Project Design Phase-II

Solution Requirements (Functional & Non-functional)

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| Date | 15 October 2022 |
| Team ID | PNT2022TMID51438 |
| Project Name | Project - A Novel Method for Handwritten Digit  Recognition System |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

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| **FR No.** | **Functional Requirement** | **Sub Requirement** |
| FR-1 | **Input** | * Must be able to take the handwritten **inputs** in the form of the **images**. (JPG, PNG) |
| FR-2 | **Error** | * System shall show the error message to the user when the **input** given is **not** in the **required format**. |
| FR-3 | **Detect Target** | * System should **detect characters** present in the image. * Must be able to perform classification and identification algorithms and should recognize the handwritten input |
| FR-4 | **Output** | * System should **retrieve characters** present in the image and display them to the user. * Must be able to display the accurate output in text format. |

**Non-functional Requirements:**

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | * Applications for digit recognition include filling out forms, processing bank checks, and sorting mail. * It can also used for blind-people by using sound input. |
| NFR-2 | **Security** | * Banking sector where it can be used to maintain   the security pin number safely. |
| NFR-3 | **Reliability** | * This software will work reliably for low resolution image and not for graphical images * The standard implementations of neural networks achieve an accuracy of approximately |
| NFR-4 | **Performance** | * Software will perform its intended function for a large period of sufficient time and also it will operate in a secured environment without any   failures. |
| NFR-5 | **Availability** | * This system will retrieve the handwritten text regions only if the image contains written text in   it. |
| NFR-6 | **Scalability** | * System can work normally under any amount of   inputted handwritten data. |