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

Date	18 October 2022
Team ID	PNT2022TMID18492
Project Name	A Novel Method For Handwritten Digit Recognition Model
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement	Sub Requirement (Story / Sub-Task)
FR-1	Input image	We need to give image as an input to recognize the digits
FR-2	Algorithm	We need a machine learning algorithm to implement this project. we use CNN to predict the digits
FR-3	Website	We require a GUI for the users to get accessed to our service
FR-4	Dataset	The MNIST database (Modified National Institute of Standards and Technology Database) is a large collection of handwritten digits. We have a training set of 60,000 examples and a test set of 10,000 examples. It is a subset of the larger NIST Specialty Database and contains black and white images of handwritten digits.
FR-5	Cloud	"The cloud" refers to servers that are accessed over the Internet, and the software and databases that run on those servers. Cloud servers are located in data centers all over the world. By using cloud computing, users and companies do not have to manage physical servers themselves or run software applications on their own machines.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The major reason why someone would use our service is to reduce the difficulties faced while recognizing the handwritings written by different peoples. For eg: bank cheques.

NFR-2	**Security**	Our service will make use of login authentication to make sure the users have some form of privacy.
NFR-3	**Reliability**	Algorithm will have an accuracy of 90%, further recognize the handwritten digits based on the rules defined by uswhich will be based upon the general handwritten digits.
NFR-4	**Performance**	Our website will be efficient and accurate to the user.
NFR-5	**Availability**	Our website will be made public for everyone to use.
NFR-6	**Scalability**	In future, the website will be able to retain the knowledge of previous user's data and further advance in the process of digit recognition.