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

| Date | 03 October 2022 |
|---|---|
| Team ID | PNT2022TMID42634 |
| 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) |
|---|---|
| FR-1 | Image Data:An image data include digital images curated for testing,training and evaluating the performance of machine learning and artificial intelligence algorthims. |
| 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. Shared, dedicated, VPS, and reseller hosting are the four basic varieties. |
| FR-3 | Digit classifier model:Use the MNIST database of the handwritten digits to train the convolutional network to predict the digit given an image |
| 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. |

**Non-functional Requirements:**

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

| FR No. | Non-Functional Requirement | Description |
|---|---|---|
| NFR-1 | **Usability** | The proposed system gives good results for images that contain handwritten text written in different styles, different size and alignment With varying background. |
| NFR-2 | **Security** | Only authorized people can access the system data And modify the database. |
| NFR-3 | **Reliability** | The Database is frequently updated with handwriting of different styles and size and will Rollback when any update fails. |

| NFR-4 | **Performance** | The proposed system is advantageous as it uses fewer features to train the neural network, Which results in faster convergence. |
|-------|-----------------|----------------------------------------------------------------------------------------------------------------------------------|
| NFR-5 | **Availability** | The system functionality and services are available for use with all operations. |
| NFR-6 | **Scalability** | The website traffic limit must be scalable enough to support 2 lakhs users at a time. |