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

Date	02 November 2022
Team ID	PNT2022TMID37259
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	User Registration	Registration through Form Registration through Gmail
FR-2	User Confirmation	Confirmation via Email
FR-3	Upload Image	User can upload the images from variety of sources like document, photos, etc.,
FR-4	Scanning	Scan the uploaded images that given from the user they might be in various forms like jpg, jpeg, pdf, etc.,
FR-5	Digit Classifier Model	The task is to classify a given image of a handwritten digit into one of classes representing integer values from 0 to 9, inclusively.
FR-6	Modified National Institute of standards and technology dataset	The abbreviation NIST stands for the MNIST dataset. It is widely used for this recognition process and it has 70000 handwritten digits and also training and testing in the field of machine learning.
FR-7	Evaluation	If we have to get successful output, the numbers must be recognized from the image.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	In pattern recognition application, the major drawback is recognition of handwritten characters.
NFR-2	**Security**	Data which is fed into the application will be secure and will not be shown to anyone else unless a password of the user's choice is entered.
NFR-3	**Reliability**	To solve the problem of detecting handwritten characters, the neural network is implemented to automatically recognize those handwritten characters.
NFR-4	**Performance**	We use OCR(optical character recognition) technology to recognize abnormalities in handwritten characters.
NFR-5	**Availability**	Easily available as software which is used by common people.
NFR-6	**Scalability**	It does not consume more time and high accuracy is observed.