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

Date	03 October 2022
Team ID	PNT2022TMID32702
Project Name	Project – Crude Oil Price Prediction
Maximum Marks	4 Marks

Technical Architecture:

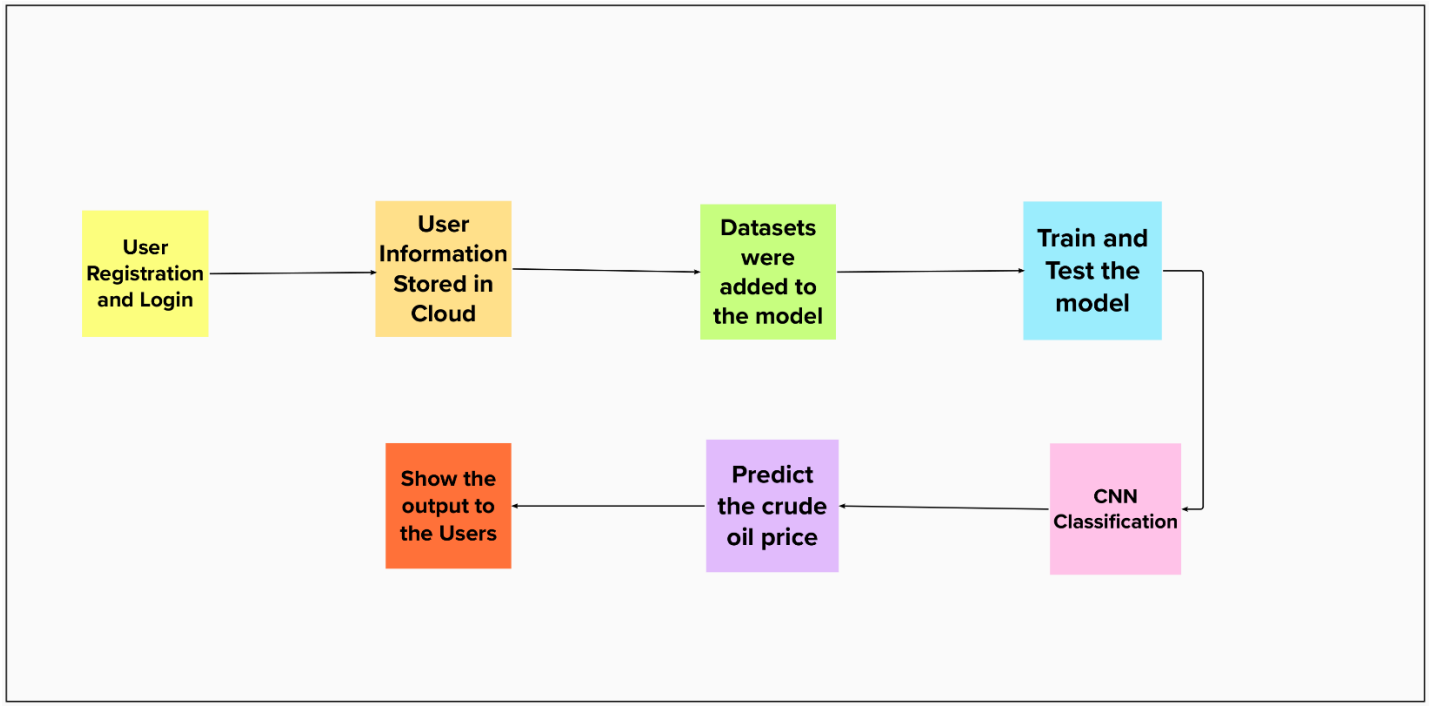

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web Application	HTML, CSS, JavaScript , Angular Js
2.	Application Logic-1	Logic for a process is Providing the datasets and gets the output for the price of crude oil	Python
3.	Database	Storing the Credentials of Users	MySQL, NoSQL, etc.
4.	Cloud Database	Use cloud storage for reducing the physical storage and access anywhere	IBM DB2, IBM Cloud etc.
5.	File Storage	Storing the files	IBM Block Storage or Other Storage Service or Local Filesystem
6.	External API-1	Using external API for connecting with external sources	IBM Weather API, etc.
7.	Machine Learning Model	Creating the Machine Learning Model for predicting the crude oil price	Object Recognition Model, etc.
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	Local, Cloud Foundry etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Google Chrome , Online Websites	Pandas, flask, numpy, tensorflow
2.	Security Implementations	User data will be stored according to CIA model	End to end encrpytion (SHA- 256)
3.	Scalable Architecture	IBM cloud and firebase both used for better performance in storage and authentication	IBM watson , Firebase, Mysql
4.	Availability	Handle huge requests,avoid DDOS and XSS attack.	Coding is effecting and restrictive user access based on need
5.	Performance	Handle more than 1000 users to use server at a time.	Flask