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

Date	03 October 2022
Team ID	PNT2022TMID15389
Project Name	Project – A Novel Method for Handwritten digit recognition system
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Pre-processing	The role of the pre-processing step is it performs various tasks on the input image.
FR-2	Segmentation	In this step an edge detection technique is being used for segmentation of dataset images.
FR-3	Feature Extraction	In the feature extraction stage redundancy from the data is removed.
FR-4	Classification and Recognition	feature vectors are taken as an individual input to each of the classifiers

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The usability of this Handwritten digit recognition system is to identify and understand hand written digits or characters automatically.
NFR-2	**Security**	The security will be high because since the handwritings has been recognized one cannot upload copy of others document
NFR-3	**Reliability**	The MNIST data set is widly used for this recognition process and it has 70000 handwritten digits.since it is reliable
NFR-4	**Performance**	The performance of this web application is high because we use Artificial neural networks to train these images and build a deep learning model.
NFR-5	**Availability**	Since it is web application one can use it easily and the availability is good .

NFR-6	**Scalability**	Even though the count of handwritings increased it wont be slow because we are using MNIST data set as it used for recognition process and it has 70000 handwritten digits.