PROJECT DESIGN PHASE-II
TECHNOLOGY STACK (ARCHITECTURE & STACK)

DATE	17 OCTOBER 2022
TEAM ID	PNT2022TMID38670
PROJECT NAME	RETAIL STORE STOCK INVENTORYANALYTICS
MAXIMUM MARKS	4 MARKS

Technical Architecture:
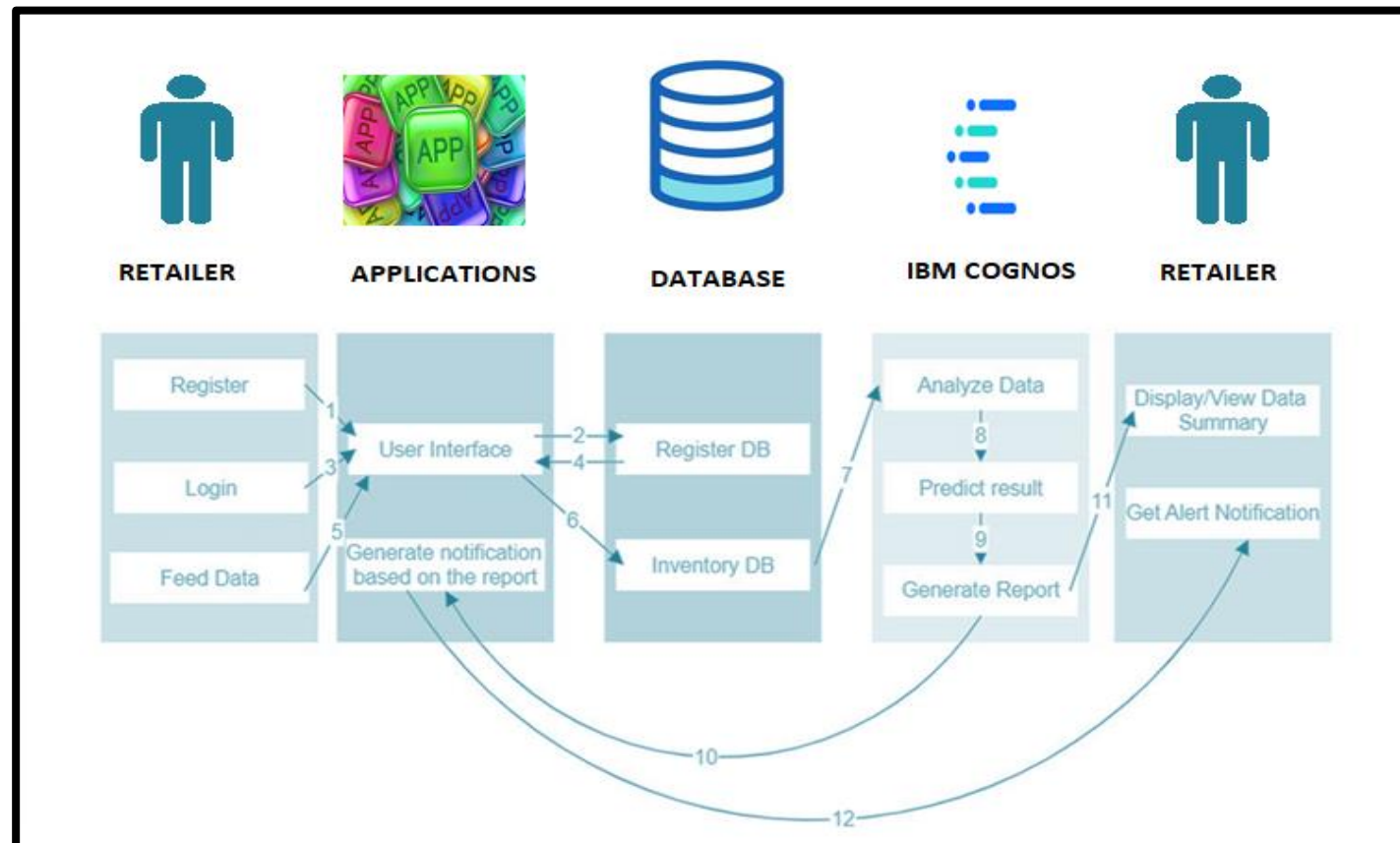
Table-1: Components and Technologies:

S.No	Component	Description	Technology
1	User Interface	Provides an interactive platform for Retailers to register,login and enter inventory data such as stocks ,order etc..	HTML, CSS, JavaScript
2	Register	Create credentials and store it in the Register Database.	Python
3	Login	Enter the credentials using UI and get authenticated through Register database	Python
4	Feed Data -Inventory data	Enter the stock ,order ,employee details as data using AI and store it in the Inventory database.	Python,HTML,CSS,JavaScript.
5	Generate notification based on report	Use the report Generated by IBM cognos analytics to alert retailers for under stock and overstock.	Python
6	Register Database	The database which contains login credentials and employee contact details(mail id,ph.no) that is used to send messages.	Mysql/IBM DB2
7	Inventory Database	The database contains product,category,stocks,stock need,purchase details and bill details that is sent as input to cognos analytics to generate reports.	Mysql/IBM DB2
8	Analyze Data	Upload,Prepare and analyse the data.	IBM Cognos Analytics.
9	Predict result	Present the data.	IBM Cognos Analytics.
10	Generate Report	Generate the summary .	IBM Cognos Analytics.
11	Machine Learning Model	Forecast the need using the SVM model.	Python.
12	Infrastructure (Server / Cloud)	Gives the collection of hardware and software elements needed.	IBM Cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	A platform where the inbuilt libraries are available to develop the UI and to do tests for our project.	React,Pytest,MySql Testing framework
2.	Security Implementations	To encrypt the datas like the user information, count of stocks.	Encrypting techniques
3.	Scalable Architecture	The retailer can add employees,products and categories so no matter how large the inventory is.	Mysql,Python,React
4.	Availability	The entire application is based on cloud services, so it can be accessed anytime and anywhere.	IBM Cloud
5.	Performance	By doing continuous testing after each module, the performance can be improved.	Pytest.