PROJECT REPORT

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NEWS TRACKER APPLICATION (NEW US)
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TABLE OF CONTENTS

E		SUB TITLES			
ODUCTION		1.1 Project Overview			
		1.2 Purpose			
RATURE SURVEY	-	2.1 Existing problem			
		2.2 References			
		2.3 Problem Statement Definition			
TION & PROPOSE	ED	3.1 Empathy Map Canvas			
JTION		3.2 Ideation & Brainstorming			
		3.3 Proposed Solution			
		3.4 Problem Solution Fit			
JIREMENT		4.1 Functional Requirements			
LYSIS		4.2 Non Functional Requirements			
ECT DESIGN		5.1 Data Flow Diagrams			
		5.2 Solution & Technical Architecture			
		5.3 User Stories			
ECT PLANING	&	6.1 Sprint Planning & Estimation			
EDULING		6.2 Sprint Delivery Schedule			
		6.3 Reports from JIRA			
NG	&	7.1 Feature 1			
JTIONING		7.2 Feature 2			
		7.3 Database Schema			
ING		8.1 Test Cases			
		8.2 User Acceptance Testing			
		TION & PROPOSED JIREMENT LYSIS ECT DESIGN ECT PLANING & EDULING NG & UTIONING			

9	RESULTS	ESULTS Performance metrics		
10	ADVANTAGES	&	_	
	DISADVANTAGES			
11	CONCLUSION		-	
12	FUTURE SCOPE		-	
13	APPENDIX		GitHub & Project Demo Link	
	THI LIVE		Gitrao de Froject Demo Emik	

1. INTRODUCTION:

Technology makes its impact very progressively in our day to day life imparting the fact that our lives and time moves faster than expected. Likewise humans are expected to run faster according to the speed of growth technology faces every day. In this speedy growth the only concern we as a human face is to cope up with our schedule in both timely and in effective manner. Conventional methods of doing anything in a mechanical and manual manner cannot give us the optimized schedule that we are expecting it to be. And here comes the technology again with the solution to make everything in an optimized manner! Human kind is expected to be aware of what is happening around you, with all the problems going on tending to help the sufferers or to make themselves cautious but is the conventional method to read newspaper turning the sides of the pages makes them to do work of their own concern? Never and that is why we come up with our News Tracker Application "NEW US" which can give you the optimized solution.

1.1 PROJECT OVERVIEW

News tracking often never comes in handy as we have to access Google, and search for the relevant topics. Eventually some of them are fake and not the exact kind of news we look for. Tracking the news hence will help people to avoid boring, fake and helps in finding the desired news. The amount of data has grown exponentially with the increasing networks and information passing around through internet. The concern ultimately, is the selection and identification of extracting the knowledge of interest for different kinds of people. In the current models, the LDA (latent Dirichlet allocation) technique is used to extract topics from news texts.

It is supported with various other processes like Gibbs Sampling method to speculate parameters. The topic mining using the K-means method is compared to highlight the advantages of using LDA for topic discovery. Second, the improved single-pass algorithm is used to track news topics.

One kind of a large network of online resources and interconnected people sharing their opinions and news circulating around is Twitter. Breaking news that are posted, are categorized as groups, ranks and tracks. Instead of using a supervised ML model, the twitter messages are made into an intermediate value called as timeline to be tracked.

1.2 PURPOSE:

Clustering of the various messages, probable news with the format or structure, can be used to find the topic of relevance or interest by the people who need to view the news based on it. The improvement of the common agglomerative hierarchical clustering algorithm based on average-link method, which is used to implement the retrospective topic detection and the online topic detection of news stories of the stocks is implemented already as per the submitted paper.

Ultimately tracking of news by using stochastic models are also in use due to information occurring in fragments. These are formed by the story lines tracking in news channels and in documents. Using the Kullback–Leibler divergence, we can:

- Identifying the same topics
- Clustering the similar nodes
- Topic selection
- Topic Detection

Real time updates can be obtained by everyone at anytime and anywhere in the area of interest without any hassle.

2. LITERATURE SURVEY

2.1 EXISTING PROBLEM

The news tracker application that is already available in the market serves with the user a vast amount of feed which makes them quite confused with all the headlines, featured news, and also the abundant feed which keeps going on and on till the user reaches the upper most level of their patience to be tested and this is how personal experience of every user was. With all those feed there will be no updating of the news from time to time keeping the up only for 24 hours format which keeps the user unknown of the matter that has happened even an hour ago. With all the congested news feed and irregular updating of details, the user finds it difficult to be updated of the details which deprives of their development indirectly by consuming their time. Therefore if at all the API is connected the problem awaits as they are not sure of the dynamic links being included.

2.2 REFERENCES

- 1) Research on Topic Detection and Tracking for Online News Texts, Guixian Xu; Yueting Meng; Zhan Chen; Xiaoyu Qiu; Changzhi Wang; Haishen Yao
- 2) Breaking News Detection and Tracking in Twitter, Swit Phuvipadawat; Tsuyoshi Murata
- 3) Online topic detection and tracking of financial news based on hierarchical clustering, Xiang-Ying Dai; Qing-Cai Chen; Xiao-Long Wang; Jun Xu
- 4) Tracking Aspects in News Documents, Maoto Inoue; Takao Miura
- 5) A News Analysis and Tracking System, Sk. Mirajul Haque, Lipika Dey & Anuj Mahajan
- 6) Research article on web user tracking of browsing patterns for personalized Advertising Silvia Puglisi, David Rebollo-Monedero and Jordi Forn´e
- 7) News hotspots detection and tracking based on LDA topic model, Xia Hu

2.3 PROBLEM STATEMENT DEFINITION

News tracking often never comes in handy as we have to access Google, and search for the relevant topics. Eventually some of them are fake and not the exact kind of news we look for. Tracking the news hence will help people to avoid boring, fake and helps in finding the desired news.

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.

The main aim of the News Tracker Application is that every user should have the login details and the registration details to be shared with them being able to access the news feed based on the search results and filtering the news feed according to the readability and the news accessibility of every user kept in mind. The application should track every news being updated in the portals of every other website and link them to provide the most updated news to the user.

3. IDEATION & PROPOSED SOLUTION

3.1 EMPATHY MAP CANVAS

Empathy map is the first and foremost step to begin the designing phase and to take further actions in the planning and scheduling of the project to be taken into due consideration of. For Empathy map the main and the base factor is that taking the points of the users and to understand the feeling of the user in order to make the application or the program whatever being developed ends up in satisfying the needs and the requests of the user respectively. The four main factors in the empathy map canvas are:

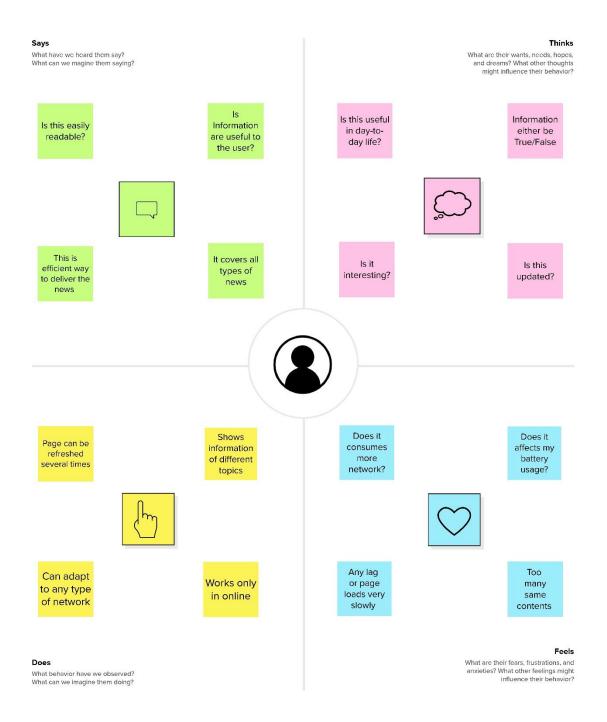
- SAYS
- THINKS
- DOES
- FEELS

Says is the phase or the division in the empathy map where the most basic questions such as based on the user assumption if the guess for the user assumptions is correct

by attempting to the questions such as if the application (here referring to the news tracker) is easily readable and provided if the information is really useful to the user.

Thinks is the phase where the needs and the demands of the users are sorted out in a clear and concise and the most prefixed manner being discussed in detail with everyone. This mainly describes the wants, needs, hopes, dreams depending or to be pursued upon the application into consideration or for having faith that this can be taken upon to impart a positive impact on the schedule respectively. Here we have discussed if the application have this day to day usability without tiring the useful provided the information should be useful to them based on the needs they have and the demands they wanted to get. The main point of developing these applications not only considers the optimization but also the interest factor plays a major role with the features and the news being updated from time to time respectively.

Does is the phase that keeps track of the observations of behavior of both the user and the application from scratch to deployment and to imagine what they can do in order to achieve the needs and to pursue the demands of the user respectively. In our app we have created a feature to refresh the pages several times where each time the feed is refreshed and brings about new and updated changes to the application.

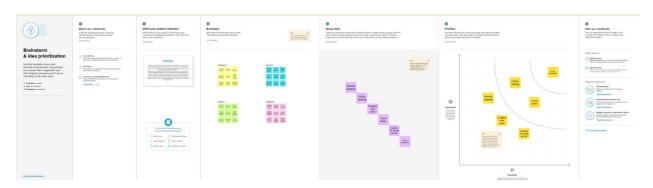


There are diverse topics for the users to keep track and to roam around but also to make sure that they are only relatable to the search results of the user and they are not congested with the latest news displayed on the top of the search result. This is mainly designed to adapt to any of the network condition and the bandwidth of the network but making sure that this works in online.

Feels phase is the phase that deals with the fears, frustration, anxieties and other major emotions coming into play for the proper use by the user. The other feelings of the users are also taken into consideration which might influence the behavior of the customer while using the application respectively. In our project we have taken the factors such as the network being consumed more, if this might affects the battery usage of the laptops or pc's used by the user and if any page takes more time to loads with too many same content being repeated. These concerns are only an example of the user feelings but there are many for the user to experience respectively.

3.2 IDEATION & BRAINSTORMING

This phase is the dealing of the problem statements with the demands and needs of the users into consideration drafting that the user has most of the expectations set on the project the team members are educated on the basic scope and purpose of the project. The ideation phase deals with the basic concepts and factual knowledge of the problem statement and the brainstorming of this phase includes the sharing of every ideas and opinions of the team members from which the best and the most optimizable idea that can serve the user of their needs and wants are taken into consideration for the project development respectively.



The three main tasks under the ideation and brain storming session are:

- Team Gathering
- Set the goal
- Learning how to use the facilitation tools

The major steps to be followed in this phase includes the following being described in brief and concise manner respectively.

I DEFINE YOUR PROBLEM STATEMENT

This phase under the ideation and the brainstorming session deals with the discussion of the problem statement given to the user and to briefly talk about the needs and demands of the user. More of the fact is that the user should be the one dealing the features and the usability and so the discussion among the teammates is carried out as being viewed by the user perspective.

This mainly takes into account of what is the problem that we are trying to solve and to frame the problem as the basic statement of how it can brief the needs, demands at the same time can make it more understanding of the problem in the briefest manner.

Here is our briefly descripted problem of our News Tracker application

PROBLEM

The user needs a way to get relevant news based on his choices so that the user does not have to spend a lot of time on searching news News is filed with ads and spams annoys and irritates the user and affects the user- experience.

Market is full of news with all categories. Users are not interested in all the categories and will be more interested with their personal choices. Traditional way of tracking news is slow and obsolete, user needs a new innovative application to track news with personal based choices. Lack of quick updates for the day results in staying behind in the trend in today's world and tracking the news regularly should be done.

The major key rules to be taken into consideration for the brainstorming session is that:

- **x** Stay in topic
- ¤ Encourage wild ideas
- p Defer judgement
- **x** Listen to others
- **\mathbb{g}** Go for volumes
- ¤ If possible, be visual

These constraints are to be followed in order to make sure that the session goes on smooth and it is done being productive for the teams to make decision wanting to develop the application or the project keenly based on the demands and the needs of the user in order to satisfy every needs taking the whole project as the user centric one.

II BRAINSTORM

In this session the team mates say four of them needs to get into a discussion forum in order to make the basics of the application. This takes into account of the suggestions that could be used to develop the application demanded and needed by the users.

Not every suggestions are taken into consideration some most empathetic and the pain points of the users which should need a light to shed on is the one that is focused most of al.

III GROUP IDEAS

The most of the similar ideas or related notes while having the brainstorming session with the teammates are taken into clustering using the sticky notes and each cluster a sticker like lael to have the easy identification and grasping the concepts in a brief and precise manner. No cluster should be bigger than six sentences and if so extended should be broken down into smaller sub groups respectively.

IV PRIORITIZE

As the name suggests this makes the priorities count where the team members together decide which idea to get on to first. They are presented in a grid to determine the importance of certain ideas and ti indicate the feasibility of each idea.

3.3 PROPOSED SOLUTION

S.	Parameter	Description				
No						
1.	Problem	News tracking often never comes in handy as we have to				
	Statement	access Google, and search for the relevant topics. Eventually				
		some of them are fake and not the exact kind of news we look				
		for. Tracking the news hence will help people to avoid				
		boring, fake and helps in finding the desired news.				
		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.				
2.	Idea	The amount of data has grown exponentially with the				
	Description	increasing networks and information passing around through				
		internet. The concern ultimately, is the selection and				
		identification of extracting the knowledge of interest for				
		different kinds of people. In the current models, the LDA				
		(latent Dirichlet allocation) technique is used to extract topics				
		from news texts. It is supported with various other processes				
		like Gibbs Sampling method to speculate parameters.				

		The topic mining using the K-means method is compared to					
		highlight the advantages of using LDA for topic discovery.					
		Second, the improved single-pass algorithm is used to track					
		news topics.					
3.	Novelty/Uni	Clustering of the various messages, probable news with the					
	queness	format or structure, can be used to find the topic of relevance					
		or interest by the people who need to view the news based on					
		it. The improvement of the common agglomerative					
		hierarchical clustering algorithm based on average-link					
		method, which is used to implement the retrospective topic					
		detection and the online topic detection of news stories of the					
		stocks is implemented already as per the submitted paper.					
4.	Social	Ultimately tracking of news by using stochastic models are					
	Impact/	also in use due to information occurring in fragments. These					
	Customer	are formed by the story lines tracking in news channels and					
	Satisfaction	in documents. Using the Kullback-Leibler divergence, we					
		can:					
		1) Identifying the same topics					
		2) Clustering the similar nodes					
		3) Topic selection					
		4) Topic Detection					
		Real time updates can be obtained by everyone at anytime					
		and anywhere in the area of interest without any hassle.					

5. Business Model(Finan cial Benefit)

The Financial Benefit that can be obtained from this model is nothing but the increased and optimized reach of the news and related information's which can save up to 70% efficiency compared with the other apps and also this can lead to the conservation of time of every people using.

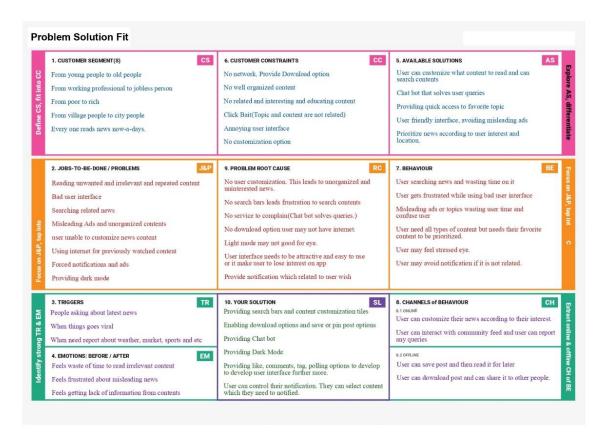
This can bring about a marginal profit of more than the average news apps with all these enhanced algorithms and the clustering coming into the existence. Using every choice, selection and interest of the user as the main topics of consideration for the clustering this can be a major turn over in every news information application industry.

6. Scalability Of the Solution

In this project, the use of the K-Means clustering Algorithm can make the project a highlighted one for the main use of sorting the topics from the news text and sometimes to identify the main clauses from the text to make the concern of the customers perfected with all the necessities and selection of the news that is only need to the time of the search. With the clustering of various messages the news with certain format or structure is used for finding the news related to the topics or interest of the people with the consideration of the opinions of the people sharing similar interest by analyzing the news circulation in twitter. Breaking news being posted are being categorized with groups, ranks and tacks enlisted. Without using the ML model the twitter messages are directly made into the intermediate value being

called the timeline which is to be tackled for the optimized use and recovery respectively. Agglomerative Hierarchical Clustering Algorithm helps in the implementation of the retrospective topic detection and the online topic detection of news stories of the stocks implementation. With all the stochastic models usage in information fragments ultimate tracking of the news and the follow-up of the channels is well monitored.

3.4 PROBLEM SOLUTION FIT



The phrase "problem-solution fit" refers to the fact that a company idea's underlying problem and suggested solution are both real and can be solved. When you verify your problem hypothesis with actual data and user response, the problem is said to be genuine. To find out whether real users care about the problem you're trying to tackle, you thus seek information from them.

Test to see if your solution actually fixes the issue: the moment you confirm that the target market values the benefits your solution offers them. Prior to product development, there must be a problem-solution fit, which serves as the cornerstone of any successful business. Prior to even starting a firm, it aids in providing you with basic startup-related answers.

- Do individuals really have the issue you believe they do?
- How do they currently address the issue?
- Does your suggested fix actually change anything?
- When you're happy with the solutions, you employ them to create a marketable product and begin attracting clients.

4 REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENT

The user is requested to enter their topics of interest based on which the generation of news is done. In the output obtained, the user must choose a brief or detailed report as per need and time constraint, images/ video sources as required and can have the options of sharing the news or exporting it to other applications.

These are the requirements that the end user specifically demands as basic facilities that the system should offer. All these functionalities need to be necessarily

incorporated into the system as a part of the contract. These are represented or stated

in the form of input to be given to the system, the operation performed and the output

expected. They are basically the requirements stated by the user which one can see

directly in the final product, unlike the non-functional requirements.

Hardware Requirements

1. Laptop or PC

2. I3 processor system or higher

3. 8 GB RAM or higher

4. 100 GB ROM or higher

5. Processor: Intel i5 9th Gen

Software Requirements

1. Anaconda Prompt

2. Visual studio Code

3. Flask

4. Operating System (win 7+/ Linux/Mac Os)

5. IBM DB2

6. NEWS API

IDE's, Tools and Techniques used:

- 1. Python
- 2. Flask
- 3. LDA (latent Dirichlet allocation)

- 4. K- Means Clustering
- 5. Gibbs Sampling
- 6. HTML/CSS

4.2 NON FUNCTIONAL REQUIREMENTS

A software system's quality attribute is described by a non-functional requirement (NFR). They evaluate the software system according to responsiveness, usability, security, portability, and other non-functional criteria that are essential to its success. "How quickly does the website load?" is an example of a non-functional requirement. Systems may fail to meet user needs if non-functional requirements are not met.

You can impose constraints or restrictions on the design of the system across different agile backlogs using non-functional requirements in software engineering. When there are more than 10,000 users online at once, for instance, the site should load in 3 seconds. It's just as important to describe non-functional requirements as it is to describe functional requirements. System qualities including security, reliability, performance, maintainability, scalability, and usability are defined by nonfunctional requirements (NFRs). They act as limitations or restrictions on how the system is designed for the various backlogs. Nonfunctional requirements, also referred to as system attributes, are just as important as functional Epics, Capabilities, Features, and Stories. They guarantee the system's efficiency and usability. Systems that do not satisfy any one of these may not meet regulatory or standards organization requirements, internal business requirements, user requirements, or market requirements. Non-compliance can occasionally result in serious legal problems (privacy, security, and safety, to name a few). Contrary to

functional requirements, non-functional requirements (NFRs) are ongoing qualities and restrictions that are typically reviewed as part of.

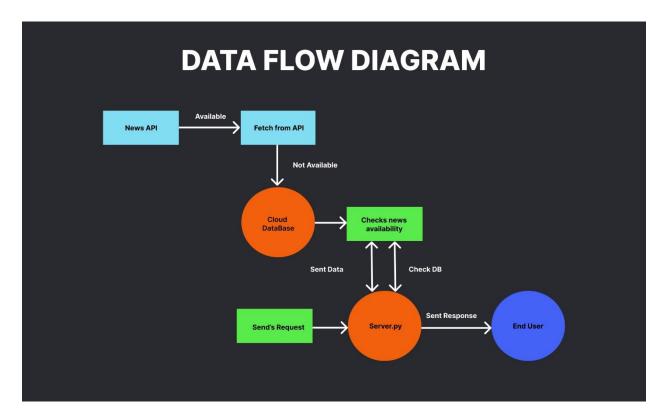
The basic nonfunctional requirements in our project claims to be aware of the technical requirements being enlisted and here it is the IBM technologies, proper planning and scheduling of the works according to the time line, managing of task to ensure that the project keeps in track of time. The main goals here we establish are high reliability, performance, maintainability, scalability and usability.

5. PROJECT DESIGN

5.1 DATA FLOW DIAGRAMS

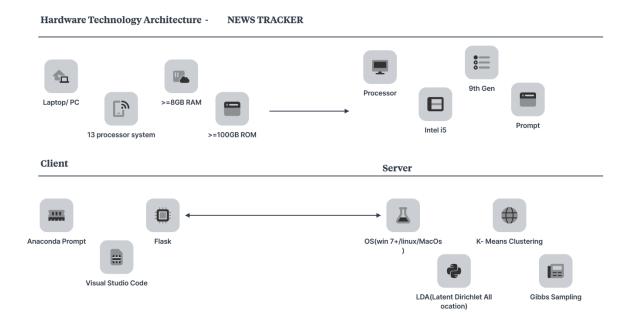
A data flow diagram (DFD) shows how information moves through any system or process. It displays data inputs, outputs, storage locations, and routes between each destination using predefined symbols such rectangles, circles, and arrows as well as brief text labels. Data flow diagrams can be as basic as hand-drawn process overviews or more complex, multi-level DFDs that progressively delve deeper into the data handling process. They can be used to model a new system or analyze an existing one. A DFD, like the best diagrams and charts, can frequently "say" things visually that are challenging to explain verbally. They are appropriate for both technical and nontechnical audiences, from developers to CEOs. That explains why DFDs are still so widely used today.

As the above paragraph denotes of what and why the Data Flow Diagrams are used in order to develop the project and keep track of the process making sure that it pertains to all the requirements being specified respectively. Here in our project we make sure that this should remain user- centric with the four main constraints of usability, access, reliability and interest of the user is satisfied.



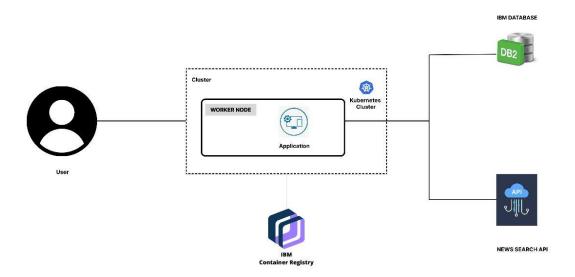
From the diagram that we have attached here in accordance to the project specifies that the News API is the one which offers the latest and time to time updated news for the application in order to make the user aware of the timely activities and the available and pertained, featured news are fetched from the API in turn is connected to the application's homepage. Whereas the unavailable data's are connected with the cloud data base to check the availability once again to ensure that the news reaches out to the user. This process begins by checking the data base with the server python program that fetches the request from the user or the server side and then response is given to the end user as a result of the fetched results.

5.2 SOLUTION & TECHNICAL ARCHITECTURES



Computer systems are designed using a type of IT architecture called technical architecture (TA). It entails creating a technical blueprint for how all components should be arranged, work together, and depend on one another in order to satisfy system-relevant requirements. In the last ten years, the term "architecture" has spread widely in the field of information technology. This shouldn't come as a surprise given that the majority of businesses have to restructure their IT infrastructure in order to integrate contemporary technologies like cloud computing and software as a service. This digital transformation required not only talented development teams but also IT architects in the first place. As IT strategists and planners, they create a target architecture and guarantee that all IT decisions are in line with business objectives.

In our project the technology architecture that we defy of is that mainly we have client and the server side. As a source of hardware we have laptop, pc and processor with the specification of 9th gen, Intel i5 and prompt in specific for the system to maintain the reliability while the user makes use of the application. The prompts such as the Anaconda Prompt, Visual studio code and flask are used to do the K means clustering algorithm, Gibbs sampling and the LDA specified for the project respectively.

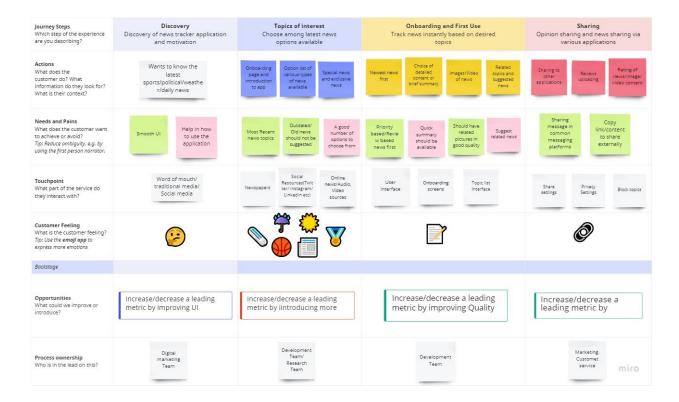


The user has the connection to the cluster where the working node is present which ensures that the application is kept in track with the cluster being associated with the kubernetes engine. This can be controlled either by the IBM container registry and the common connection may extend to the IBM Database and the news search API respectively.

5.3 USER STORIES

The smallest piece of work in an agile framework is a user story. It is a final objective, not a feature, as seen through the eyes of a software user. A user story is a casual, all-inclusive description of a software feature written from the viewpoint of the client or end user. A user story's objective is to describe how a piece of work will provide the customer with a specific value. Keep in mind that "customers" don't always have to be end users on the outside in the conventional sense; they might also be colleagues or internal customers within your company who depend on your team .User stories are short, straightforward statements that describe the desired result. They don't get specific. After a while, requirements are added.

Here we take into account the journey map which included the collection or the cluster of user stories for the project to keep in track respectively. We have the journey steps which prescribes the experience step that is prone to description where we included the Discovery stage that discovers the news tracker application and motivation to discover the same. Topics of interest to surf about the latest news options available in the existing solutions taken into consideration. Onboarding and first use which tracks the news instantly based in the desired topics chosen. Finally sharing of those opinions and news via varous application respectively.



To conclude about the actions of the customers, predicting what information they look for the next step and their context of the project. Needs and pains to denote the actual goals of the user regarding the application and out of context ideas that should not be included to be any playing part in the application. Touch point having to discuss with which part of the service they are subjected to continue their interaction with respectively. Finally the customer feeling to denote their pain points and stuffs. At the backstage we have the opportunities that should be taken into consideration for the improvement of the project and finally the process ownership defining of who are the user and what do they take part in the usage of the particular project.

6 PROJECT PLANNING & SCHEDULING

6.1 SPRINT PLANNING & ESTIMATION

Sprint	Functional	User	User Story /	Story	Priority	Team
	Requirement	Story	Task	Points		Members
	(Epic)	Number				
Sprint-	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	10	High	Shanthini
		USN-2	As a user, I will receive confirmation email once I have registered for the application	10	High	Vijay
Sprint-2	Login	USN-3	As a user, I can log into the application by	10	Medium	Karthik

Sprint	Functional	User	User Story /	Story	Priority	Team
	Requirement	Story	Task	Points		Members
	(Epic)	Number				
			entering email & password			
Sprint-2	Home screen	USN-4	As a user, I get to navigate through the pages of the Application	5	Medium	Swathika
		USN-5	As a user, I give my interests to filter the news which I need updates on	5	High	Shanthini
Sprint-	Optimization	USN-6	As a user, I get to search the news which I needed to know about in the search bar	10	Low	Karthik
		USN-7	The application shows the categories based	5	Medium	Swathika

Sprint	Functional	User	User Story /	Story	Priority	Team
	Requirement	Story	Task	Points		Members
	(Epic)	Number				
			on the search			
			results of the user			
Sprint-	User	USN-8	To test the	5	Low	Vijay
4	Acceptance		performance of			
	Testing		the application on			
			the basis of			
			empathy and			
			usability			
			analysis.			

Sprint planning is an event in scrum that kicks off the sprint. The purpose of sprint planning is to define what can be delivered in the sprint and how that work will be achieved. Sprint planning is done in collaboration with the whole scrum team. In scrum, the sprint is a set period of time where all the work is done. However, before you can leap into action you have to set up the sprint. You need to decide on how long the time box is going to be, the sprint goal, and where you're going to start. The sprint planning session kicks off the sprint by setting the agenda and focus. If done correctly, it also creates an environment where the team is motivated, challenged, and can be successful. Bad sprint plans can derail the team by setting unrealistic expectations.

The What – The product owner describes the objective (or goal) of the sprint and what backlog items contribute to that goal. The scrum team decides what can be done in the coming sprint and what they will do during the sprint to make that happen.

The How – The development team plans the work necessary to deliver the sprint goal. Ultimately, the resulting sprint plan is a negotiation between the development team and product owner based on value and effort.

The Who – You cannot do sprint planning without the product owner or the development team. The product owner defines the goal based on the value that they seek. The development team needs to understand how they can or cannot deliver that goal. If either is missing from this event it makes planning the sprint almost impossible.

The Inputs – A great starting point for the sprint plan is the product backlog as it provides a list of 'stuff' that could potentially be part of the current sprint. The team should also look at the existing work done in the increment and have a view to capacity.

The Outputs – The most important outcome for the sprint planning meeting is that the team can describe the goal of the sprint and how it will start working toward that goal. This is made visible in the sprint backlog.

In our project we take into account the sprint which comes into account as sprint 1, sprint 2, sprint3 and so on up to which the project has features to cling on to and the service to be attended to. Functional requirement of the user is the second most important category which includes the brief user story for making the EPIC of the project and to have a crisp and brief summary of the whole task that is to be done

respectively. The user story number is the number of the user story that is taken into consideration for the story being used in certain ways for executing the project respectively. User story/ task is the one which explains the summary of the job that the particular feature does. And then comes the story points which is used in the further evaluation of the tasks and it is used as the base for calculating the burn down chart and the report evaluation respectively. Priority is the concern which is used in knowing whether the project should be given more priority and those which should be less of concern to. Finally the members who is responsible for the task and to do them with all the functionality respectively.

6.2 SPRINT DELIVERY SCHEDULE

The sprint Delivery schedule is the progress of the project to reach the final stage that is the delivery stage of each sprint. This may have the velocity of the project under which the speed of the project is estimated and with the speed if the project the a table for table having the duration and other story estimates are considered.

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

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

Sprint	Total	Duration	Sprint	Sprint End	Story	Sprint
	Story		Start	Date	Points	Release
	Points		Date	(Planned)	(Planned) Completed	
					(as on	(Actual)
					Planned	
					End Date)	
Sprint-1	20	6 Days	24 Oct	29 Oct 2022	20	29 Oct 2022
			2022			
Sprint-2	20	6 Days	31 Oct	05 Nov	20	05 Nov 2022
			2022	2022		
Sprint-3	20	6 Days	07 Nov	12 Nov	20	12 Nov 2022
			2022	2022		
Sprint-4	20	6 Days	14 Nov	19 Nov	20	19 Nov 2022
			2022	2022		

The above table represents the schedule of each sprint cycle respectively. Considering the sprints in certain column and the total story point estimation which determines the evaluated and the exact points for each user tory respectively. Duration of the project to each sprint makes the main category of concern where the number of days are given as the input to the program. Along with the duration of the project os the subtypes which is the start and end date which should be the estimate of the project. As the date ends and estimation is perfect for the duration, the story points are also taken into consideration as the sprint gets completed. The release date of the sprint is also taken into main consideration to keep a note and track of the progress of the project.

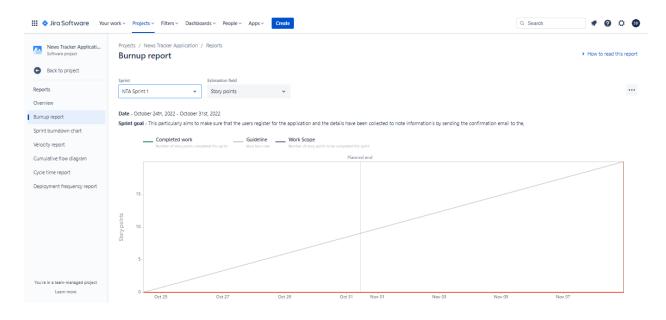
6.3 REPORTS FROM JIRA

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time. This is made into consideration based on the total story points given for the project and the time line given by which the project has been kept up to date.

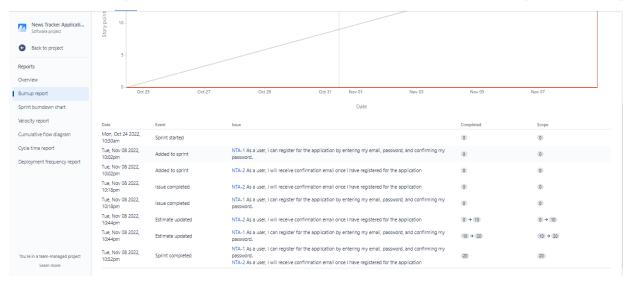
JIRA is a software that is used by the team who is doing the project and to make sure that their project should be kept in track of the process and the duration should be the main concern with all the story point evaluation aspects respectively.

BURNUP REPORT

A burn up chart is a graph that shows project progress over time. There are two main lines shown on the chart: one for the total project work planned, and the other for tracking the work completed to date. By comparing the work your team has accomplished so far with the total amount of work planned, you can understand how efficiently they're working and better estimate how long it will take to complete the work remaining. Burn up charts are an essential part of the agile methodology, as they keep track of what has been accomplished across each sprint. In this way, they are also useful for Scrum teams, as the Scrum master can review their burn up chart to analyze where improvements can be made, and cover these in daily meetings with the rest of the team.

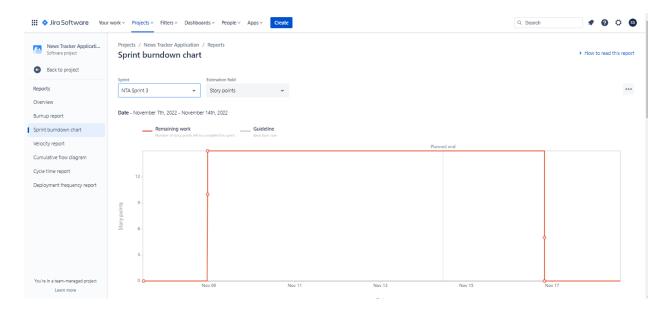


The vertical axis represents the amount of work and can be measured in different ways such as story points, issue count, or estimates. The horizontal axis represents time in days. The distance between the lines on the chart is the amount of work remaining. When the project has been completed, the lines will meet. Examine the 'Work scope' line to identify any scope creep.



SPRINT BURN DOWN CHART

A burndown chart shows the amount of work that has been completed in an epic or sprint and the total work remaining. Burndown charts are used to predict your team's likelihood of completing their work in the time available. They're also great for keeping the team aware of any scope creep that occurs.

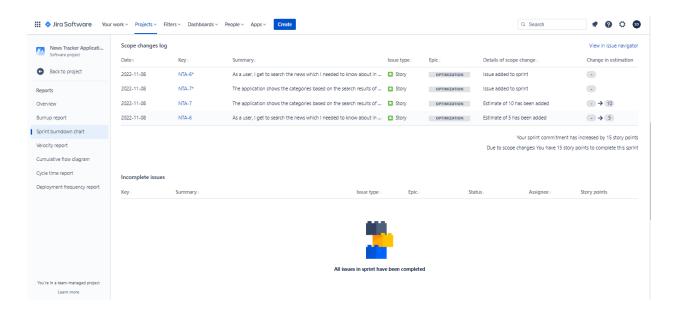


Burndown charts are beneficial since they shed light on the team's process. For instance:

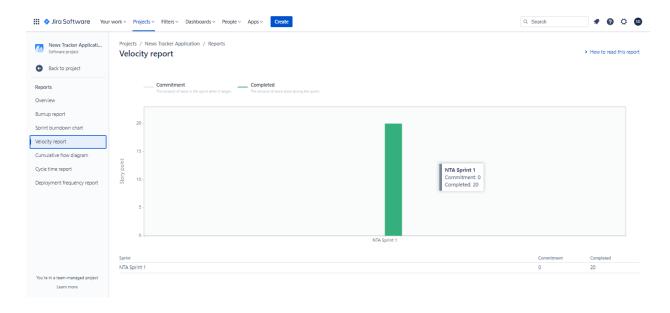
The team may not be dedicating enough time to work during sprint planning if you find that they frequently conclude their task early.

If they frequently fall short of expectations, they could have taken on too much.

It may indicate that work has not been properly estimated or broken down if the burndown chart shows a sharp drop during the sprint.



VELOCITY REPORT



The quantity of work that a scrum team typically completes in a sprint is known as velocity. This can be quantified in narrative points or the total number of issues in Jira Software projects that are managed by a team. Because the report tracks the anticipated and completed work over several sprints, teams can use velocity to predict how quickly they will be able to work through the backlog. The forecast is more precise the more sprints there are.

To read the velocity report:

The statistic used to estimate stories is shown on the vertical axis. The team's most recent seven sprints are shown on the horizontal axis; velocity is calculated using this information.

Each sprint's commitment (blue) bar displays the overall estimate of all issues at the start of the sprint. Any new tales added to the sprint or adjustments to estimations made after the sprint has begun will not be included in this total.

Each sprint's Completed (green) bar displays the total completed estimations at the time the sprint is over. This sum includes any scope adjustments made after the sprint got underway.

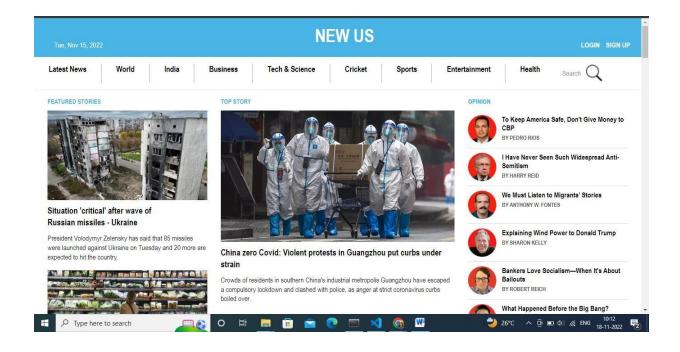
7 CODING & SOLUTIONING

7.1 FEATURE 1

7.2 FEATURE 2

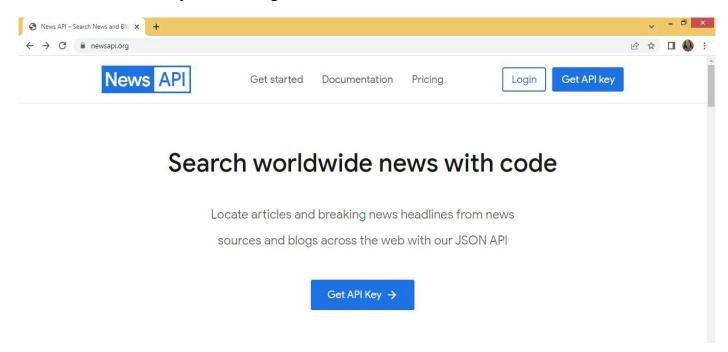
HOME PAGE:

The user can visit the main page which has the highlight news and has various options for news in the following fields: Business, Health, Sports, Entertainment, India, World, Tech and Science news. Each of these can be accessed within any page of the application. It has navigation to the Main page and also the Login/ Register page.

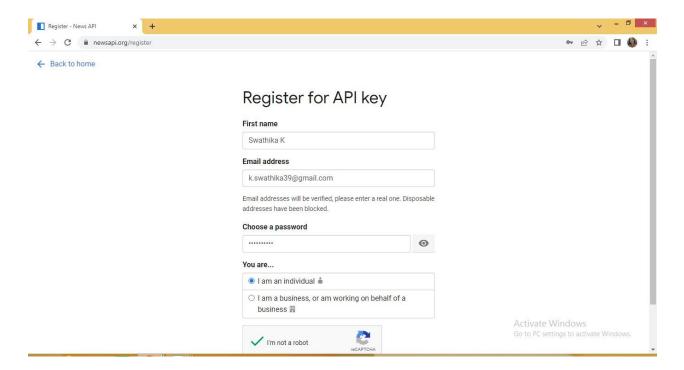


LATEST NEWS: (News API)

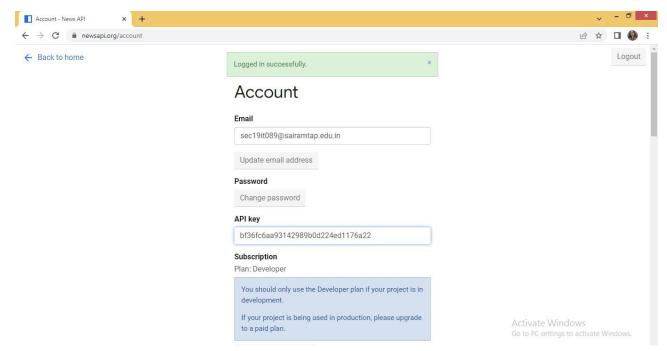
The user can check out the latest news that is dynamically connected with news API, where an API key should be generated.



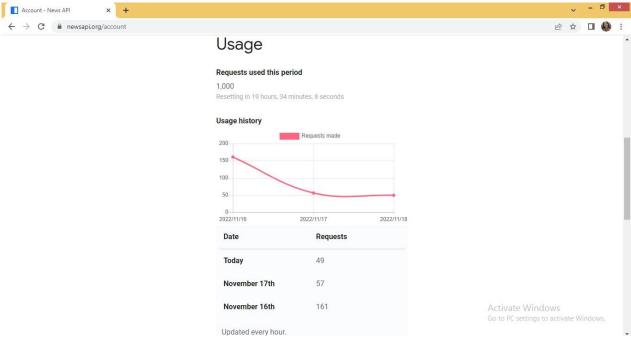
After creating an account, an API key is generated.



Using the API key, the frontend with HTML was connected dynamically.

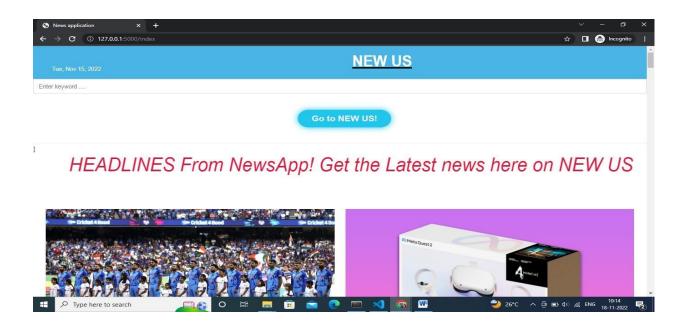


Usage based on every hour, is updated in the account



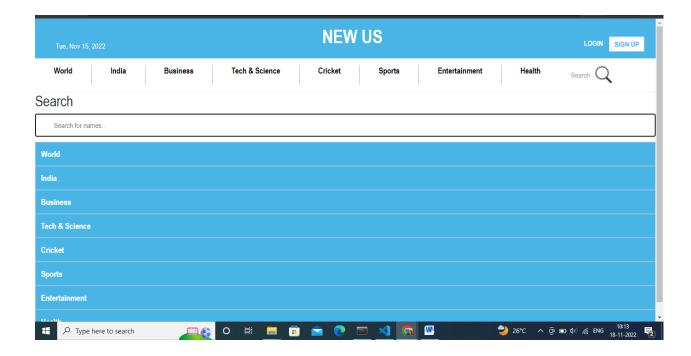
CATEGORY BASED UPDATED NEWS:

Updated news in a constant time interval is shown in our New US Application. Users can go through different categories of through the search key and browse the required content.



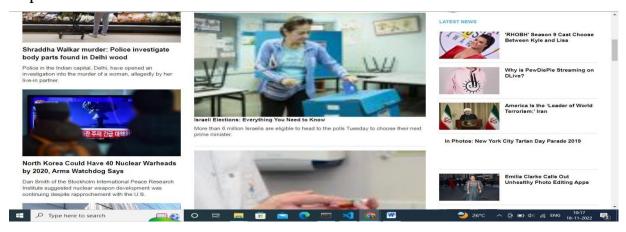
SEARCH BAR:

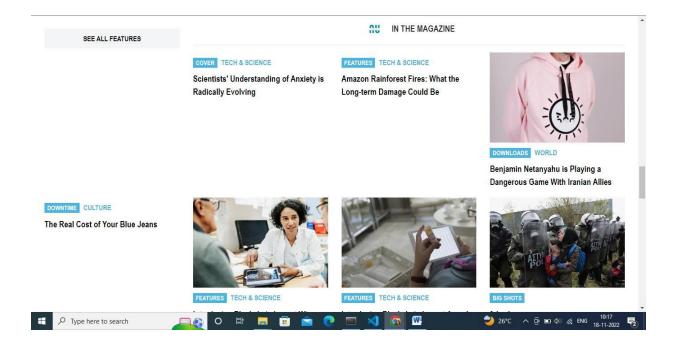
When the user requires specific news, the search bar will help in finding it in the dynamic page.

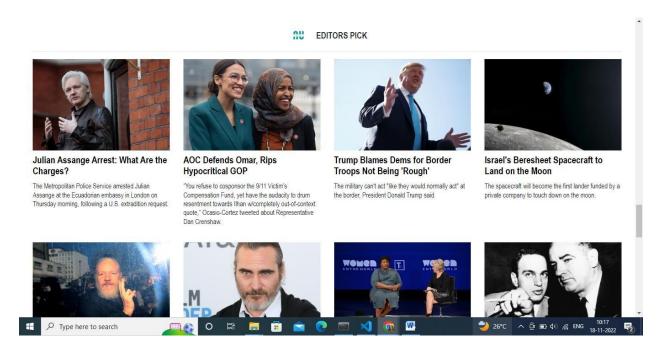


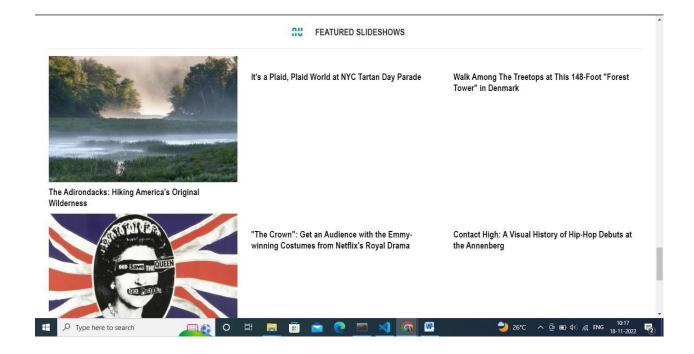
MAIN APP:

Navigation to different categories of such as Sports, General, Science, Technology, Health, and Business, Entertainment, Users can select their own category of News as per their interest.



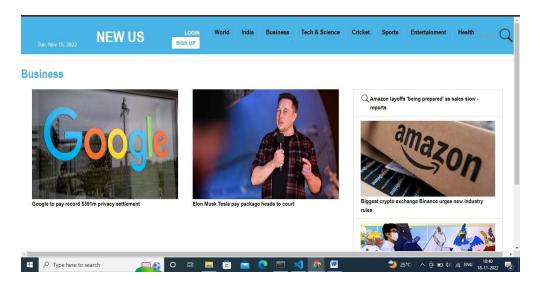




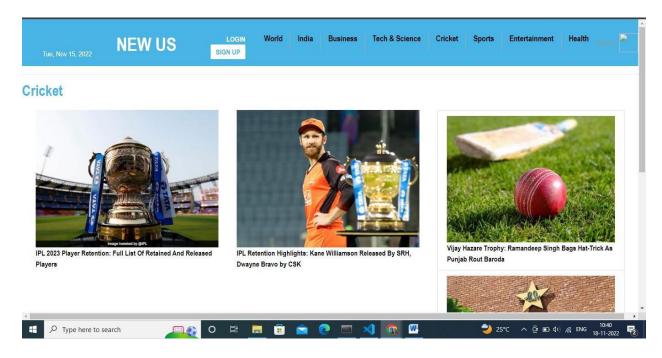


BUSINESS NEWSPAGE

Latest journalism based news that interprets and provides business, economic, and financial activities throughout the nation.

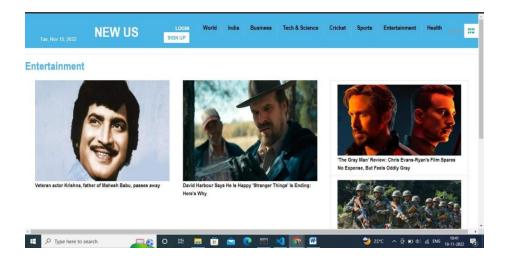


CRICKET NEWSPAGE



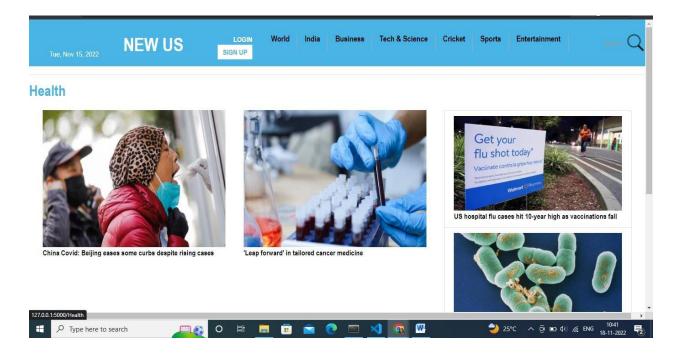
We developed another demanding news page that is based on the liking of most of the citizens of our nation. The recent match details and scores obtained are provided here.

ENTERTAINMENT NEWSPAGE



A page that provides insights about the latest movies, series, fashion, films and television shows, events, music and games for entertainment.

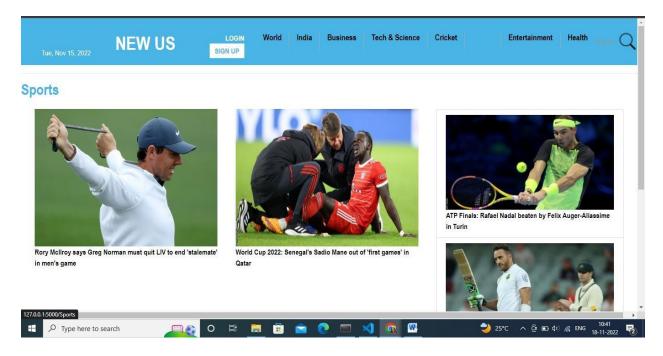
HEALTH NEWS PAGE



Vital news for people concerning their safety, we provide news about pertaining health of the people of a community or a society.

It involves people that are affected in a specific are worldwide, and the cause, effects, reasons, consequences and safety measures required for more protection.

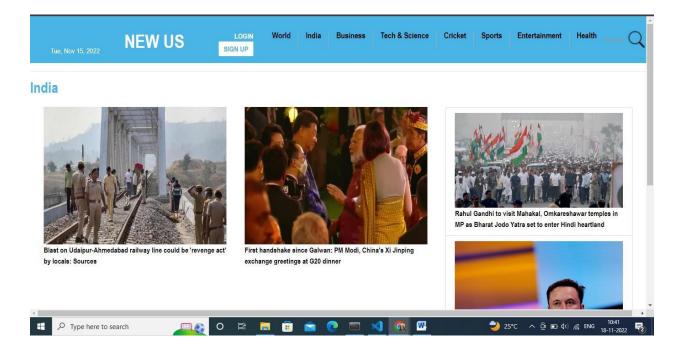
SPORTS NEWSPAGE



Sports journalism provides the insight on occurring sports and scores scored. The players who score the goals and difference in relative scores of two opponents are of interest in the public.

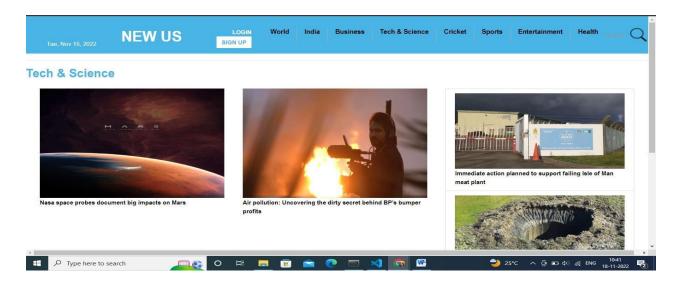
Sports fans rely on sports media and broadcasting organizations to inform them on upcoming games, current scores and standings, player and coach activity, and general industry news.

INDIA NEWSPAGE



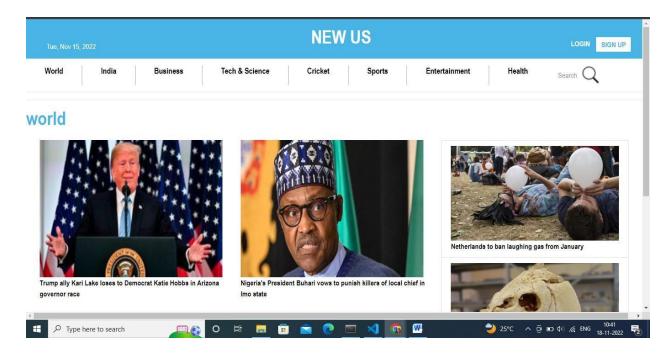
An eye opening news for every citizen that needs to know their internal government regulations and events throughout the nation. This includes new policies and recently released laws and orders, restrictions if any and citizenship rules.

TECH & SCIENCE NEWSPAGE



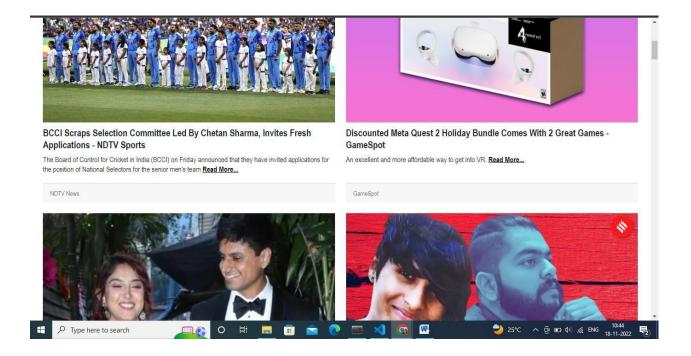
This includes focusing on genres such as reports, analysis and documents related to a variety of topics in the most advanced field in today's world that is technology. It involves a revolving update around topics like Internet, Social media, Robotics, Artificial intelligence, Machines, IT industry the other technologies of the digital world. Science news involves new researches, reason and methodologies of research in the field of innovation.

WORLD NEWS PAGE:



An international level coverage of foreign issues and providing reason for global subjects. This news deals with the information gathered from distant places through communication technologies, and reaches the locals.

LATEST NEWS PAGE:

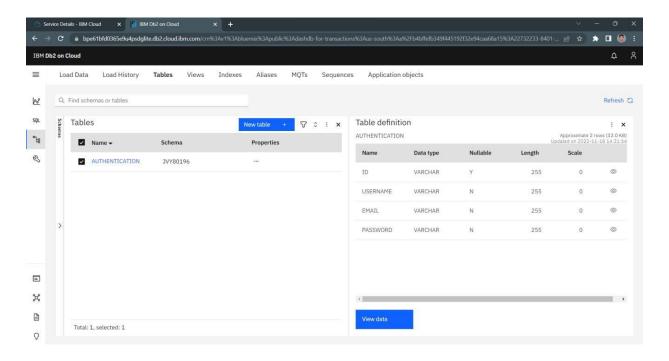


Dynamic news obtained from News API.

7.3 DATABASE SCHEMA

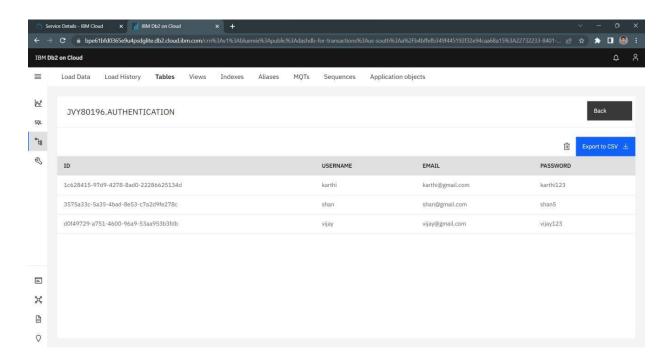
IBM DB2 is used for managing the schema through the entire project and to sail through in the backend of the project. The main aim of the project is to make the users well authorized and authenticated for the best use of the application respectively. The login and sign up is the two options that serves as the entry key to the project where the login will have two sections of username and password.

The username and password section will have or pertain to the details of the user when only the user is already an authorized one by the application side and possess certainly the exact authentication factors provided respectively.



If the user is an authenticated personnel then the screen will itself shift to the home page but when the personnel is an unidentified user or if the login details are not valid then they are redirected to the sign in page respectively. The sign in page consists of the name, email and the password where the email should have the valid constraints. Verification will be sent to the user via the mail id given and the user is then authenticated to make use of the app.

Coming to the backend of the IBM DB2 it does the prime job of authenticating the user through the factors listed by the developers and common factors are by default are included in the DB2. The entries are allocated to the Authentication Table of the DB2. The entries of the user along with the username and email id of the personnel. The password is also entered for the save for later use of the personnel with the unique id given for every user registering with the application.



8 TESTING

8.1 TEST CASES

- 1. Login
- 2. Sign in
- 3. Navigation
- 4. Search bar
- 5. Rapid_API

8.2 USER ACCEPTANCE TESTING

1. Purpose of Document

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

2. Defect Analysis

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

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	10	1	5	2	18
Duplicate	1	0	7	0	8
External	4	4	0	1	9
Fixed	13	6	3	13	29
Not Reproduced	0	0	2	0	2
Skipped	0	0	1	3	4
Won't Fix	0	5	2	1	8
Totals	28	16	20	20	77

3. Test Case Analysis

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

Section	Total Cases	Not Tested	Fail	Pass
LOG IN	6	0	0	6
SIGN UP	7	0	0	7
NAVIGATION	1	0	0	1
SEARCH BAR	1	0	0	1
RAPID API	1	0	0	1

9 RESULTS

9.1 PERFORMANCE METRICS

Data from performance metrics is used to monitor business operations.

Activities, employee behavior, and productivity are used as the main metrics to achieve this. Employers then use these indicators to assess performance. This relates to a predetermined purpose, like employee productivity or sales targets. Performance metrics, or PMs, are indicators of an organization's performance in a specific area. This usually works against a predetermined objective. This implies that you receive more information than what is provided by a key performance indicator, or KPI.

Performance metrics are used by businesses to evaluate a variety of aspects of their operations. This can relate to their general business operations, project management, employee productivity, and sales.

Four distinct groups can be made from these metrics:

- **¤** Business performance
- Sales performance
- ¤ Project management performance
- ¤ Employee performance

I BUSINESS PERFORMANCE

Business performance metrics monitor and evaluate your company's operation. This relates to sales, marketing, and general profitability. These measurements assist companies in determining where to implement various upgrades and modifications. This is done in an effort to foster growth and improved performance. They have a propensity to consider topics like the profitability of particular aspects and the return on investment. It also emphasizes productivity across the board for the company.

II SALES PERFORMANCE

The effectiveness of a team or an individual in the sales department is measured by the sales metrics. These KPIs can be compared to the target's lead generation, lead retention, and sales actions. Additionally, it might consider important performance indicators like overall income and client reach. Following that, these measurements are compared to the initial aims. As a business owner, you are then able to spot any trends in either over performance or underperformance.

III PROJECT MANAGEMENT

These metrics are used to monitor and assess the productivity and financial success of various projects. The project's progress is monitored and evaluated against the objectives it set out to accomplish at each stage. Future projects can be planned using the information gathered from the metrics, which also provides insight into how to make projects more effective.

IV EMPLOYEE PERFORMANCE

Employee performance is a component of the final performance statistic. Your company will suffer if your staff don't meet the criteria that have been set. However, it could not always be the case that a person is not performing their duties correctly. Sometimes the right equipment is not provided for them to carry out their duties

effectively. As a result, these measurements can assist you determine what needs to be changed or improved so that staff can achieve their objectives. The calibre, quantity, effectiveness, and productivity of an employee's work are all valid indicators of their performance.

10. ADVANTAGES & DISADVANTAGES

ADVANTAGES

- The main advantage of our news tracker application is that this can make the user achieve the main target of time conservation.
- The feed is not congested to view than any other application has.
- The purpose of the project is perfectly fulfilled as the rapid API is connected
- The Rapid API ensures in providing the news in all time without missing any of the news piece and to give the users the updated news from time to time respectively.
- The option "search" is the best one which can filter the results of the whole feed to the basic service constraints to be added as the wish of the user respectively.
- Every user is logged in and if not a part of the application then they are registered to create a new account connected with the database.
- The database of the project stores the records of every user and makes sure to save the records and the history of the wish list of every user respectively.

DISADVANTAGES

The disadvantage of the project is that our data base has lower level of connectivity with the login and the sign up page.

The user may experience trouble linking to the latest news in about minute durations.

11. CONCLUSION

"Technology and Time waits for no one"

As the phrase says technology grows by every day but to stay in updated with every feature of its own and being indulged in this society by knowing at least 20% of what is happening around can make you a best citizen. Considering this fact as the primary one, for an add on we need development of our own (self-development) either related to the work we are adapted to or enhancing the self, time plays a major role in the play and we don't want to miss the play if we want to be in the act! To summarize, our solution is the best fit for enhancing the technology that you have already learned and to consume your time. The users can know about the latest news in one tap and can filter their news based on their interest without any congestion of feed and discomfort in using the app. This becomes a user friendly and at the same time makes you updated.

12. FUTURE SCOPE

The future scope of this application is that we can save more time only by constraining the areas of interest of the user which can trace back to locations, to entertainment or to any of our own interests. The greatest concern is that the news feed no being so congested in order to make it easily reliable, readable and usable by

the user respectively. We have already achieved that constraint but enhancement of

further user friendly application is planned of execution. Taking into consideration

of hearing impaired people, we are deciding to work on the videos of the feed by the

actions and make them feel no inferior to others.

Similarly for the visually impaired people there is a plan in making the whole

application only based on the audios of the people and reducing the most congested

part for good. The search and the navigation folders may be subjected to braille or

other factors that can make them feel comfortable for use respectively. Reaching out

to most of the audience might be the target of every other application in the market

but for our application in having quality over quantity and the application should

fulfil the basic need and wants of the people using it respectively.

13. APPENDIX

GitHub & Project Demo Link

<u>DEMO LINK:</u> https://www.youtube.com/watch?v=M0opXV-zLmY

GITHUB LINK: https://github.com/IBM-EPBL/IBM-Project-26125-1660016572