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

Date	03 October 2022
Team ID	PNT2022TMID020408
Project Name	Project – A novel method for handwriting digit recognition system
Maximum Marks	4 Marks

Technical Architecture:

Table 1:

The below table consists of the components and the technologies that are used to develop this application

S.NO	Component	Description	Technology
1	User interface	How the user interacts with the system-image and digital writing options	HTML+CSS
2	Database	Data type, configurations to store the data	MySQL, NoSQL, etc.
3	File Storage	File storage requirements	IBM Block Storage
4	Machine Learning Model	The goal of developing the machine learning model	To train the model to recognize the written digit
5	Infrastructure (Server/Cloud)	Resource to run and train the model	Local servers and cloud services
6	Programming language	Language used to build the model	Python
7	Cloud database	Maintaining a database in the cloud	IBM DB2, IBM Cloudant
8	External API	To integrate the application with other applications	IBM API, Aadhar AI

Table 2:

The below table consists of the application characteristics of the application that is developed.

S.NO	Component	Description	Technology
1	Performance	The model is predicted to have an accuracy of 98-99 percent using the typical neural network implementations	Requests per second, memory management and cache methods
2	Availability	The availability of the application should not be restricted to only particular technologies as it will affect the Business model. It can be deployed in the cloud for remote access with the help of cloud service providers.	IBM cloud, Distributed servers, Amazon cloud
3	Security implementations	The application dealing with the sensitive data of customers such as their bank details, personal details etc. should be encrypted with the latest and advanced encryption standards.	SHA-256, IAM controls, OWASP
4	Scalability	The architecture should be user friendly and simple. Scaling of the model should be done according to the need of the requirements	3-tier,micro services