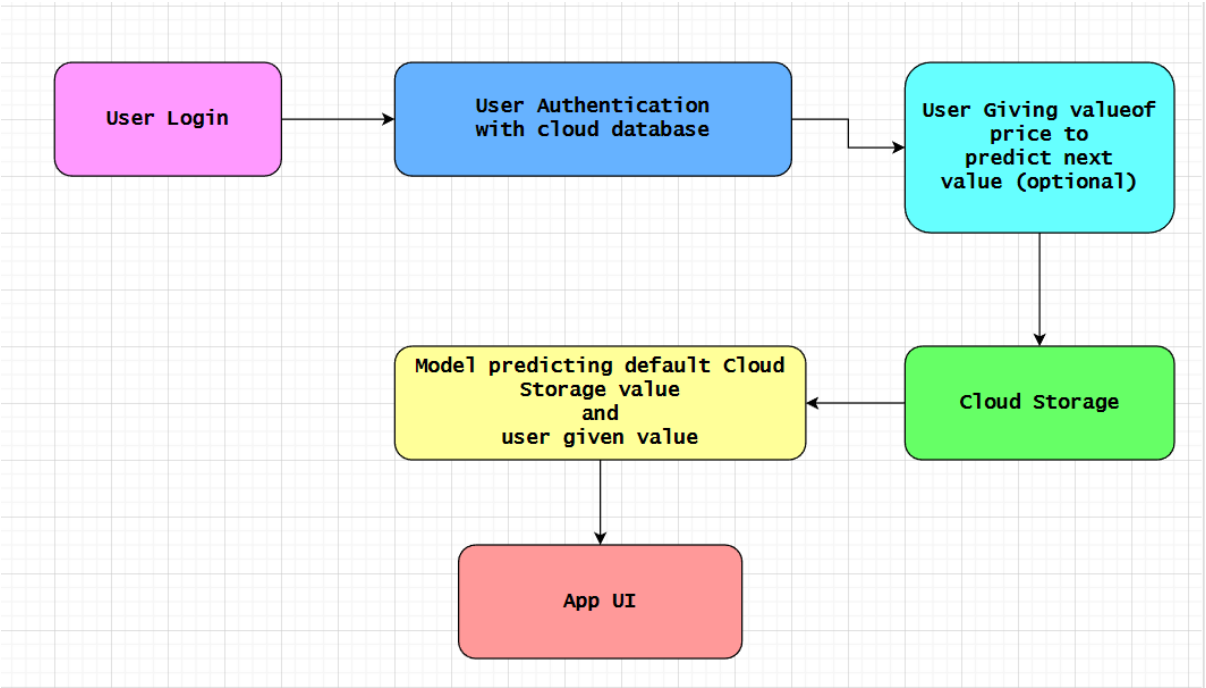
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	03October 2022
Team ID	PNT2022TMID13112
Project Name	Crude Oil Price Prediction
Maximum Marks	4 Marks

Technical Architecture:



Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application	HTML, CSS, React Js
2.	Application Logic-1	Logic for a process in the application	Python(Flask)
3.	Database	Data Type, Configurations etc	MySQL
4.	Cloud Database	Database Service on Cloud	IBM Cloud
5.	File Storage	File storage requirements	IBM Block Storage
6.	External API-1	For standalone server	Firebase
7.	Machine Learning Model	To predict the price of crude oil	Recurrent neural network & LSTM
8.	Infrastructure (Server / Cloud)	Application Deployment on Local Server and Firebase	Local , Firebase

Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Framework-1	Python	Pandas,flask,numpy,tensorflow
2.	Open-Source Framework-2	ReactJs	App module
3.	Open-Source Framework-3	HTML & CSS	module
4.	Scalable Architecture	IBM cloud and firebase	IBM Watson,Firebase,Mysql
5.	Availability	Handle huge requests	Effective coding
6.	Performance	Handles 100 to 10000 users to use server at a time	Flask