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

Date	27 October 2022
Team ID	PNT2022TMID19219
Project Name	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	Image Data	Handwritten digit recognition refers to a computer's capacity to identify human handwritten digits from a variety of sources, such as photographs, documents, touch screens, etc., and categorise them into ten established classifications (0-9)
FR-2	Website	Web hosting makes the code, graphics, and other items that make up a website accessible online. A server hosts every website you've ever visited. The type of hosting determines how much space is allotted to a website on a server.
FR-3	Digit Classifier Model	To train a convolutional network to predict the digit form an image, use the MNIST database of handwritten digits. Get the training and validation data first.
FR-4	Cloud	The cloud offers a range of IT services, including virtual storage, networking, servers, databases, and applications. In plain English, cloud computing is described as a virtual platform that enables unlimited storage and access to your data over the internet.
FR-5	MNIST dataset	The abbreviation of MNIST stands for Modified National Institute of Standards and Technology dataset. It is a collection of 60,000 tiny square grayscale photographs, each measuring 28 by 28, comprising handwritten single digits between 0 and 9.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	One of the very significant problems in pattern recognition applications is the recognition of handwritten characters. Applications for digit recognition include filling out forms, processing bank checks, and sorting mail.

NFR-2	**Security**	The system generates a thorough description of the instantiation parameters, which might reveal information like the writing style, in addition to a categorization of the digit. The generative models are capable of segmentation driven by recognition. The procedure uses a relatively.
NFR-3	**Reliability**	The samples are used by the neural network to automatically deduce rules for reading handwritten digits. Furthermore, the network may learn more about handwriting and hence enhance its accuracy by increasing the quantity of training instances.
NFR-4	**Performance**	The application is expected of having response which is derived in a quick manner.
NFR-5	**Availability**	Since the application is hosted in the cloud, we can expect the application to be available all over the world where people can have access to the internet.
NFR-6	**Scalability**	The application is expected to handle huge chunks of data without having the need to compromise on performance and accuracy of the end result.