PROJECT DESIGN PHASE - II
Solution Requirements
(Functional & Non-functional)

Date	28 October 2022
Team ID	PNT2022TMID51528
Project Name	Detecting Parkinson's Disease Using MachineLearning
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	Analyzing Symptoms	➢ Stiffness in muscles ➢ Rigidity and slowness in body movements ➢ Breaking of voice and shivering in tone ➢ Difficulty with walking ➢ Emotional and behavioral changes ➢ Dementia and depression
FR-2	Collecting voice dataset	➢ Speech and voice recordings of the patient iscollected. ➢ Various voice parameters are measured.
FR-3	Working on dataset	➢ Voice recording is measured against theparameters. ➢ Data is preprocessed and dependent variablesare found. ➢ Data is split into train and test data. ➢ Training and testing is done and the model isevaluated.

FR-4	Applying SVM algorithm	➢ SVM finds a hyper-plane that creates a boundary between the types of data. ➢ We plot each data item in the dataset in an N-dimensional space. ➢ The algorithm tries to find the optimal hyperplane which can be used to classifydataset into healthy person or person suffering from Parkinson.
FR-5	Providing insights of dataset	➢ Raw data collection and sharing of dataand systems are essential factors in hospital management. ➢ According to these data appropriatemeasures can be taken. ➢ Providing data set without error. ➢ Providing treatment for the patients who aresuffering from Parkinson.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	➢ Usable systems are straightforward to use by as many people as possible, both in caseof either end users or administrators to view the hospital records when needed.
NFR-2	**Security**	**Patient identification:** ➢ To recognize and analyze the patient perfectly.
NFR-3	**Reliability**	➢ Understanding the current trend and working on to it to solve the problem in anefficient manner. ➢ Being software as a service, HMS is highly resilient to any technology disruptions, downtime, or crashes experienced by othertechnology systems.
NFR-4	**Performance**	**Response time:** ➢ Providing acknowledgment in minimal time about the patient information. **Comfortability:** ➢ To ensure that the guidelines andaccessibilities are followed.
NFR-5	**Availability**	➢ Better coordination with the hospital management to provide all its resources accessible when needed. ➢ Accessibility of all medical facilities.
NFR-6	**Scalability**	➢ Make sure that the work is done in moreefficient way with the appropriate resources. ➢ Make complex decisions understandablewith proper data.