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

Date	03 October 2022
Team ID	PNT2022TMID25581
Project Name	Early Detection of Chronic Kidney Disease using Machine Learning
Maximum Marks	4 Marks

Technical Architecture:

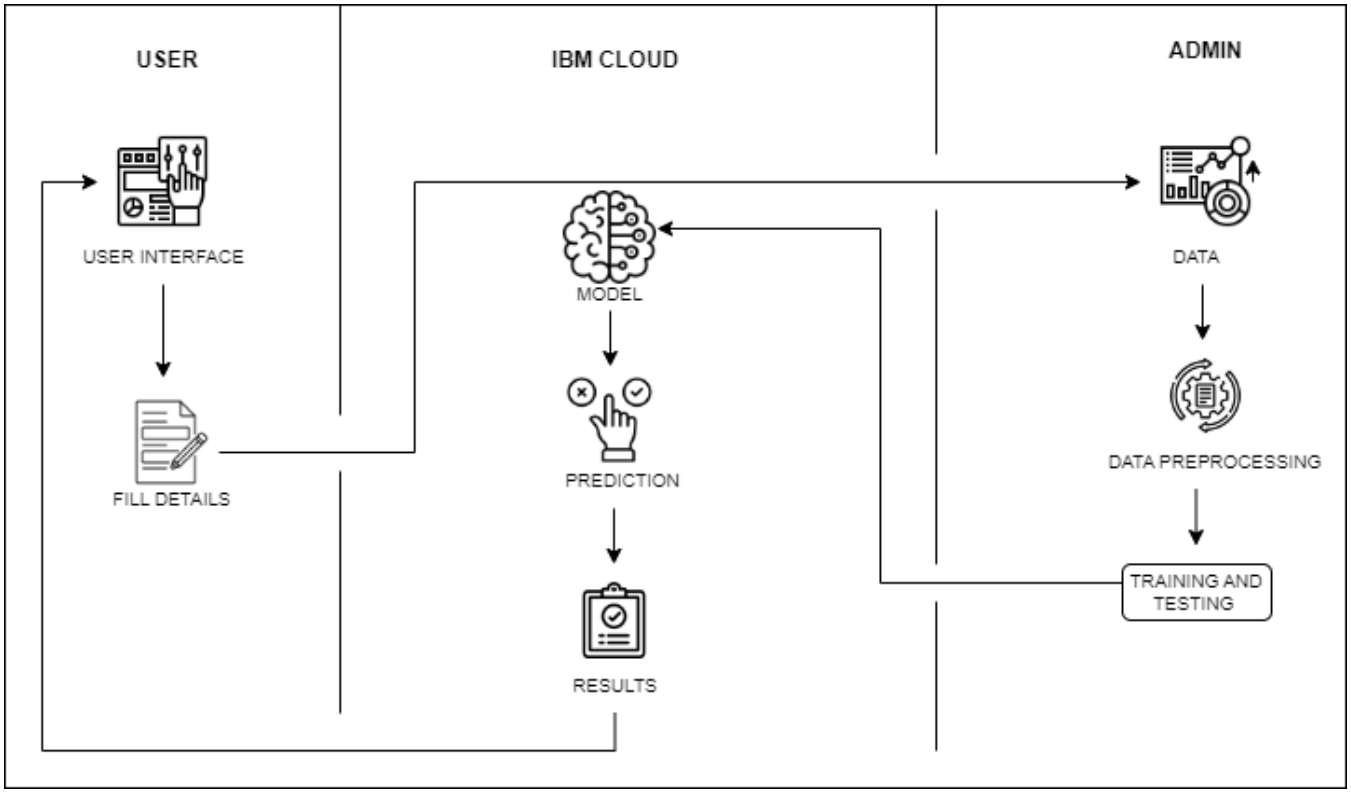

Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	User will interact with the application via Web UI.	HTML, CSS, Python Flask
2.	Application Logic-1 Register	Registration Page – When the user is using the website for the first time.	HTML, CSS, Python Flask
3.	Application Logic-2 Login	Login Page – When the user already has entered his/her details	HTML, CSS, Python Flask
4.	Application Logic-3 Entering Vital details	After user has logged in, he/she has to enter the details in the form to get prediction results.	HTML, CSS, Python Flask
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 user data and then predict the results and provide it to the user	Various Machine Learning Models
11.	Infrastructure (Server / Cloud)	Cloud Server Configuration	IBM Cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	International Business Machines	Cloud
2.	Security Implementations	Authentication using CAPTCHA	Encryption
3.	Scalable Architecture	More information can be taken from the user to improve accuracy of predictions	Three-Tier Architecture
4.	Availability	Available as Web UI. Available all the time	Web Development
5.	Performance	It will be able to handle large number of users at the same time	Load Balancer