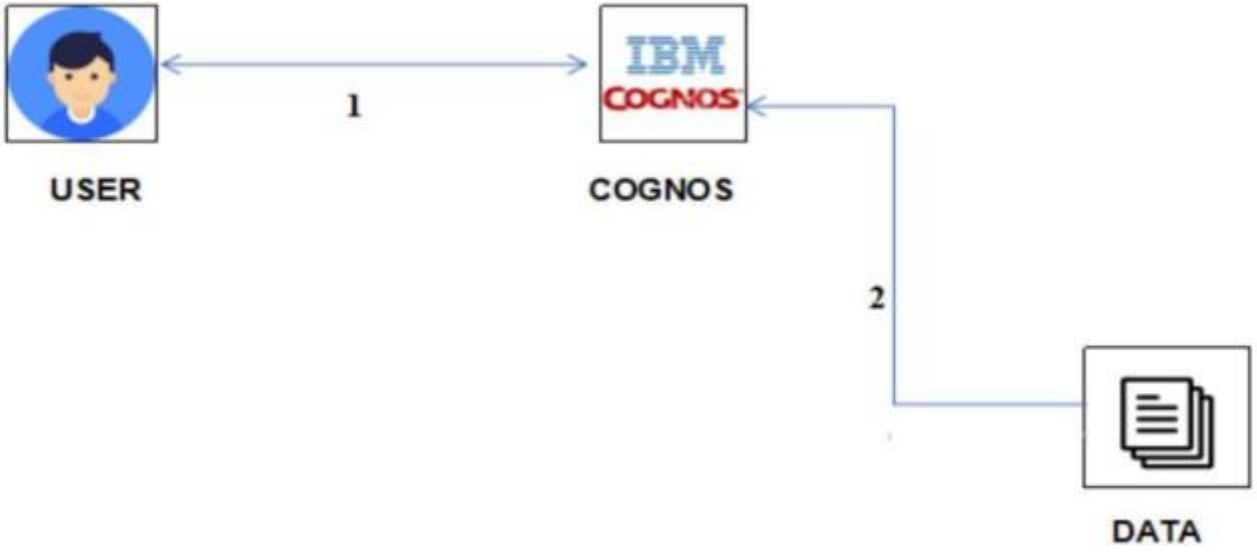
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	14 October 2022
Team ID	PNT2022TMID15537
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 during pandemics for offline mode

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Logging in as a farmer (common user) in the application	Java / Python
3.	Application Logic-2	Logging in as an admin in the application	IBM Watson STT service
4.	Application Logic-3	Logging in as a merchant the application	IBM Watson Assistant
5.	Database	Data about the crops is stored in database.	MySQL, NoSQL, etc.
6.	Cloud Database	IBM Watson cloud is used for storage	IBM DB2, IBM Cloudant etc.
7.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
8.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
9.	Infrastructure (Server / Cloud)	Application Deployment on Local System / 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	List the open-source frameworks used	Technology of Opensource framework

S.No	Characteristics	Description	Technology
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Technology used
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used

Is the system robust?

Yes, the software that is being developed for data analysis is robust

Is it highly modifiable?

Yes, the system is user friendly and ready for developers to make changes and enhance it

Is it scalable?

Yes, the system can be scaled up when there is a need and is flexible.

Is it buildable?

Yes, it is feasible to build at a low budget