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

Date	28 October 2022
Team ID	PNT2022TMID45350
Project Name	Car Resale Value Prediction
Maximum Marks	4 Marks

Technical Architecture:
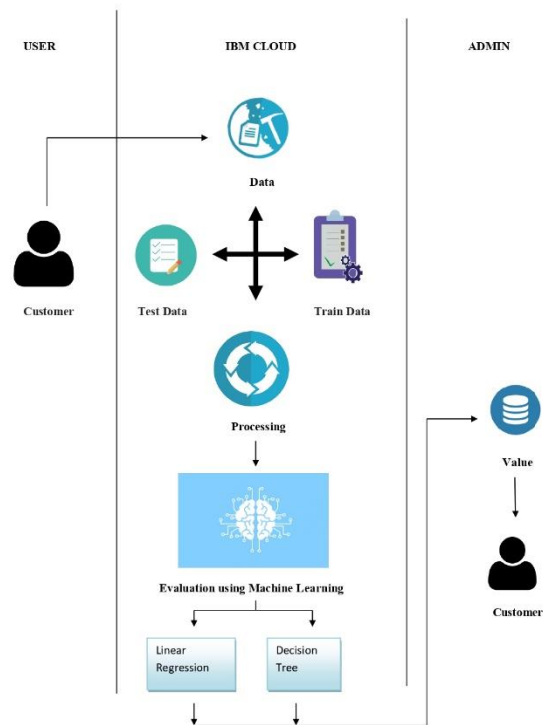
Guidelines:

1. **User –** Customer gives his car details in the application as photos, videos, and car related documents in the application.
2. **IBM Cloud –** Customer car details are tested and trained in it using different machine learning algorithm like Linear Regression, Decision Tree, SVM algorithm, Navie Bayes algorithm, KNN algorithm and so on.
   After evaluation of data , we will got the approximate value of the car.
3. **Admin –** After evaluation, admin shares the approximate car value to the customer in the application.

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web Application	HTML, CSS, JavaScript
2.	Application Logic-1	Customer create a login.	Python
3.	Application Logic-2	Customer upload his vehicle photos and details in the application.	Python
4.	Database	Store the customer login and vehicle details in database.	MySQL
5.	Cloud Database	Value predict of the car is done using machine learning algorithm and the process is stored In cloud and predicted car value.	IBM Cloudant
6.	File Storage	Car details, Login details.	Local Filesystem
7.	Machine Learning Model	Machine Learning Algorithms like Regression is used to predict the value of the car. We use different algorithms like Linear Regression, Decision Tree, SVM Algorithm, Naive Bayes algorithm, KNN algorithm to find the accuracy value of the car	Object Recognition Model
8.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration : Customer local store data in local network. Cloud Server Configuration : Car details and predict process and car value are in cloud	Kubernetes

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-Source Framework is a code that is designed to be publicly accessible.	Python Flask
2.	Security Implementations	Security is implemented to safe the customer data in cloud.	Encryptions, IAM Controls, OWASP
3.	Scalable Architecture	Scalability is the property of a system to handle a growing amount of work by adding resources to the system.	IBM event streams
4.	Availability	Availability is the extent to which an application is operational, functional and usable for completing the user task.	IBM Cloud environment
5.	Performance	Performance indicates how the application is functioning and how responsive to the user.	IBM Cloud environment