Project Design Phase-II
Technology Stack (Architecture & Stack)

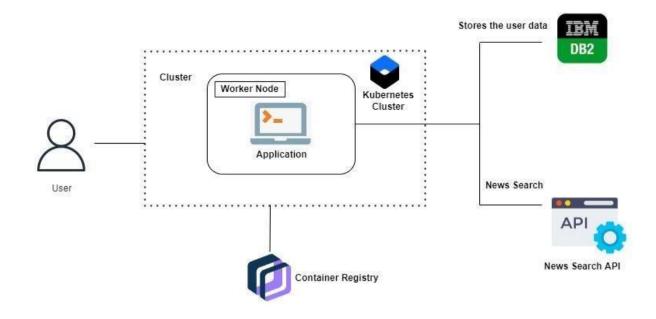| Date	16 October 2022
Team ID	PNT2022TMID33284
Project Name	News Tracker Application
Maximum Marks	4 Marks

Technical Architecture:

Table-1:

Components & Technologies:

S. No	Component	Description	Technology
1.	**User Interface**	User interacts with application with ease of use and most handy environment with minimum effort on user to receive maximum effort	HTML CSS JavaScript
2.	**Application Logic-1**	This application starts with login page where user sign up or sign in web application	Java Python
3.	**Application Logic-2**	User enters personal data to update their Account profile where IBM Watson STT service used to convert audio to text that is user can fill their detail by voice assistance	IBM Watson STT service

4.	**Application Logic-3**	User can view news content based on dates and places where chatbot is used there to filter content	IBM Watson Assistant
5.	**File Storage**	User's personal data and last visited news content are get stored in IBM block storage.	IBM Block Storage
6.	**External API-1**	Third-party developers who need to access data or services that belong to a software, or who want to build apps that integrate with the business's platform, can do so using external APIs	newsdata.io
7.	**External API-2**	Third-party developers who need to access data or services that belong to a software, or who want to build apps that integrate with the business's platform, can do so using external APIs	newsapi.org
9.	**Infrastructure (Cloud)**	Application Deployment on Cloud for faster and flexible performance over the internet	Kubernetes

		Local Server Configuration: A server configuration defines a specific database as the repository for its data. To prevent corruption, that database can be associated with only one server configuration.	Cloud Foundry
10.	**Database**	User data gets stored in database for lateral purposes	MySQL
11.	**Cloud Database**	Here Database Service are used in IBM DB2 Using this user can access all the data stored in cloud through network from any accessible device	IBM DB2 IBM Cloudant

Table-2:

Application Characteristics:

S. No	Characteristics	Description	Technology
1.	**Open-Source Frameworks**	Here this application is light weight application using flask (python) as a backend development	Flask (Python) Cloud Computing - Apache Cassandra, Django
2.	**Security Implementations**	Application contains user personal information, login credentials, transaction details are protected and kept confidential using data protection in IBM cloud	IAM in IBM cloud E.g.: Firewall Network Segmentations IPS

S. No	Characteristics	Description	Technology
3.	**Scalable Architecture**	Here application runs 24/7 as it is scalable where size is everything. So, flask is used to perform web application quickly	Flask (Python)
4.	**Availability**	Application functions properly and will justify requirements. It can be accessible anytime.	Docker, Kubernetes cluster
5.	**Performance**	Application traces every request and building blocks efficiently for better performance	Instana CPU Usage Memory Usage Latency and Up-Time