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

Date	03 October 2022
Team ID	PNT2022TMID20576
Project Name	Project – Early Detection of Chronic Kidney Disease
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	Home Page (Login Page)	• Introduction page of the website. • Symptoms and steps to cure will be displayed. • If the user already exists asks to **login** or else redirects to **Sign Up.**
FR-2	User Sign Up Page	The user had to enter the username, phone number and password.
FR-3	User Verification	After getting the phone number the OTP will be sent via SMS and it will be verified.
FR-4	Dataset Collection	Collect the data set related to Chronic Kidney Disease and process the data.
FR-5	Training the Model	By using the processed data the model will be trained again and again by using back propagation techniques.
FR-6	Testing the Model	By using 20% of dataset the model will be tested.
FR-7	Prediction	By using the data collected from the tested model the result is predicted.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Creating a machine learning model that uses the attributes of medical tests taken for different purposes to detect chronic kidney disease at early stage.
NFR-2	**Security**	The reports are maintained confidentially to the customer.
NFR-3	**Reliability**	The model will identify and detect the kidney disease earlier, so more number of clients will approach us and it results how the model is more reliable to the customers.
NFR-4	**Performance**	By using DNN, we can predict the chronic kidney disease with more than 95% of accuracy. In the DNN we have more hidden layers and hence its accuracy

		also high.
NFR-5	**Availability**	It is used a website(UI) and trained model to predict it will work at any time.
NFR-6	**Scalability**	This model can be expanded to include more attributes for more accurate detection. Training the model with even more attributes will increase the efficiency further.