**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| --- | --- |
| Date | 27 October 2022 |
| Team ID | PNT2022TMID26524 |
| Project Name | Project – Nutrition Assistant Application |
| 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**

**Reference:** [**https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/**](https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/)

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| --- | --- | --- |
|  | |  | | --- | | Guidelines:   1. Include all the processes (As an application logic / Technology Block) 2. Provide infrastructural demarcation (Local / Cloud) 3. Indicate external interfaces (third party API’s etc.) 4. Indicate Data Storage components / services 5. Indicate interface to machine learning models (if applicable) | |

**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 |
| 2. | Application Logic-1 | Logic for a process in the application | Python |
| 3. | Cloud Database | Database Service on Cloud | IBM DB2, IBM Cloudant |
| 4. | File Storage | File storage requirements | IBM Block Storage or Other Storage Service or Local Filesystem |
| 5. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud  Local Server Configuration:  Cloud Server Configuration : | Local, Cloud Foundry, Kubernetes |

**Table-2: Application Characteristics:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Characteristics** | **Description** | **Technology** |
| 1. | Open-Source Frameworks | List the open-source frameworks used | Python flask |
| 2. | Security Implementations | List all the security / access controls implemented, use of firewalls etc. | SHA-256, Encryptions, IAM Controls |
| 3. | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | IBM cloud, IBM database |
| 4. | Availability | Justify the availability of application (e.g. use of load balancers, distributed servers etc.) | IBM cloud |
| 5. | Performance | Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN’s) etc. | IBM cloud |

**References:**

[**https://c4model.com/**](https://c4model.com/)

[**https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/**](https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/) [**https://www.ibm.com/cloud/architecture**](https://www.ibm.com/cloud/architecture) [**https://aws.amazon.com/architecture**](https://aws.amazon.com/architecture)

[**https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d**](https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d)