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

Date	03 October 2022
Team ID	PNT2022TMID00213
Project Name	Project-Estimate Crop Yield using Data analysis
Maximum Marks	4 Marks

Technical Architecture:

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

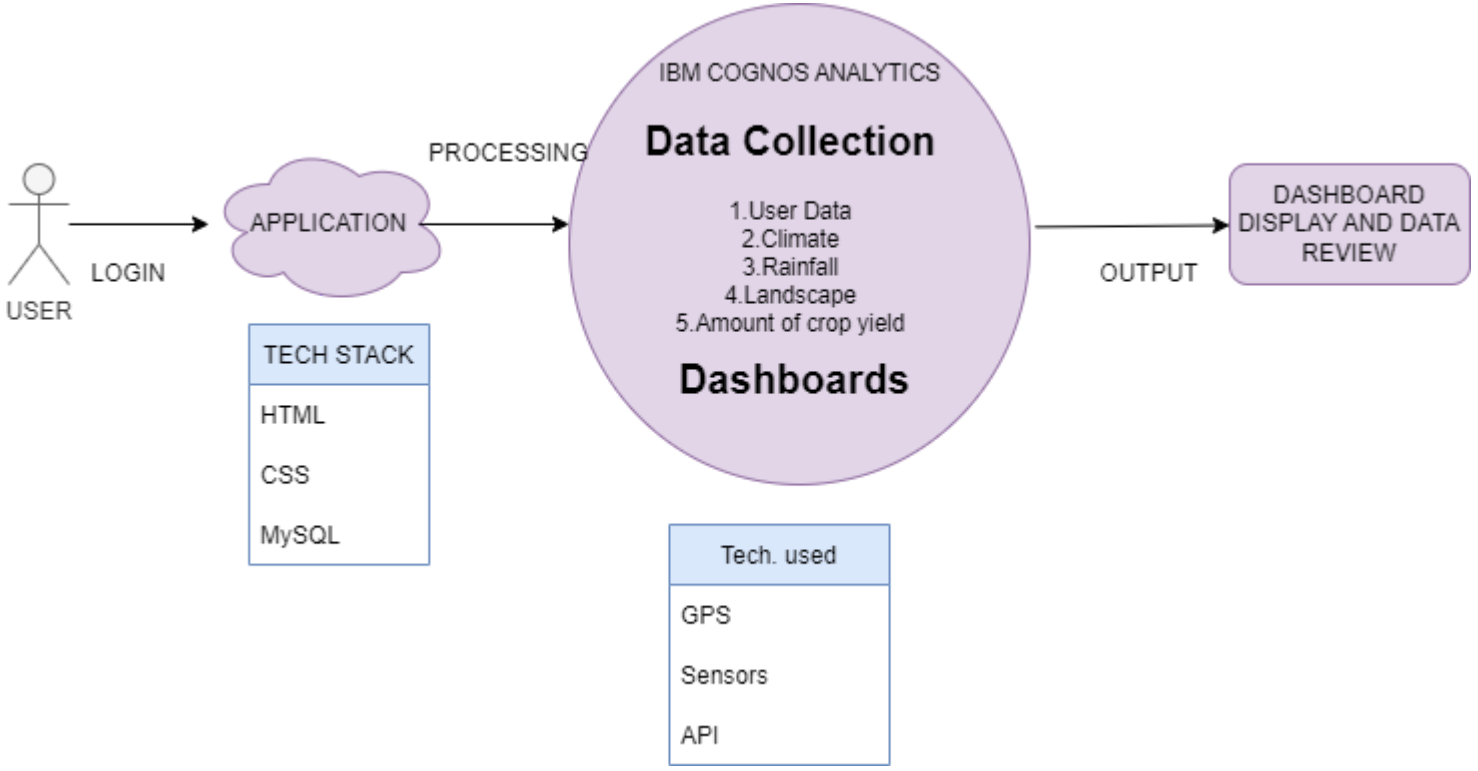

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User will interact with the application through a web page	HTML, CSS, JavaScript
2.	Predicting Climate Resilence	Anticipate and prepare for anomalous events that may happen unexpectedly.	Python and AI
3.	Environment Analysis	Analysing various environmental factors like soil,water etc.	IBM Cognos Analytics
4.	Predictive Dashboards	Creating dashboards based on inferences	IBM Cognos
5.	Database	Numerical Inferential data of various constraints	MySQL
6.	Cloud Database	Database Service to store inferential data	IBM DB2
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	Data API	IBM environmental intelligence API is used to understand climatic patterns	IBM Weather API, etc.
9.	Power API-2	Interaction with Power dataset that provides satellite data on temperature etc.	Power API.
10.	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	Power API,IBM Weather API
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	None
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Web page integrating ibm cognos and ibm db2
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	None

S.No	Characteristics	Description	Technology
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN’s) etc.	None