Project Design Phase-II Technology Stack (Arch

Itecture & Stack)

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| Date | 08 October 2022 |
| Team ID | PNT2022TMID39080 |
| Project Name | Project- Smart Lender- Applicant Credibility for Loan Approval |
| Maximum Marks | 4 Marks |

Technical Architecture:

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

Order processing during pandemics for online mode.

Reference: <https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/>

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| --- | --- |
| C:\Users\Admin\Desktop\ban.jpg | 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. | Python with applied Data science |
| 2. | Application Logic-1 | Logic for a process in the application | Python with applied Data science |
| 3. | Application Logic-2 | Logic for a process in the application | Python with applied Data science |
| 4. | Application Logic-3 | Logic for a process in the application | Python with applied Data science |
| 5. | Database | Data Type, Configurations etc. | Python |
| 6. | Cloud Database | Database Service on Cloud | IBM DB2. |
| 7. | File Storage | File storage requirements | IBM Block Storage or Other Storage Service or Local File system |

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| --- | --- | --- | --- |
| 8. | External API-1 | Purpose of External API used in the application | IBM Bank API, etc. |
| 9. | External API-2 | Purpose of External API used in the application | Aadhar API, etc. |
| 10. | Machine Learning Model | Purpose of Machine Learning Model | Data science |
| 11. | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud Local Server Configuration:  Cloud Server Configuration : | Local, Cloud etc. |

Table-2: Application Characteristics:

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Characteristics** | **Description** | **Technology** |
| 1. | Open-Source Frameworks | List the open-source frameworks used | Technology of Opensource framework |
| 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 |
| **S.No** | **Characteristics** | **Description** | **Technology** |
| 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) etc. | Technology used |

References: <https://c4model.com/>

<https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/> <https://www.ibm.com/cloud/architecture><https://aws.amazon.com/architecture>

<https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>