Project Design Phase-I
Solution Architecture

Date	7 October 2022
Team ID	PNT2022TMID12535
Project Name	Project - Early Detection of Chronic Kidney Disease using Machine Learning
Maximum Marks	4 Marks

Solution Architecture:

At a high level of abstraction, the architecture for the prediction of chronic kidney disease is to collect the required data from the user and to run on a pre-trained machine learning model to get the prediction results. While it may seem simple with two steps, there are many sub-processes involved and various details to be taken care of while developing the product. The user interacts only with the web application to enter the details required and to view the prediction results. Developing the web application can be compartmentalised into front end, back end, and the machine learning model.

Front-end

The front-end is the interface the user sees and interacts with. It should be user-friendly and must not allow much room for question and confusion on part of the user. The UI must be consistent, familiar, and suggestive.

Languages and frameworks:

- HTML
- CSS
- JS
- Bootstrap
- Tailwind

Back-end

The backend deals with server-side development of the web application.

Languages and frameworks

- Python
- Flask

ML model

The machine learning model is trained with previously available dataset. The dataset is pre-processed and split to train and test dataset for improved accuracy. Suitable algorithm is then run on the user provided data to obtain the final results after evaluation.

Languages and frameworks

- Python and its libraries

Solution Architecture Diagram: