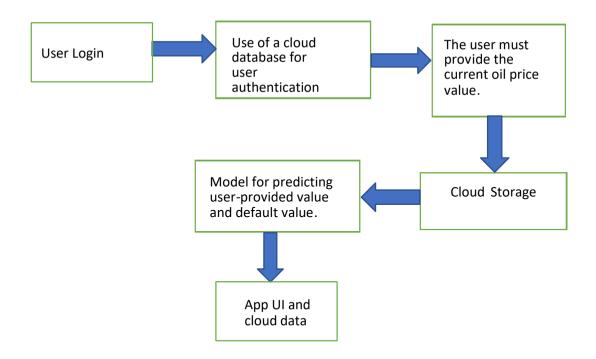
## Project Design Phase-II Technology Stack (Architecture & Stack)

Date	10 October 2022
Team ID	PNT2022TMID16420
Project Name	Project – Crude Oil Price Prediction
Maximum Marks	4 Marks

## **Technical Architecture:**



**Table-1: Components & Technologies:** 

Component	Description	Technology
User Interface	Web application	HTML, CSS, JavaScript ,Angular Js
Application Logic-1	Logic for a process in the application	Python
Application Logic-2	Logic for a process in the application	IBM Watson Assistant
Database	Data Type, Configurations	MySQL
	User Interface Application Logic-1 Application Logic-2	User Interface  Web application  Application Logic-1  Logic for a process in the application  Application Logic-2  Logic for a process in the application

5.	Cloud Database	Database Service on Cloud	IBM cloud
6.	File Storage	File storage requirements	IBM Block Storage,Local Filesystem
7.	External API-1	Purpose of External API used in the application	Firebase
8.	Machine Learning Model	Purpose of Machine Learning Model	Recurrent neural network & LSTM
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration:	Local, Firebase.

## **Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks-1	Python,	Pandas, flask, numpy, tensorflow
2.	Open-Source Frameworks-2	JavaScript ,Angular Js.	App module,component module
3.	Security Implementations	User data will be stored according to CIA model.	End to end encrpytion (SHA- 256)
4.	Scalable Architecture	IBM cloud and firebase both used for better performance in storage and authentication.	IBM watson , Firebase, Mysql

5.	Availability	Handle huge requests, avoid DDOS and XSS	Effective coding and restrictive user
		attack.	access based on need
6.	Performance	Handle more than 1000 users to use server at a time.	Flask