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

Date	15 October 2022
Team ID	PNT2022TMID40332
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	User Registration	Registration through Gmail
FR-2	User Confirmation	Confirmation via Email
FR-3	User Login	Login via registered Username and Password
FR-4	Uploading images	Able to input the handwritten images into the application
FR-5	Input correlation	Image Correlation is a technique used to recognize characters from images. Collecting data and prepare it for training
FR-6	Feature extraction	Feature extraction is analysing the images and deriving some characteristics from these images that identify each specific element
FR-7	Recognizing digits	Display the recognized digits from the input images to the user.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The application needs to respond smoothly so that the user can use the application effectively and need to be an user friendly application. To recognize the digits from bank cheque, papers, numeric entry in forms etc.
NFR-2	**Security**	Ensure the security by authenticating the users using their username and password.
NFR-3	**Reliability**	This software will work reliably for low resolution images and not for graphical images
NFR-4	**Performance**	Needs to respond fast and provide the output even for complex handwritings. The input image will be recognized with an accuracy of about 90% and more
NFR-5	**Availability**	Need to available for all users at any time and can able to process the handwritten image as input to the application easily
NFR-6	**Scalability**	It consist thousands of handwritten digits that have been used in the development of programs
		It is able to handle N numbers of users at the same time with faster response and recognize the digits effectively