

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

Date	03 October 2022
Team ID	PNT2022TMID21488
Project Name	Retail Store Stock Inventory Analysis
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table 1 & table 2

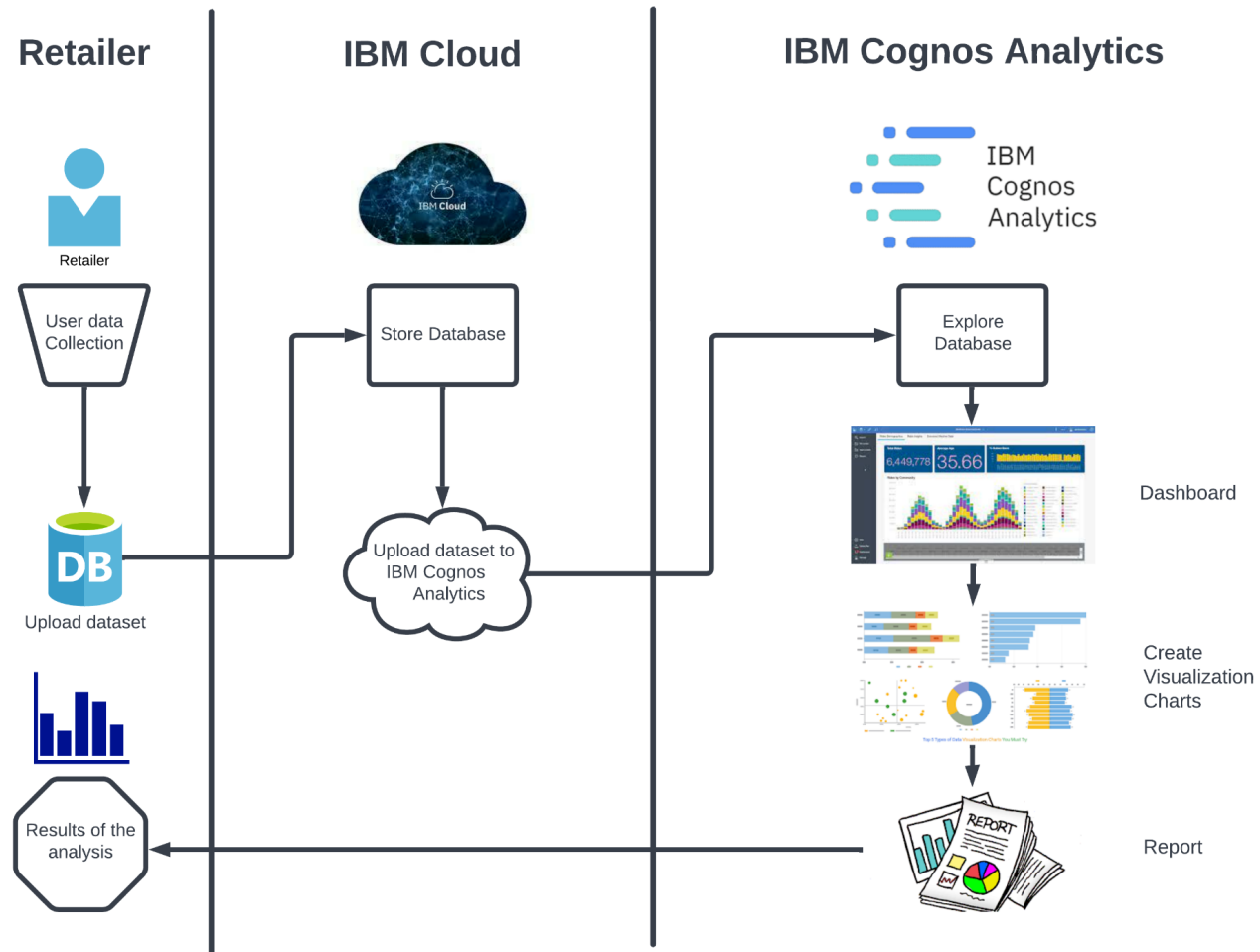


Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	The user interacts with the application via website or mobile app.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Database	The customer sales data is collected and stored.	MySQL, NoSQL, etc.
3.	Data Processing	The dataset is preprocessed and cleaned for analysis.	IBM Cognos Analytics with Watson
4.	Cloud Database	Dataset is uploaded in IBM cloud.	Couch DB, IBM Cloudant etc.
5.	Data Visualization	Various kinds of charts are depicted on the various factors that are useful for analysis.	IBM Cognos Analytics with Watson and Data Visualization using Python
6.	Machine Learning Model	Efficient algorithms are used to train the model and predict the output.	Regression, Random Forest, ABC technique etc.
7.	Report	A detailed report is made and is displayed on the dashboard and can be used to emphasize better decisions.	Charts and Visualization using Data Science algorithms

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	IBM Cognos Analytics with Watson is used.	IBM Cognos Analytics with Watson, Python, Jupyter Notebook
2.	Security Implementations	Authentication is undergone.	Encryptions
3.	Scalable Architecture	This is a 3-tier application.	Application server – Python Database Server – IBM Cloud
4.	Availability	The application is available for IBM Cloud users.	IBM Cloud Hosting
5.	Performance	This allows retailers to maintain the inventory to make happy customers.	ML Algorithms