Project Design Phase-I
Proposed Solution Template

Date	23 September 2022
Team ID	PNT2022TMID35275
Project Name	Project - xxx
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Chronic kidney disease involves conditions that damage and destabilize the kidneys that ultimately leads to anemia, nerve damage, body failure,etc. The ultimate aim of the project is to diagnose whether the user has chronic kidney disease or not at early stages. The testing methods may include results taken for other purposes and used to detect CKD. This machine learning model will be used to predict CKDs earlier than the presently existing methods.
2.	Idea / Solution description	Building an efficient interface to help users know if they have CKD by using different predictive models and providing the most accurate result by making use of the most informative parameters in the dataset that are derived from blood and urine analysis as well as other contributing/potential factors.
3.	Novelty / Uniqueness	The solution makes use of only the most informative attributes that are essential to predict the class and neglects the redundant attributes thereby having higher performance. It makes use of raw data which contains missing as well as extreme values to better handle real world data. It is an user friendly application that facilitates interaction between users and hospitals and test centres and helps track the treatment. It helps improve users' mental and physical health through various suggestions. It increases awareness and eliminates fear through clarity of information about CKD, treatment, expenses as well as health policies.
4.	Social Impact / Customer Satisfaction	Test results from other results can be used to detect the presence of CKD and hence customers with no symptoms can also be detected if they have CKD or not. Predictions are most accurate using different machine algorithms. Precaution and treatments are provided benefitting all customers. From

		normal customers to existing patients, everyone is benefitted.
5.	Business Model (Revenue Model)	B2C Model – Business to Consumer model
6.	Scalability of the Solution	Value of some parameters can be affected by prescribed drugs. For instance, patients may be prescribed a drug to control blood pressure. In this case, healthy as well as patients with CKD will record approximate values of blood pressure, which in turn weakens predictive power of blood pressure parameters. Therefore, collecting information about the medications and considering it, will lead to a better prediction model. Taking into account the combination of parameters instead of a single parameter at each splitting process could lead to better prediction of CKD. The solution can be developed to benefit a wider range of people by acquiring data from many other hospitals and regions.