

**PROJECT DESIGN PHASE-II**  
**SOLUTION REQUIREMENTS**

|               |  |
|---------------|--|
| Date          | 11 October 2022  |
| Team ID       | PNT2022TMID15455   |
| Project Name  | Early Detection of Chronic Kidney Disease Using Machine Learning |
| 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   | User Registration             | Registration through Form<br>Registration through Gmail.  |
| FR-2   | User Confirmation             | Confirmation via Email<br>Confirmation via OTP<br>Confirmation via Phone number.                                  |
| FR-3   | Capturing image               | Capture the image of the kidney by using<br>Radioactive material and check the parameter of the<br>scanned image. |
| FR-4   | Capturing image               | Upload the image for the prediction of the disease in<br>the kidney.  |
| FR-5   | Kidney Identification         | Identify the kidney and predict the disease in the<br>kidney.   |
| FR-6   | Image Description             | Suggestion the best method for diagnosing the<br>disease.   |

**Non-functional Requirements:**

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

| <b>FR No.</b> | <b>Non-Functional Requirement</b> | <b>Description</b>   |
|---------------|-----------------------------------|--|
| NFR-1         | Usability                         | Datasets of all the kidney is used to find the disease that present in the kidney.                           |
| NFR-2         | Security                          | The information belongs to the user and kidney are secured highly without vulnerable to the malicious users. |
| NFR-3         | Reliability                       | The dataset collected on the kidney should be important for predicting the disease in the kidney.            |
| NFR-4         | Performance                       | Performance is based on the collected dataset which is used for disease prediction.                          |
| NFR-5         | Availability                      | It is available for all the user who tend to predict the disease in the kidney.                              |
| NFR-6         | Scalability                       | Increasing the analysis range for the prediction of disease in the kidney.                                   |