Project Design Phase-II
Technology Stack (Architecture & Stack)

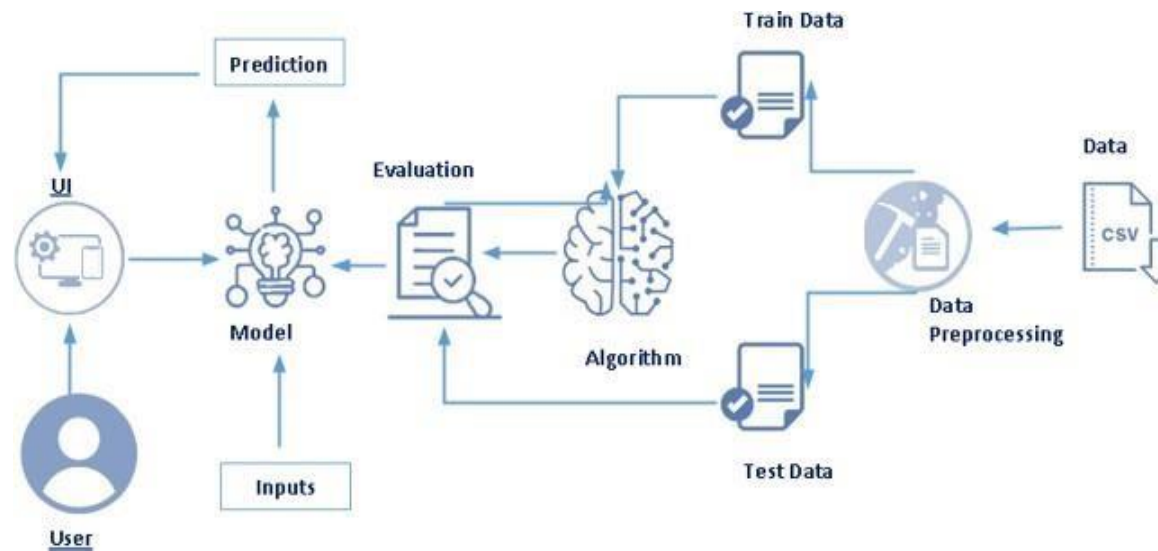| Date	14 October 2022
Team ID	PNT2022TMID15092
Project Name	Early Detection of Chronic Kidney Disease using Machine Learning
Maximum Marks	4 Marks

Technical Architecture:

Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	User interact with our application through web user interface	HTML, CSS and Python flask
2.	Application Logic-1 Login.	When the user clicks on the login button, he/she is directed to login page, if they are registered already.	HTML, CSS and Python flask
3.	Application Logic-2 Registration	When the user clicks on the Register button, he/she is directed to Register Page for further process.	HTML, CSS and Python flask
4.	Application Logic-3 Test Vitals Form	After Logged in, when the user clicks on the test vital form button, he/she directed to the form page to enter the vitals for prediction.	Front end-HTML, CSS, MySQL, Python flask Backend-Python
5.	Database	Data Type-String, Numeric	MySQL
6.	Cloud Database	Database Service on Cloud	IBM
7.	File Storage	File storage requirements	NIL
8.	External API-1	Purpose of External API used in the application	NIL
9.	External API-2	Purpose of External API used in the application	NIL
10.	Machine Learning Model	Get the data from the user and predict the data with tested and trained dataset models	Data Recognition Model, etc.
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration:	NIL

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	International Business Machines.	Cloud
2.	Security Implementations	Access permission for login page using CAPTCHA	Encryptions
3.	Scalable Architecture	The key of Three tier architecture is improving scalability.	Three Tier architecture
4.	Availability	Load balancer or ADC is the key component that ensures high availability by sending request.	Load balancer
5.	Performance	The system should be able to handle large number of users at the time.	Load balancer