**Project Design Phase-I**

**Technology Stack (Architecture & Stack)**

|  |  |
| --- | --- |
| Date | 24 October 2023 |
| Team ID | 593505 |
| Project Name | AI System That Verifies User Identities Based On Their Online Behavior Patterns, Adding An Extra Layer Of Security |
| Maximum Marks | 4 Marks |

**Technical architecture:**

The stack architecture required to build a product based on the topic is mentioned in table 1 and table 2. The architectural diagram will be made later as an AI platform will have a lot of changes and it is industry practice to finish testing a base model and then moving to build architecture based on said model.

**Table-1: Components & Technologies:**

| **S.No** | **Component Description** | **Technology** |
| --- | --- | --- |
| 1 | User Interface | Web UI, Mobile App, Chatbot |
| 2 | Application Logic-1 | Python |
| 3 | Application Logic-2 | IBM Watson Speech to Text (STT) service |
| 4 | Application Logic-3 | IBM Watson Assistant |
| 5 | Database | MySQL, NoSQL, etc. |
| 6 | Cloud Database | IBM DB2, IBM Cloudant, etc. |
| 7 | File Storage | IBM Block Storage, Local Filesystem, etc. |
| 8 | External API-1 | IBM Weather API, etc. |
| 9 | External API-2 | Aadhar API, etc. |
| 10 | Machine Learning Model | Object Recognition Model, etc. |
| 11 | Infrastructure (Server/Cloud) | Local Server, Cloud (e.g., IBM Cloud Foundry, Kubernetes) |

Table 2:

**Table-2: Application Characteristics:**

| **S.No** | **Characteristics Description** | **Technology** |
| --- | --- | --- |
| 1 | Open-Source Frameworks | Utilize open-source frameworks (e.g., TensorFlow, PyTorch) |
| 2 | Security Implementations | Implement security controls like SHA-256, encryption, IAM, OWASP, etc. |
| 3 | Scalable Architecture | Implement a scalable architecture (e.g., microservices) |
| 4 | Availability | Ensure high availability with load balancers, distributed servers, etc. |
| 5 | Performance | Optimize performance with caching, Content Delivery Networks (CDNs), etc. |