Project Design Phase-II
Solution Requirements (Functional & Non-functional)

<u>**TEAM MEMBERS**</u>:

Team ID	PNT2022TMID43340
Project Name	A Novel Method for Handwritten Digit Recognition System
Maximum Marks	4 Marks
Team Members	Prem Kumar I M, Sathya Varshini R D, Susmeta A , Vishnudarshan S, Yashwant C M

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	**Website**	The code, graphics, and other components of a website are made available online through web hosting. Every website you've ever visited is on a server. The amount of space a website has on a server is determined by the type of hosting. The four primary types of hosting are shared, dedicated, VPS, and reseller.
FR-2	**User Registration**	Registration through Form Registration through Gmail Registration through LinkedIN
FR-3	**User Confirmation**	Confirmation via Email Confirmation via OTP
FR-4	**Digit Classifier Model**	Packages - tensorflow
FR-5	**MNIST Dataset**	MNIST is a handwritten digits dataset which can be used for training various image processing systems. It has 60,000 training and 10,000 testing examples.

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The recognition of handwritten characters is one of the major issues with pattern recognition applications. The processing of bank checks, filling out forms, and sorting mail are a few uses for digit recognition.
NFR-2	**Security**	The system produces a detailed description. parameters of the instantiation, which may elucidate details like the writing style, in in addition to the digit's classification. Each user should be able to sign in independently to the system using their unique username and password.

NFR-3	**Reliability**	The neural network uses the data to automatically determine rules for deciphering handwritten numerals. By increasing the number of training instances, the network may also learn more about handwriting and hence improve its accuracy. To recognise handwritten numbers, a variety of methods and algorithms can be employed, including Deep Learning/CNN, SVM, Gaussian Naive Bayes, KNN, Decision Trees, Random Forests, etc.
NFR-4	**Performance**	The delay in providing the information when hundreds of requests are given should be minimum.
NFR-5	**Availability**	Access to information is restricted to each user.

| NFR-6 | **Scalability** | Ten thousand concurrent site visitors should be manageable for the system. |