

PROJECT REPORT

NEWS TRACKER APPLICATION CATEGORY :

CloudAppDevelopment

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ABSTRACT

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. Front end is built using HTML 5, CSS 3 and Javascript and we use python and flask framework for backend. Data is stored in IBM cloud using IBM DB2. This web app educates people about the world and also reduces their precious time.

- **OVERVIEW**

CHAPTER 1

INTRODUCTION

News Tracker application is a web app for news readers which uses RAPID API to get news and it is a full stack app which serves users for the purpose. The world is moving faster. Buying newspapers and reading page by page is a time consuming process. Our web app is a solution for this ultimate goal by providing the latest news according to the user's interest.

- **CLOUD COMPUTING**

Cloud computing is the on-demand availability of computer system resources, especially data storage (cloud storage) and computing power, without direct active management by the user. Large clouds often have functions distributed over multiple locations, each of which is a data center. Cloud computing relies on sharing of resources to achieve coherence and typically uses a "pay as you go" model, which can help in reducing capital expenses but may also lead to unexpected operating expenses for users.

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- **EXISTING PROBLEMS**
- Newspapers are the first source that provided news for people. The modern or digital newspapers are called news apps or news feeds. Anytime, anywhere, access to the latest and updated news is reader's demand. People like to get their news on the go, and expectations from news apps are dialed to the max.

- **EXISTING WORKS**

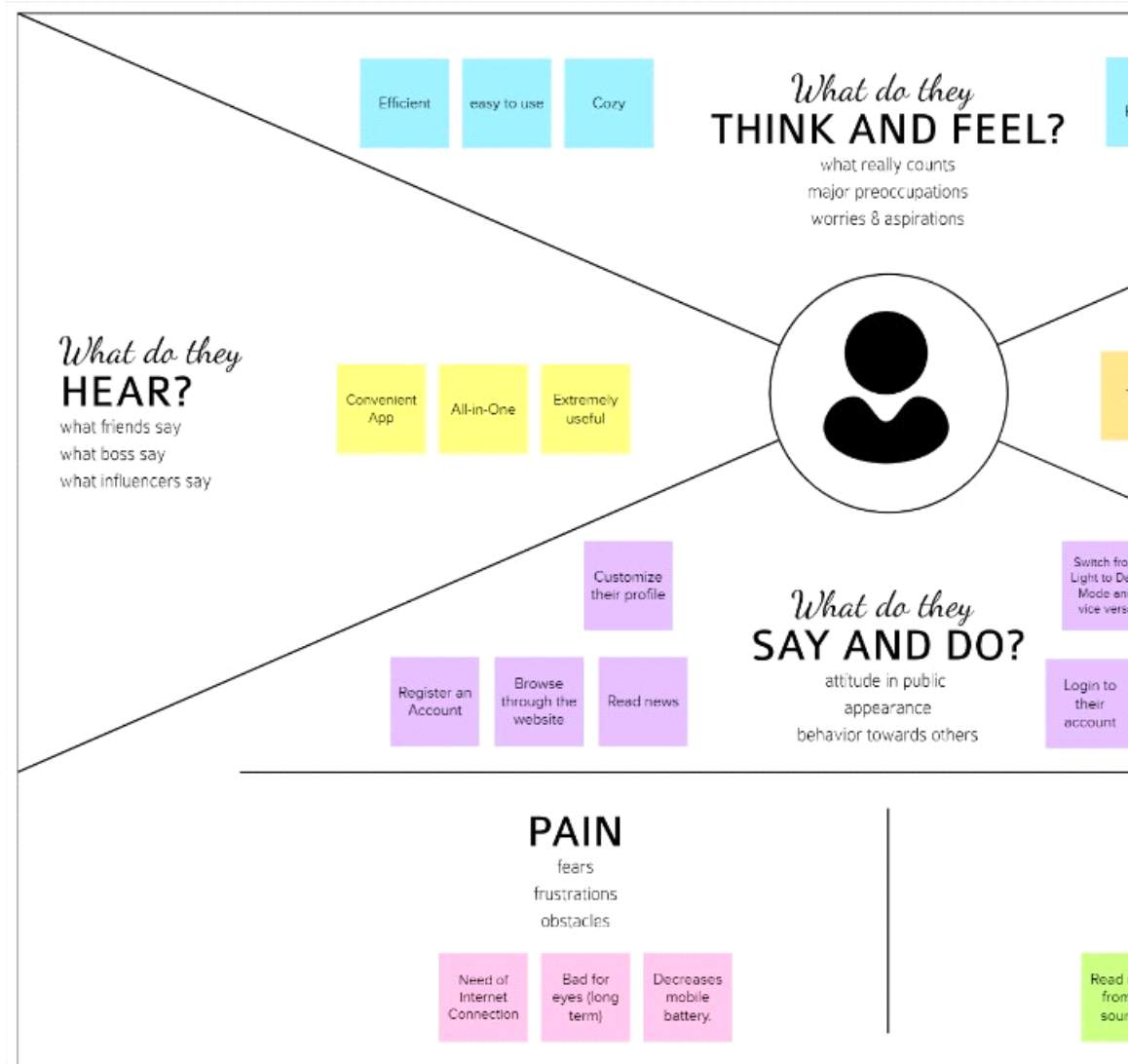
apps track user interest and suggest news according to it. But every app has some flaw in it. Let us take one previous work from above

and discuss its working, These merits and demerits and what needs to be improved.

CHAPTER 3

IDEATION & PROPOSED SOLUTION

- **EMPATHY MAP**



An empathy map is a collaborative tool teams can use to gain a deeper insight into their customers. Much like a user persona, an empathy map can represent a group of users, such as a customer segment. The empathy map was originally created by Dave Gray and has gained much popularity within the agile community.

FIG 3.1 Empathy map for News Tracker Application

- PROBLEM STATEMENT**

Problem Statement(PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	Student	search news about emerging technology	can't able to find what I need	there is no search bar or catalog to search, only option is scrolling through the end	Tired
PS-2	Business Professional	get news about share market which is my regular search	I can't able to find anything related	this app haven't tracking system	Frustrated
PS-3	Jobless Person	find job related news	it repeat sold news again	there is no specific algorithm to	Tensed

			and again	avoid this issue	
PS -4	Reporte r	report about misleadin g news	can't able to report my concern	there is no chatbot or contact info report	Useless
PS -5	Com mo n Ma n	read new s i in offli ne	can't able to do that	there is no downloa d or save option	Worry

• **PROPOSED SOLUTION**

S.NO	Parameter	Description
1	Problem Statement (Problem to be solved)	Now-a-days it is hard to find news that is relevant to our interest and hard to interact with news apps which show repeated content again and again. User interfaces in news apps are not interactive. Users find difficulty to find the content that they are searching for and apps also contain misleading information.

2	Idea / Solution description	<p>The News Tracker Application that we are developing will have a search bar which helps users to search for their content and also our app will have a chatbot which will help users to satisfy their queries. It will also have dark mode which helps users to read content without concern about their eyes. Our app will have an user interface that will satisfy users' needs and their wants. We use flask which is a lightweight framework that helps users to access our website for long time without having to worry about battery consumption.</p>
3	Novelty / Uniqueness	<p>We use IBM Watson in our chat bot which will help to solve user queries. Most news apps don't contain chat bots but it is necessary to have chatbots in news applications which will help both</p>

		<p>users and creators to get rid of fake news, misleading news and click bait. Search bar which will help users to search the content that they</p>
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		<p>want and we will offer category tiles so that users can prioritize according to their interest.</p> <p>Save post option which will help users to view their favorite news offline.</p>
4	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> • Save time • User can read news offline • Chatbot helps to queries • Less Battery Consumption • User can customize according to their interest • Simple and interactive interface
5	Business Model (Revenue Model)	<p>App will attract people of all ages who want to read news and it leads to more usage then it turns on investors interest .The app will have ads which are mostly related to user interest and these ads will generate revenue.</p>
6	Scalability of the Solution	<p>It provides Software as a service. From a small kid to a well grown man everyone can use our app to read their favorite news. It will save your time and battery. It will have a variety of topics from education to entertainment and many more</p>

Brainstorming and prioritization

Brainstorming is a method design teams use to generate ideas to solve clearly defined design problems. In controlled conditions and a free-thinking environment, teams approach a problem by such means as “How Might We” questions. They produce a vast array of ideas and draw links between them to find potential solutions.

Problem solution fit

Problem-solution fit is a term used to describe the point

validating that the base problem resulting in a business idea really exists and the proposed solution actually solves that problem.

FLASK

CHAPTER 4

MODULES DESCRIPTION

Flask is a micro web framework written in Python. It is classified as a microframework because it does not require particular tools or libraries. It has no database abstraction layer, form validation, or any other components where pre-existing third-party libraries provide common functions.

However, Flask supports extensions that can add application features as if they were implemented in Flask itself. Extensions exist for object-relational mappers, form validation, upload

handling, various open authentication technologies and several common framework related tools.

- **IBM CLOUD**

IBM Cloud provides solutions that enable higher levels of compliance, security, and management, with proven architecture patterns and methods for rapid delivery for running mission-critical workloads.

- **IBM DB 2**

IBM Db2 is a family of data management products, including the Db2 relational database. The products feature AI-powered capabilities to help you modernize the management of both structured and unstructured data across on-premises and multi cloud environments.

- **IBM CONTAINER REGISTRY**

IBM Cloud Container Registry provides a multi-tenant private image registry that you can use to store and share your container images with users in your IBM Cloud account. The IBM Cloud console includes a brief Quick Start.

- **DOCKER**

Docker is an open platform for developing, shipping, and running applications. Docker enables you to separate your applications from your infrastructure so you can deliver software quickly. With Docker, you can manage your infrastructure in the same ways you manage your applications.

- **IBM KUBERNETES CLUSTER**

Kubernetes automates operational tasks of container management and includes built-in commands for deploying applications, rolling out changes to your applications, scaling your applications up and down to fit changing needs, monitoring your applications, and more—making it easier to manage applications.

IBM Cloud Kubernetes Service delivers powerful tools by combining Docker containers, the Kubernetes technology, an intuitive user experience, and built-in security and isolation to automate the deployment, operation, scaling, and

monitoring of containerized apps in a cluster of compute hosts.

- **ARCHITECTURE**

Solution architecture provides the ground for software development projects by tailoring IT solutions to specific business needs and defining their functional requirements and stages of implementation. It consists of many subprocesses that draw guidance from various enterprise architecture viewpoints.

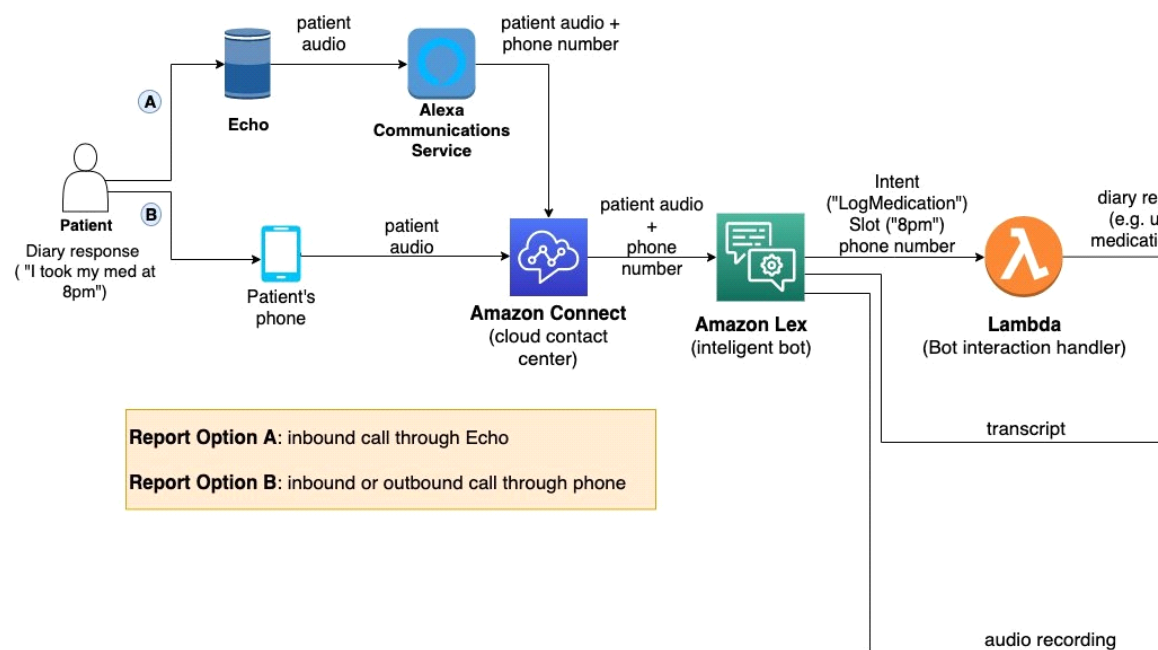


FIG 4.1 SOLUTION ARCHITECTURE OF NTA

The Solution architecture of the News Tracker Application model explains about software that are required to develop a web app. API in fig 4.1 is nothing but an application interface which is made up of using Python, Flask, HTML, CSS, Bootstrap and Java script.

- **TECHNICAL STACK**

A technology stack is a set of technologies that are stacked together to build any application. Popularly known as a technology infrastructure or solutions stack, technology stack has become essential for building easy-to-maintain, scalable web applications.

Users can use mobile or desktop to sign up/sign in. Then the

application connected to IBM DB 2 stored user data so it can be used to authenticate while the user signs in. The front end which is made up of

HTML, CSS, Java script helps users to access our application with ease and provide a good user experience.

Docker used to create images and by using IBM container registry we can containerize the app.

Kubernetes automates operational tasks of container management and includes built-in commands for deploying applications, rolling out changes to your applications.

News search API provides a key to connect with it, whose ultimate purpose is updating news for users according to the trend and users interests.

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- **PREREQUISITES**

Install python, flask, docker for desktop, open an account with IBM cloud and sendgrid which used to maintain email. After getting an IBM account buy IBM DB 2 or Cloudbant where IBM DB 2 uses relational database whereas in cloudbant we use non-relational database, IBM watson, IBM object storage, IBM container registry and IBM kubernetes cluster.

- **FRONT END**

Registration page, login page and dashboard need to be designed and developed which need to provide good user experience and also need to be simple but still efficient.

Dashboard contains a lot of things to explore.

NEWS API

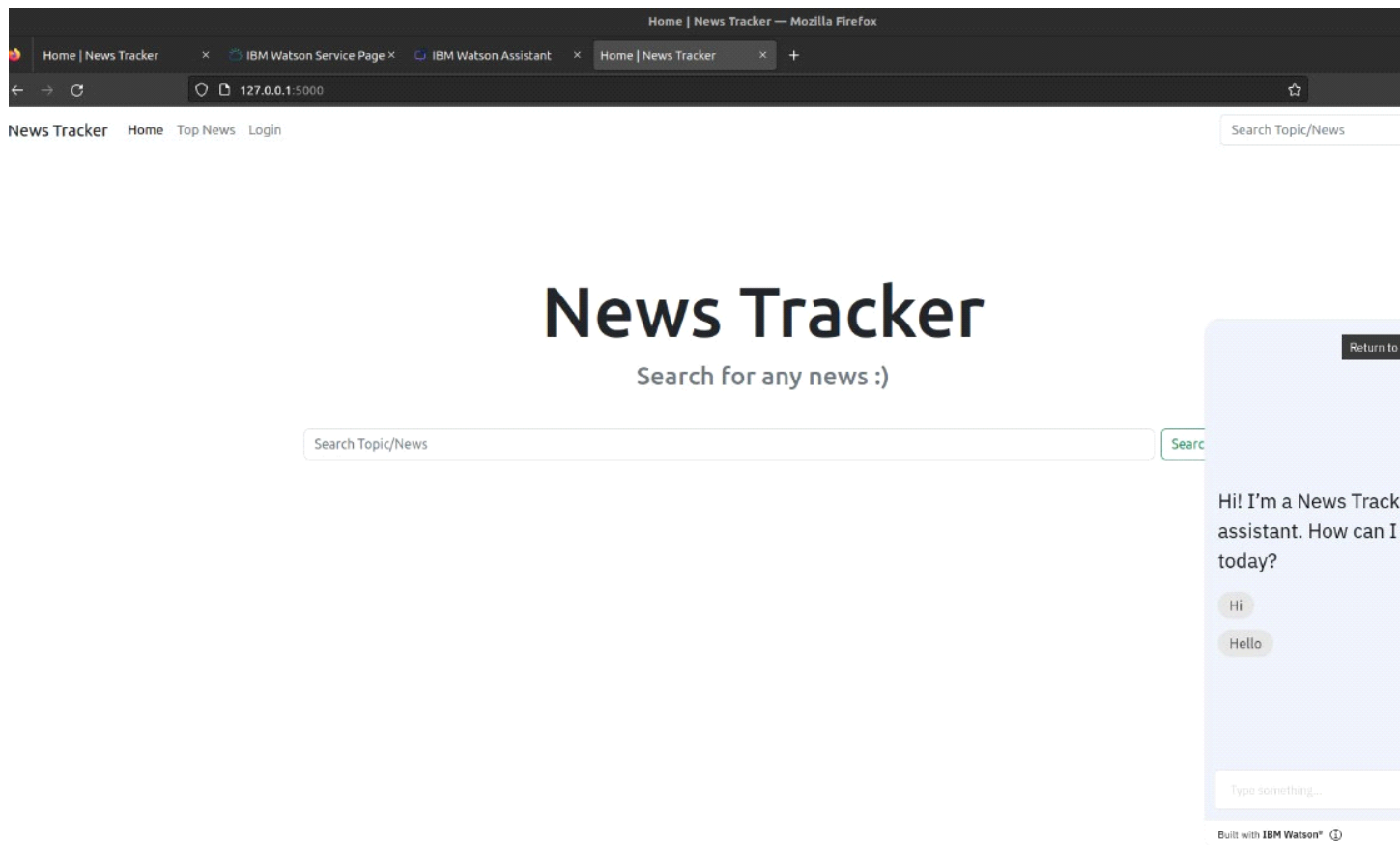
produces sufficient news for users and by using IBM Watson we created a chatbot whose ultimate

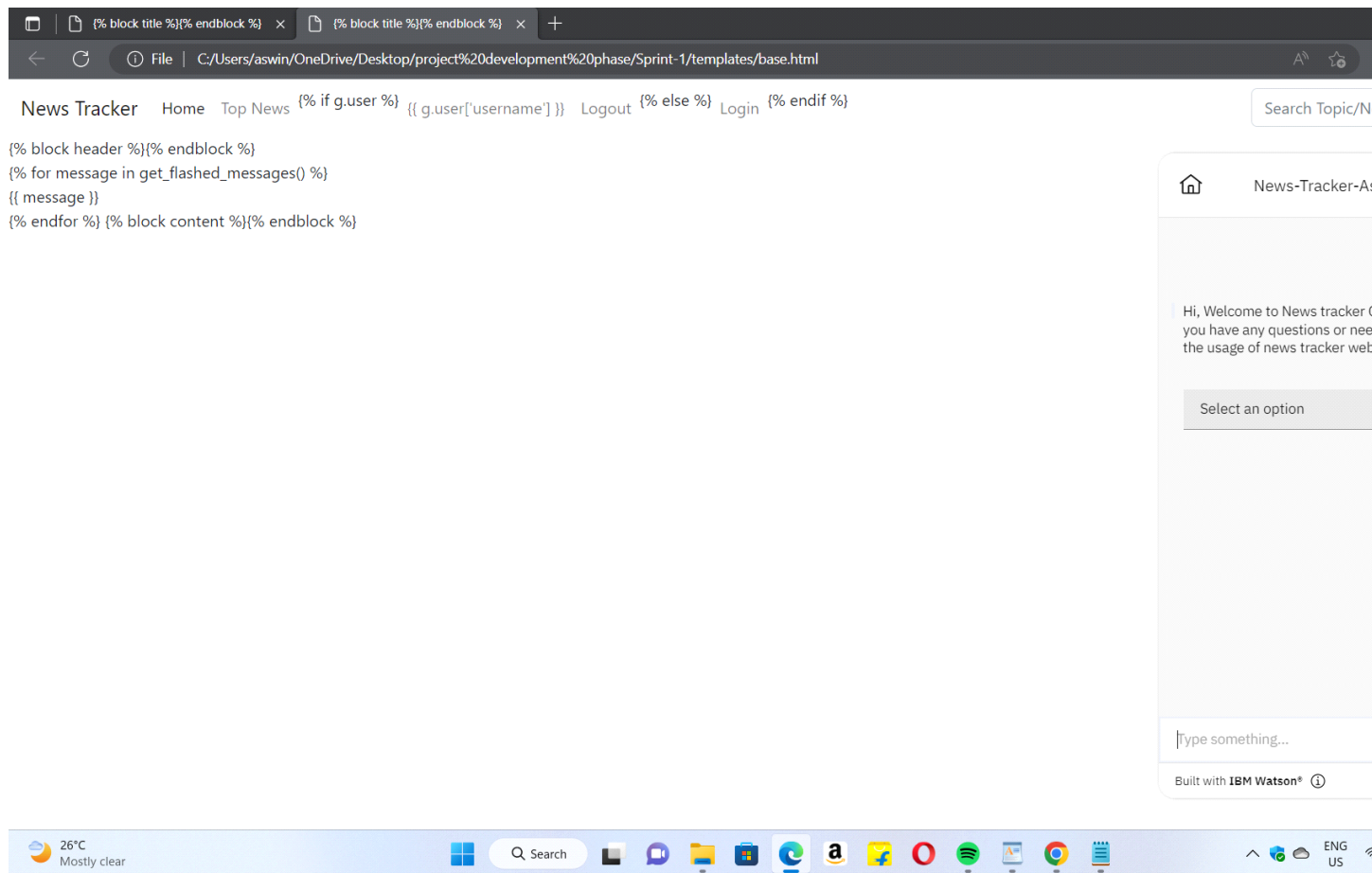
goal is to help users to have easy access and it also helps users to report about anything that disturbed them.

These pages must be designed using HTML, CSS, Bootstrap and Javascript which can be opened using the web browsers. HTML pages are called templates in terms of flask css and other style elements need to be in a static folder.

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