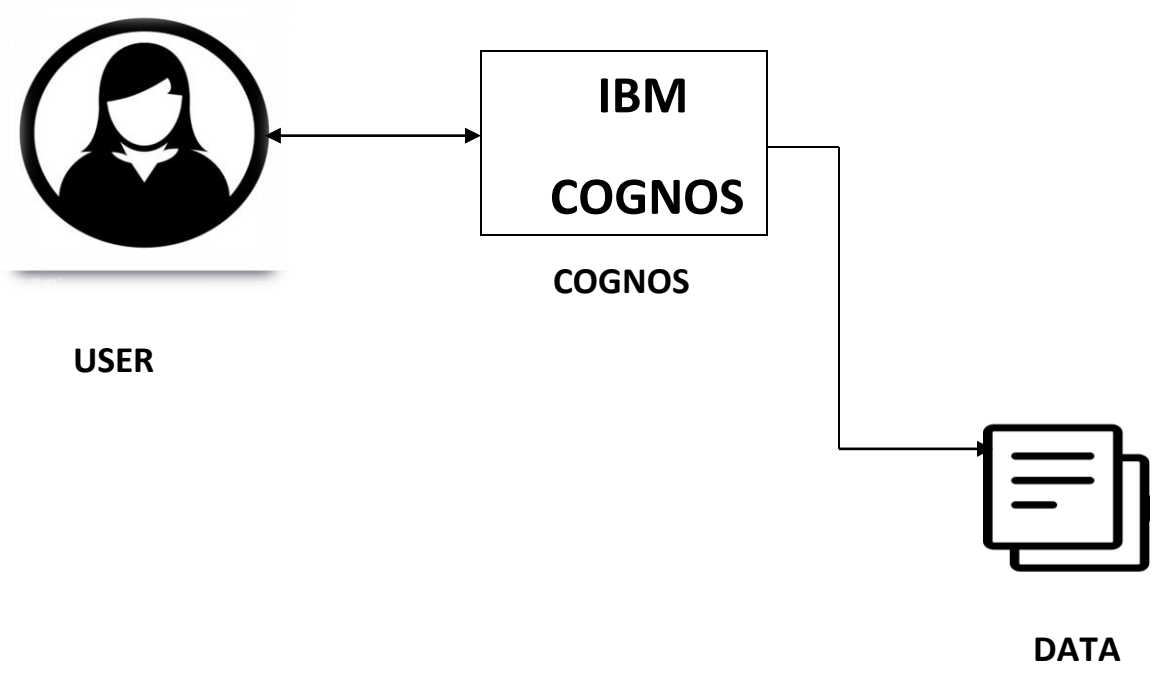
PROJECT DESIGN PHASE-II

TECHNOLOGY STACK (ARCHITECTURE & STACK)

Date	18 October 2022
Team ID	PNT2022TMID30683
Project Name	Estimate The Crop Yield Using Data Analytics
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2



Example: Order processing in offline mode during pandemics

Table-1 : Components & Technologies

S.No	Components	Description	Technology
1.	User Interface	How a user interacts with a programme, such as through a chatbot or a mobile app.	HTML, CSS, MYSQL.
2.	Application logic-1	Using the application as a farmer (common user) to log in.	Java / Python.

S.NO	Components	Description	Technology
3.	Application logic-2	Using the application's admin login information.	IBM Watson STT Service.
4.	Application logic-3	Logging into the application as a merchant.	IBM Watson Assistant.
5.	Database	A database contains information regarding the crops.	MySQL, NoSQL, etc.
6.	Cloud Database	To store data, IBM Watson cloud is employed.	IBM DB2, IBM Cloudant etc.
7.	External API-1	Use of an external API and its intended use.	e.g., IBM Weather API.
8.	Machine Learning Model	A machine learning model's intended use.	Object Recognition Model, etc.
9.	Infrastructure (Server / Cloud)	Local Server Configuration for an Application Deployed on a Local System or a Cloud. Local Server Configuration, Cloud Server Configuration.	Local, Cloud Foundry, Kubernetes, etc.

Table-2 : Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Describe the utilised open-source frameworks.	**Opensource framework technology**
2.	Security Implementations	List every security and access control measure used, including firewalls.	e.g. SHA-256, Encryptions, IAM Controls, etc.
3.	Scalable Architecture	Justify the three-tier architecture's ability to scale.	Used Technology
4.	Availability	Justify the application's accessibility (using load balancers, distributed servers, etc., as examples).	Used Technology
5.	Performance	Application performance (number of requests per second, use of Cache, use of CDNs, etc.) was taken into account during design.	Used Technology

Is the system robust?

Yes, the data analysis software that is being built is reliable.

Is it highly modifiable?

Yes, the system is user-friendly and open to developers' modifications and improvements.

Is it scalable?

Yes, the system is flexible and can be expanded as needed.

Is it buildable?

It is possible to develop on a tight budget, indeed.