

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

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| Date | 17 October 2022 |
| Team ID | PNT2022TMID31901 |
| Project Name | Project - Estimate the crop yield using data analytics |
| Maximum Marks | 4 Marks |

Technical Architecture:

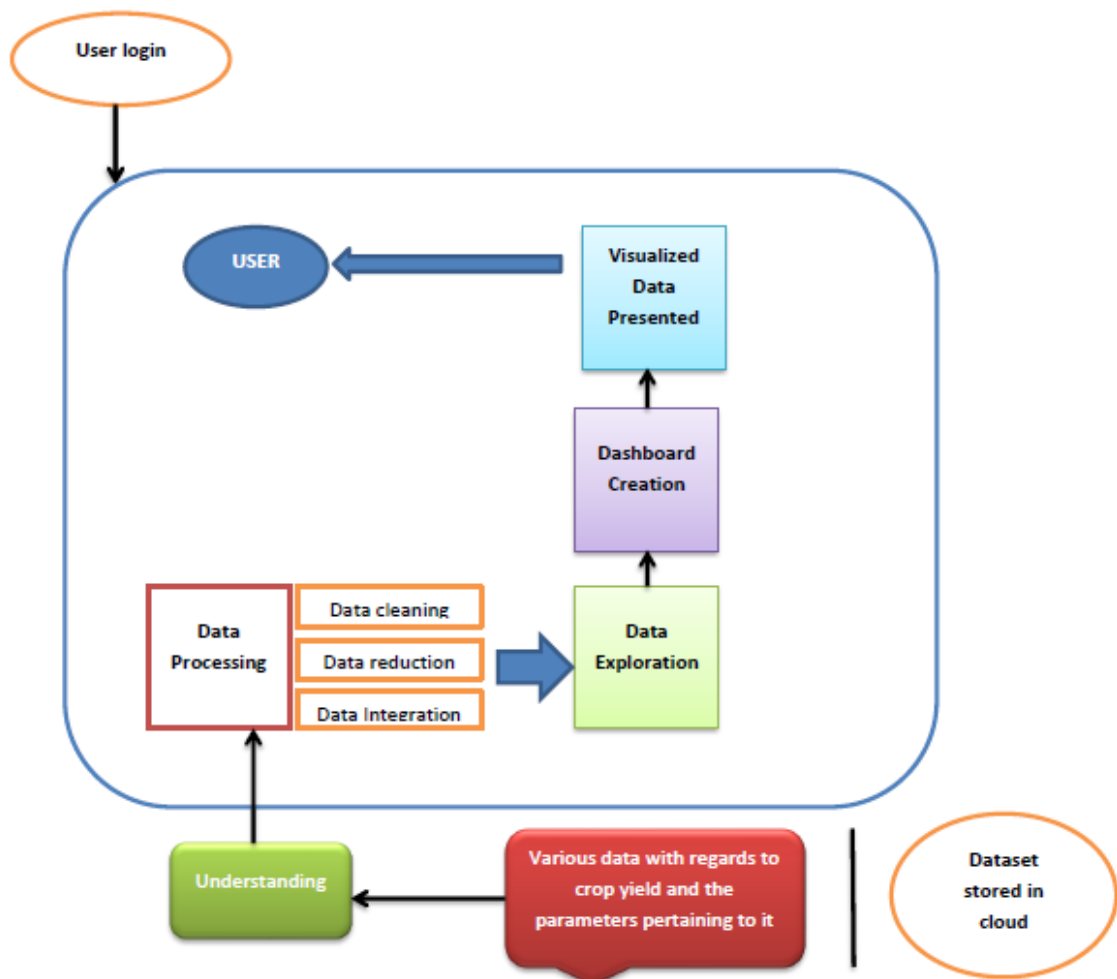


Table-1: Components & Technologies:

| S.No | Component | Description | Technology |
|------|---------------------------------|---|---|
| 1. | User Interface | How user interacts with application e.g. Web UI, Mobile App, Chatbot etc. | IBM Cognos |
| 2. | Application Logic - 1 | Logic for a process in the application. | Java |
| 3. | Application Logic - 2 | Logic for a process in the application. | Cognos Assistant |
| 4. | Database | Data Type, Configurations etc. | MySQL, NoSQL, etc. |
| 5. | Cloud Database | Database Service on Cloud. | COGNOSCS. |
| 6. | File Storage | File storage requirements. | IBM Block Storage or Other Storage Service or Local Filesystem. |
| 7. | External API-1 | Purpose of External API used in the application. | IBM Cognos Analytics REST API |
| 8. | External API-2 | Purpose of External API used in the application. | - |
| 9. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud. | IBM Cloud – IBM Cognos Analytics |

Table-2: Application Characteristics:

| S.No | Characteristics | Description | Technology |
|------|--------------------------|---|---|
| 1. | Open-Source Frameworks | List the open-source frameworks used | IBM Cognos Framework Manager |
| 2. | Security Implementations | List all the security / access controls implemented, use of firewalls etc. | Security architecture present |
| 3. | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | Business Intelligent architecture |
| 4. | Availability | Justify the availability of application (e.g. use of load balancers, distributed servers etc.) | Present on cloud and is present on demand |
| 5. | Performance | Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc. | Highly available and fast processing |