sprint-1
	Dashboard					

6. PROJECT PLANNING & SCHEDULING

6.1 SPRINT PLANNING & ESTIMATION:

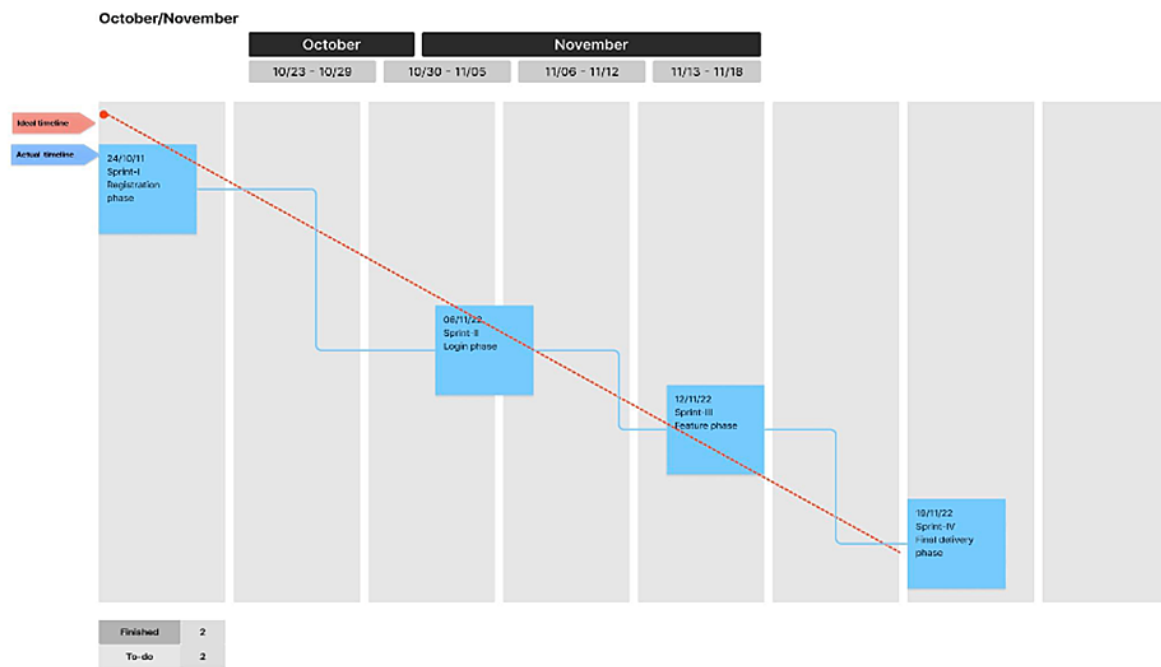
Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story points	Priority	Team Members
Sprint - 1	Registration	USN-1	As a user, I can register for the application by entering my email,password, and confirming my password.	20	High	Prathap. S
Sprint- 2	Login	USN-2	The user can see the news according to their interest	20	High	Tony Wilson. I
Sprint - 3	Features	USN-3	The application will keep track of the news topics that user is interested mostly.	20	Low	Yuvaraj. J
Sprint -4	Final Delivery	USN-4	The app will customize the news according to the user interest from the data collected earlier.	20	Medium	Raman. R

6.2 SPRINT DELIVERY SCHEDULE:

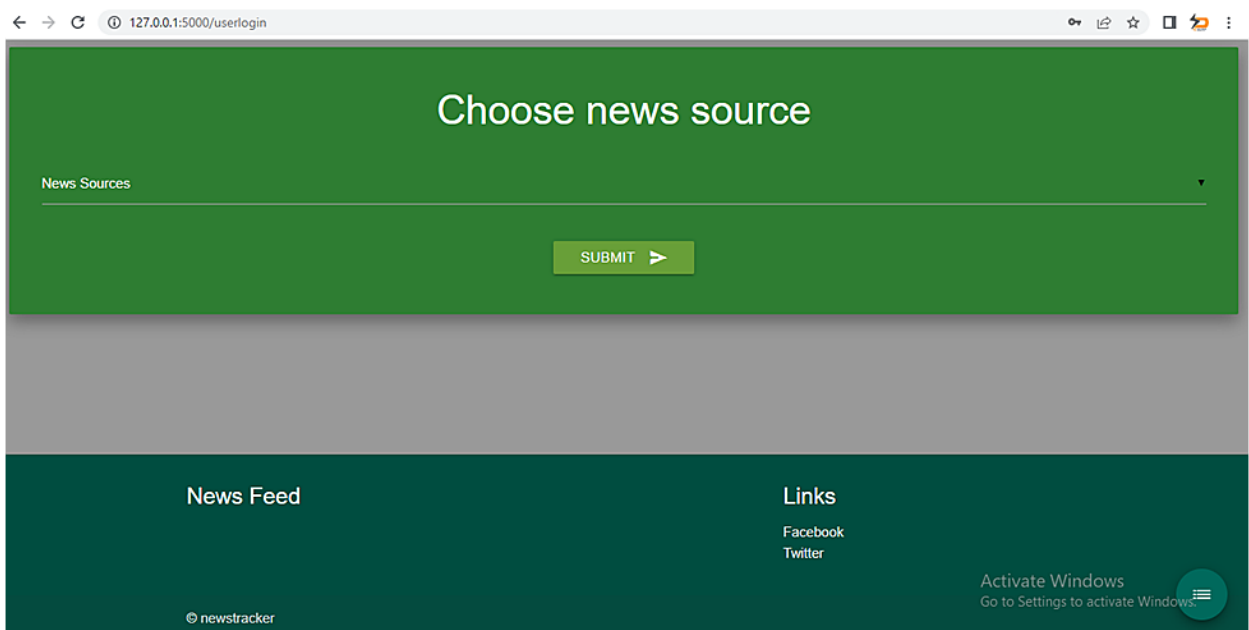
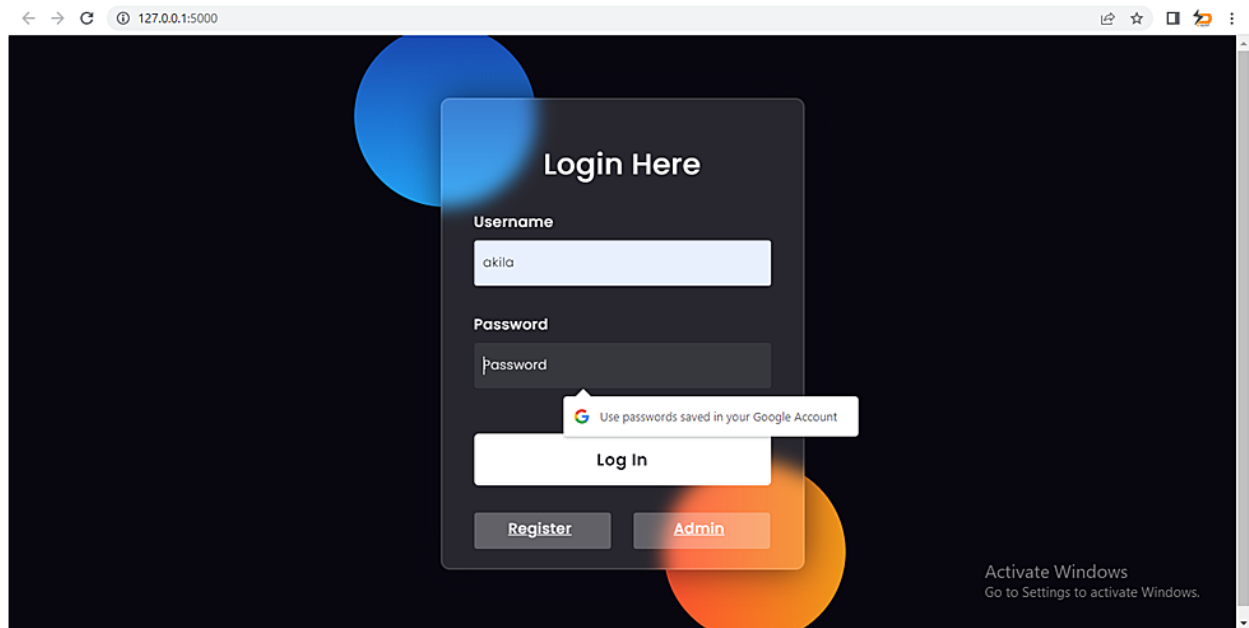
Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	25 Oct 2022	31 Oct 2022	20	31 Oct 2022
Sprint-2	20	6 Days	01 Nov 2022	06 Nov 2022	18	06 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	13 Nov 2022	20	13 Nov 2022
Sprint-4	20	6 Days	13 Nov 2022	19 Nov 2022	19	19 Nov 2022

6.3 Reports from JIRA:

Burndown Chart:



7 CODING & SOLUTIONING:



8 TESTING

8. SYSTEM TESTING

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, sub-assemblies, assemblies and/or a finished product. It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of test. Each test type addresses a specific testing requirement.

8.1 TYPES OF TESTS

8.1.1 Unit testing

Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. All decision branches and internal code flow should be validated. It is the testing of individual software units of the application .it is done after the completion of an individual unit before integration. This is a structural testing, that relies on knowledge of its construction and is invasive. Unit tests perform basic tests at component level and test a specific business process, application, and/or system configuration. Unit tests ensure that each unique path of a business process performs accurately to the documented specifications and contains clearly defined inputs and expected results.

8.1.2 Integration testing

Integration tests are designed to test integrated software components to determine if they actually run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. Integration tests demonstrate that although the components were individually satisfaction, as shown by successfully unit testing, the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components.

8.1.3 Functional test

Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation, and user manuals.

Functional testing is centered on the following items:

Valid Input : identified classes of valid input must be accepted.

Invalid Input : identified classes of invalid input must be rejected.

Functions : identified functions must be exercised.

Output : identified classes of application outputs must be exercised.

Systems/Procedures: interfacing systems or procedures must be invoked.

Organization and preparation of functional tests is focused on requirements, key functions, or special test cases. In addition, systematic coverage pertaining to identify Business process flows; data fields, predefined processes, and successive processes must be considered for testing. Before functional testing is complete,

additional tests are identified and the effective value of current tests is determined.

8.1.4 System Test

System testing ensures that the entire integrated software system meets requirements. It tests a configuration to ensure known and predictable results. An example of system testing is the configuration-oriented system integration test. System testing is based on process descriptions and flows, emphasizing pre-driven process links and integration points.

8.1.5 White Box Testing

White Box Testing is a testing in which the software tester has knowledge of the inner workings, structure and language of the software, or at least its purpose. It is used to test areas that cannot be reached from a black box level.

8.1.6 Black Box Testing

Black Box Testing is testing the software without any knowledge of the inner workings, structure or language of the module being tested. Black box tests, as most other kinds of tests, must be written from a definitive source document, such as specification or requirements document, such as specification or requirements document. It is a testing in which the software under test is treated, as a black box .you cannot “see” into it. The test provides inputs and responds to outputs without considering how the software works.

8.2 Unit Testing:

Unit testing is usually conducted as part of a combined code and unit test phase of the software lifecycle, although it is not uncommon for coding and unit

testing to be conducted as two distinct phases.

8.2.1 Test strategy and approach

Field testing will be performed manually and functional tests will be written in detail.

8.2.2 Test objectives

- All field entries must work properly.
- Pages must be activated from the identified link.
- The entry screen, messages and responses must not be delayed.

8.2.3 Features to be tested

- Verify that the entries are of the correct format
- No duplicate entries should be allowed
- All links should take the user to the correct page.

8.3 Integration Testing

Software integration testing is the incremental integration testing of two or more integrated software components on a single platform to produce failures caused by interface defects. The task of the integration test is to check that components or software applications, e.g. components in a software system or – one step up – software applications at the company level – interact without error.

Test Results: All the test cases mentioned above passed successfully. No defects encountered.

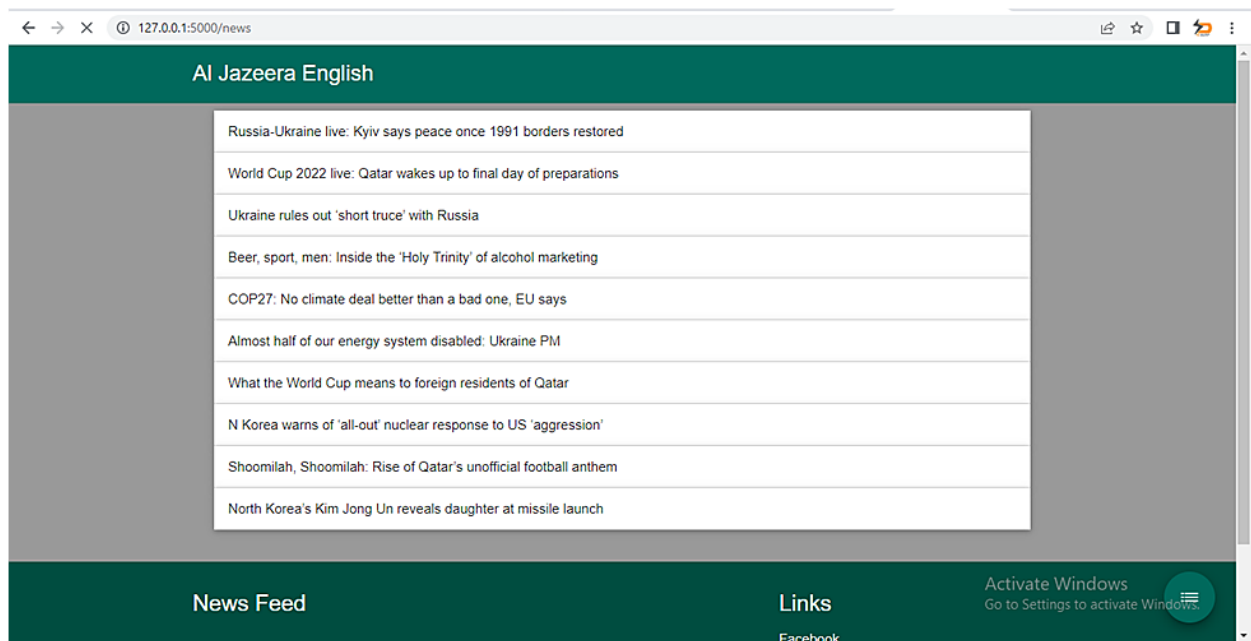
8.4 Acceptance Testing

User Acceptance Testing is a critical phase of any project and requires significant participation by the end user. It also ensures that the system meets the

functional requirements.

Test Results: All the test cases mentioned above passed successfully. No defects encountered.

9 RESULTS



10 ADVANTAGES & DISADVANTAGES

ADVANTAGES:

- Own Your Channels.
- Better User Experience.
- Higher Engagement.
- Push notifications.
- Revenue Opportunities.
- App Store Presence.

DISADVANTAGES:

- It CAN BE limited by time.
- It may rely too heavily on personalities, emotions, opinions... not facts.
- It can shortchange complex stories or avoid them altogether.

11 CONCLUSIONS

At the end conclusion of this paper is that, we have combined machine learning approaches. We would be applying system for sports domain, if time permits would check our approach on politics, entertainment, science and discovery, etc. We have used Agglomerative hierarchical clustering using average distance measure for topic detection and K-nearest neighbor classifier for topic Tracking. We select K Nearest Neighbor classifier for tracking because it gives better performance. As well as it makes the fewest assumptions of about terms, stories and efficient decisions surface for the tracking task. For future work we will detect and track broadcast news.

12 FUTURE SCOPES

We select K Nearest Neighbor classifier for tracking because it gives better performance. As well as it makes the fewest assumptions of about terms, stories and efficient decisions surface for the tracking task. For future work we will detect and track broadcast news.

13 APPENDIXES:

Source code:

```
import news
```

```
from flask import Flask, render_template, request, jsonify, session
```

```
import datetime
```

```
import re
```

```
import ibm_db
```

```
import pandas
```

```
import ibm_db_dbi
```

```
from sqlalchemy import create_engine
```

```
engine = create_engine('sqlite://',
```

```
    echo = False)
```

```
dsn_hostname = "19af6446-6171-4641-8aba-  
9dcff8e1b6ff.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud"
```

```
dsn_uid = "wdn20062"
```

```
dsn_pwd = "2eFT80IyOuJQE3zV"
```

```
dsn_driver = "{IBM DB2 ODBC DRIVER}"
```

```
dsn_database = "bludb"
```

```
dsn_port = "30699"
```

```
dsn_protocol = "TCPIP"
```

```
dsn_security = "SSL"
```

```
dsn = (
```

```
    "DRIVER={0};"
```

```
    "DATABASE={1};"
```

```
    "HOSTNAME={2};"
```

```
"PORT={3};"
```

```
"PROTOCOL={4};"
```

```
"UID={5};"
```

```
"PWD={6};"
```

```
"SECURITY={7};" ).format(dsn_driver, dsn_database, dsn_hostname, dsn_port,  
dsn_protocol, dsn_uid, dsn_pwd,dsn_security)
```

```
try:
```

```
conn = ibm_db.connect(dsn, "", "")
```

```
print ("Connected to database: ", dsn_database, "as user: ", dsn_uid, "on host: ",  
dsn_hostname)
```

```
except:
```

```
print ("Unable to connect: ", ibm_db.conn_errormsg() )
```

```
app = Flask(__name__)

app.config.from_object(__name__)

app.config['SECRET_KEY'] = '7d441f27d441f27567d441f2b6176a'
```

```
@app.route("/")
```

```
def homepage():
```

```
    return render_template('UserLogin.html')
```

```
@app.route("/alogin")
```

```
def alogin():
```

```
    return render_template('AdminLogin.html')
```

```
@app.route("/NewUser")
```

```
def NewUser():
```

```
return render_template('NewUser.html')
```

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

```
def RNewUser():
```

```
    if request.method == 'POST':
```

```
        name1 = request.form['name']
```

```
        gender1 = request.form['gender']
```

```
        Age = request.form['age']
```

```
        email = request.form['email']
```

```
        address = request.form['address']
```

```
        pnumber = request.form['phone']
```

```
        unname = request.form['uname']
```

```
        password = request.form['psw']
```

```
        conn = ibm_db.connect(dsn, "", "")
```

```
        insertQuery = "INSERT INTO regtb VALUES ('" + name1 + "'," + gender1 +
```

```
"," + Age + "," + email + "," + pnumber + "," + address + "," + uname + "," +  
password + ")"
```

```
insert_table = ibm_db.exec_immediate (conn, insertQuery)
```

```
print(insert_table)
```

```
return render_template('userlogin.html')
```

```
@app.route("/AdminHome")
```

```
def AdminHome():
```

```
conn = ibm_db.connect(dsn, "", "")
```

```
pd_conn = ibm_db_dbi.Connection(conn)
```

```
selectQuery = "SELECT * from regtb "
```

```
dataframe = pandas.read_sql(selectQuery, pd_conn)
```

```
dataframe.to_sql('Employee_Data',
```

```
con=engine,
```

```
if_exists='append')
```

```
# run a sql query
```

```
data = engine.execute("SELECT * FROM Employee_Data").fetchall()
```

```
return render_template('AdminHome.html', data=data)
```

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

```
def userlogin():
```

```
    error = None
```

```
    if request.method == 'POST':
```

```
        username = request.form['uname']
```

```
        password = request.form['password']
```

```
        session['uname'] = request.form['uname']
```

```
conn = ibm_db.connect(dsn, "", "")
```

```
pd_conn = ibm_db_dbi.Connection(conn)
```

```
selectQuery = "SELECT * from regtb where uname='" + username + "' and
```



```
password="" + password + ""
```

```
dataframe = pandas.read_sql(selectQuery, pd_conn)
```

```
if dataframe.empty:
```

```
    data1 = 'Username or Password is wrong'
```

```
    return render_template('goback.html', data=data1)
```

```
else:
```

```
    print("Login")
```

```
    selectQuery = "SELECT * from regtb where uname="" + username + "" and  
password="" + password + ""
```

```
    dataframe = pandas.read_sql(selectQuery, pd_conn)
```

```
dataframe.to_sql('Employee_Data',
```

```
    con=engine,
```

```
    if_exists='append')
```

```
# run a sql query

print(engine.execute("SELECT * FROM Employee_Data").fetchall())


return render_template('index.html', data=engine.execute("SELECT *
FROM Employee_Data").fetchall())


@app.route("/adminlogin", methods=['GET', 'POST'])

def adminlogin():

    error = None

    if request.method == 'POST':

        username = request.form['uname']

        password = request.form['password']


        conn = ibm_db.connect(dsn, "", "")

        pd_conn = ibm_db_dbi.Connection(conn)

        selectQuery = "SELECT * from admintb where USERNAME=" + username
```

```
+ "" and PASSWORD="" + password + ""
```

```
dataframe = pandas.read_sql(selectQuery, pd_conn)
```

```
if dataframe.empty:
```

```
    data1 = 'Username or Password is wrong'
```

```
    return render_template('goback.html', data=data1)
```

```
else:
```

```
    print("Login")
```

```
    selectQuery = "SELECT * from regtb "
```

```
    dataframe = pandas.read_sql(selectQuery, pd_conn)
```

```
    dataframe.to_sql('Employee_Data', con=engine,if_exists='append')
```

```
    # run a sql query
```

```
    print(engine.execute("SELECT * FROM Employee_Data").fetchall())
```

```
    return render_template('AdminHome.html', data=engine.execute("SELECT *  
FROM Employee_Data").fetchall())
```

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

def submit_data():

    vals = request.form['news-source']

    id = vals.split('_')[0]

    name = vals.split('_')[1]

    articles = news.main(id)

    print(articles)

    return render_template('news.html', articles=articles, name=name)


if __name__ == '__main__':

    app.run(host="0.0.0.0")
```

html

```
{% extends 'layout.html' %} {% block body %}
```

```
<div class="row">
```

```
    <div class="center col s12">
```

```
        <div class="card green darken-3 hoverable">
```

```
            <div class="card-content white-text">
```

```
                <span class="center card-title"><h3>Choose news source</h3></span>
```

```
                <div class="row">
```

```
                    <form action="/news" method="POST" class="col s12">
```

```
                        <div class="row">
```

```
                            <div class="input-field center">
```

```
                                <select id="news-source" name="news-source" required=""  
class="initialized">
```

```
                                    <option value="" disabled selected>News Sources</option>
```

```
                                        <option value="abc-news-au_ABC News (AU)">ABC  
News (AU)</option>
```

```
                                            <option value="al-jazeera-english_Al Jazeera English">Al  
Jazeera English</option>
```

<option value="ars-technica_Ars Technica">Ars
Technica</option>

<option value="associated-press_Associated
Press">Associated Press</option>

<option value="bbc-news_BBC News">BBC
News</option>

<option value="bbc-sport_BBC Sport">BBC
Sport</option>

<option value="bild_Bild">Bild</option>

<option
value="bloomberg_Bloomberg">Bloomberg</option>

<option value="breitbart-news_Breitbart News">Breitbart
News</option>

<option value="business-insider_Business
Insider">Business Insider</option>

<option value="business-insider-uk_Business Insider
(UK)">Business Insider (UK)

</option>

<option value="buzzfeed_Buzzfeed">Buzzfeed</option>

<option value="cnbc_CNBC">CNBC</option>

<option value="cnn_CNN">CNN</option>

<option value="daily-mail_Daily Mail">Daily
Mail</option>

<option value="der-tagesspiegel_Der Tagesspiegel">Der
Tagesspiegel</option>

<option value="die-zeit_Die Zeit">Die Zeit</option>

<option value="engadget_Engadget">Engadget</option>

<option value="entertainment-weekly_Entertainment
Weekly">Entertainment Weekly</option>

<option value="espn_ESPN">ESPN</option>

<option value="espn-cric-info_ESPN Cric Info">ESPN Cric
Info</option>

<option value="financial-times_Financial Times">Financial
Times</option>

<option value="focus_Focus">Focus</option>

<option value="football-italia_Football Italia">Football
Italia</option>

<option value="fortune_Fortune">Fortune</option>

<option value="four-four-
two_FourFourTwo">FourFourTwo</option>

<option value="fox-sports_Fox Sports">Fox
Sports</option>

<option value="google-news_Google News">Google
News</option>

<option
value="gruenderszene_Gruenderszene">Gruenderszene</option>

<option value="hacker-news_Hacker News">Hacker
News</option>

<option
value="handelsblatt_Handelsblatt">Handelsblatt</option>

<option value="ign_IGN">IGN</option>

<option
value="independent_Independent">Independent</option>

<option value="mashable_Mashable">Mashable</option>

<option value="metro_Metro">Metro</option>

<option value="mirror_Mirror">Mirror</option>

<option value="mtv-news_MTV News">MTV
News</option>

<option value="mtv-news-uk_MTV News (UK)">MTV
News (UK)</option>

<option value="national-geographic_National
Geographic">National Geographic</option>

<option value="new-scientist_New Scientist">New
Scientist</option>

<option
value="newsweek_Newsweek">Newsweek</option>

<option value="new-york-magazine_New York
Magazine">New York Magazine</option>

<option value="nfl-news_NFL News">NFL News</option>

<option value="polygon_Polygon">Polygon</option>

<option value="recode_Recode">Recode</option>

<option value="reddit-r-all_Reddit /r/all">Reddit
/r/all</option>

<option value="reuters_Reuters">Reuters</option>

<option value="spiegel-online_Spiegel Online">Spiegel
Online</option>

<option value="t3n_T3n">T3n</option>

<option value="talksport_TalkSport">TalkSport</option>

<option
value="techcrunch_TechCrunch">TechCrunch</option>

<option value="techradar_TechRadar">TechRadar</option>

<option value="the-economist_The Economist">The Economist</option>

<option value="the-guardian-au_The Guardian (AU)">The Guardian (AU)</option>

<option value="the-guardian-uk_The Guardian (UK)">The Guardian (UK)</option>

<option value="the-hindu_The Hindu">The Hindu</option>

<option value="the-huffington-post_The Huffington Post">The Huffington Post</option>

<option value="the-lad-bible_The Lad Bible">The Lad Bible</option>

<option value="the-new-york-times_The New York Times">The New York Times</option>

<option value="the-next-web_The Next Web">The Next Web</option>

<option value="the-sport-bible_The Sport Bible">The Sport Bible</option>

<option value="the-telegraph_The Telegraph">The Telegraph</option>

<option value="the-times-of-india_The Times of India">The

Times of India</option>

<option value="the-verge_The Verge">The Verge</option>

<option value="the-wall-street-journal_The Wall Street
Journal">The Wall Street

Journal

</option>

<option value="the-washington-post_The Washington
Post">The Washington Post</option>

<option value="time_Time">Time</option>

<option value="usa-today_USA Today">USA
Today</option>

<option value="wired-de_Wired.de">Wired.de</option>

<option value="wirtschafts-woche_Wirtschafts
Woche">Wirtschafts Woche</option>

</select>

</div>

</div>

<button class="btn light-green darken-2 pulsewaves-effect waves-
light waves-green" type="submit"

```
name="action">Submit<i class="material-icons
right">send</i></button>

    </form>

</div>

</div>

</div>

</div>

</div>

{% endblock %}

{% block script %}

<script src="{ { url_for('static', filename='select.js') }}"></script>

{% endblock %}
```