**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| --- | --- |
| Date | 03 October 2022 |
| Team ID | PNT2022TMID34173 |
| Project Name | A Novel Method for Handwritten Digit Recognition System |
| 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 |
|  | User Interface | How user interacts with the web UI | App development |
|  | Application Logic-1 | Logic for a process in the application | Python  Objectives |
|  | Application Logic-2 | Logic for a process in the application | IBM Watson STT service |
|  | Application Logic-3 | Logic for a process in the application | IBM Watson Assistant |
|  | Database | Data Type | MNIST data set |
|  | Cloud Database | Database Service on Cloud | Cloud Object  Store service |
|  | File Storage | File storage requirements | IBM Block Storage |
|  | Infrastructure(Server / Cloud) | Application Deployment on Local System / Cloud Local Server Configuration:  Cloud Server Configuration: | Cloud Foundry |

**Table-2: Application Characteristics:**

| **S.No** | **Characteristics** | **Description** | **Technology** |
| --- | --- | --- | --- |
|  | Open-Source Frameworks | The open-source frameworks used | MNIST |
|  | Security Implementations | List all the security / access controls implemented | IBM cloud encryptions |
|  | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | IBM cloud architecture |
|  | Availability | Justify the availability of application (e.g. use of load balancers, distributed servers etc.) | Artificial neural networks used by the image recognition. |
|  | Performance | Design consideration for the performance of the application | Since the artificial neural networks can all most mimic the human brain and are a key ingredient in the image processing field. |