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

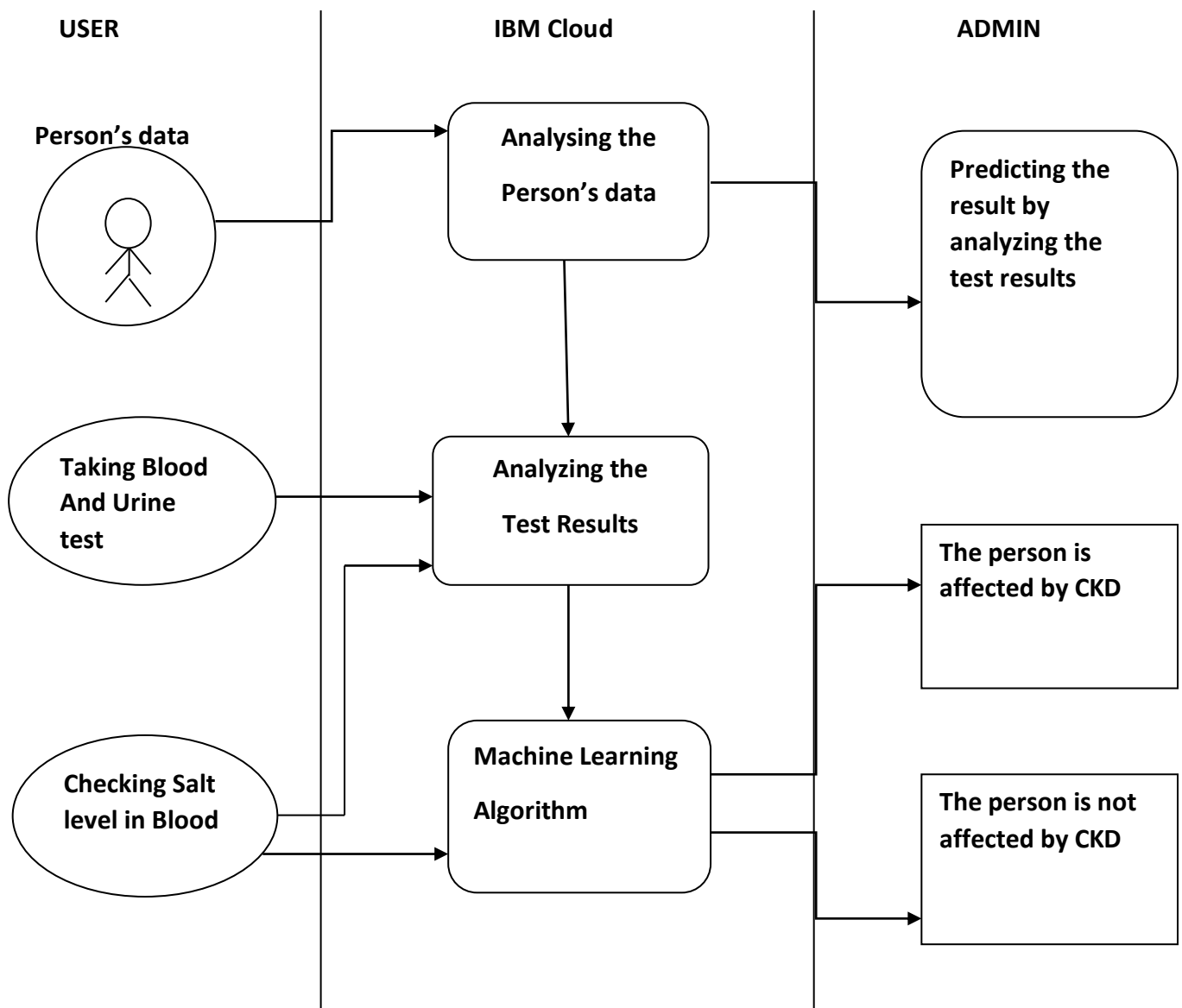|	
Date	03October 2022
Team ID	PNT2022TMID39690
Project Name	Project – Early detection of Chronic Kideny Disease using Machine Learning Algorithm
Maximum Marks	4 Marks

Technical Architecture:

USER

IBM Cloud

ADMIN

Person's data

Analysing the Person's data

Predicting the result by analyzing the test results

Taking Blood And Urine test

Analyzing the Test Results

The person is affected by CKD

Checking Salt level in Blood

Machine Learning Algorithm

The person is not affected by CKD

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript
2.	Data preprocessing	Cleaning the dataset(Handling the missing values)	Java / Python
3.	Splitting the data	Splitting the dataset into train and test data	Java / Python
4.	Test the model	Testing the model using test data	Java / Python
5.	Evaluation	Evaluating the built model(accuracy,confusion matrix)	Java / Python
6.	Machine Learning Model	The ML model which takes the input parameter given by the user and predict the result	IBM Watson Machine Learning service
7.	Infrastructure (Server / Cloud)	Application Deployment on Cloud	IBM Watson services(Cloud object storage service,Watson studio,machine learning)

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask	Flask micro web framework used for developing web application
2.	Scalable Architecture	The website should be able to handle influx or reduced traffic at any given point	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Availability	The application can be accessed by users with an internet connection from	IBM Cloud

S.No	Characteristics	Description	Technology
		anywhere at anytime	
4.	Performance	Multiple users should be able to access the application at the same time	Technology used
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used