Project Design Phase- I
Proposed Solution

Date	**03 October 2022**
Team ID	**PNT2022TMID46559**
Project Name	**Early detection of Chronic Kidney Disease using Machine Learning**
Maximum Marks	**2 Marks**

Proposed Solution:

S.no	Parameter	Description
1.	Problem Statement(Problem to be solved)	● Chronic Kidney Disease (CKD) is a major medical problem hence Chronic kidney disease prediction is one of the most important issues in healthcare analytics. ● 10% of the population worldwide is affected by chronic kidney disease (CKD), and millions die each year because they do not have access to affordable treatment. ● Chronic kidney Disease can be cured, if treated in the early stages.
2.	Solution Description	● The idea is to detect the presence of kidney disease through machine learning based classification models. ● Early detection of chronic kidney

		disease is identified through various ML Algorithms such as Logistics Regression,Random Forest, Decision Tree, SupportVector Machines and KNN. ● Using these techniques, each algorithm's effectiveness is evalutated. ● A web app is developed that asks basic user details about kidney details and result is produced
3.	Novelty	● Aims to find the best machine learning model for the early prediction of chronic kidney disease by analyzing the essential parameters and comparing their predictive accuracies. ● Then collaborate the best machine learning model to an interactive user-interface which helps in the early detection of CKD and provide cure.
4.	Social Impact	● The main aim of this application is early prediction of chronic kidney disease that can possibly stop or slow the progression of this disease to the end stage.
5.	Business Model	● The widespread use of Machine Learning of predicting the CKD in the Medical Industries promotes medical innovation, lowers medical expenses, and improves medical quality. To cure the CKD patients atearly stages. ● We can generate revenue through

		direct customers or can also collaborate with the health care sector and generate revenue from their customers.
6.	Scalability of solution	• Early prediction of CKD using Machine Learning that is more efficient to analyze the disease so that it can be cured on time. • We can also use image data and apply Deep Learning techniques such as Multilayer Perceptron(MLP) etc., which will provide an improved accuracy than machine learning.