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

Team ID	PNT2022TMID31437
Project Name	Project - Smart Lender - Applicant Credibility Prediction for Loan Approval
Maximum Marks	4 Marks

Technical Architecture:

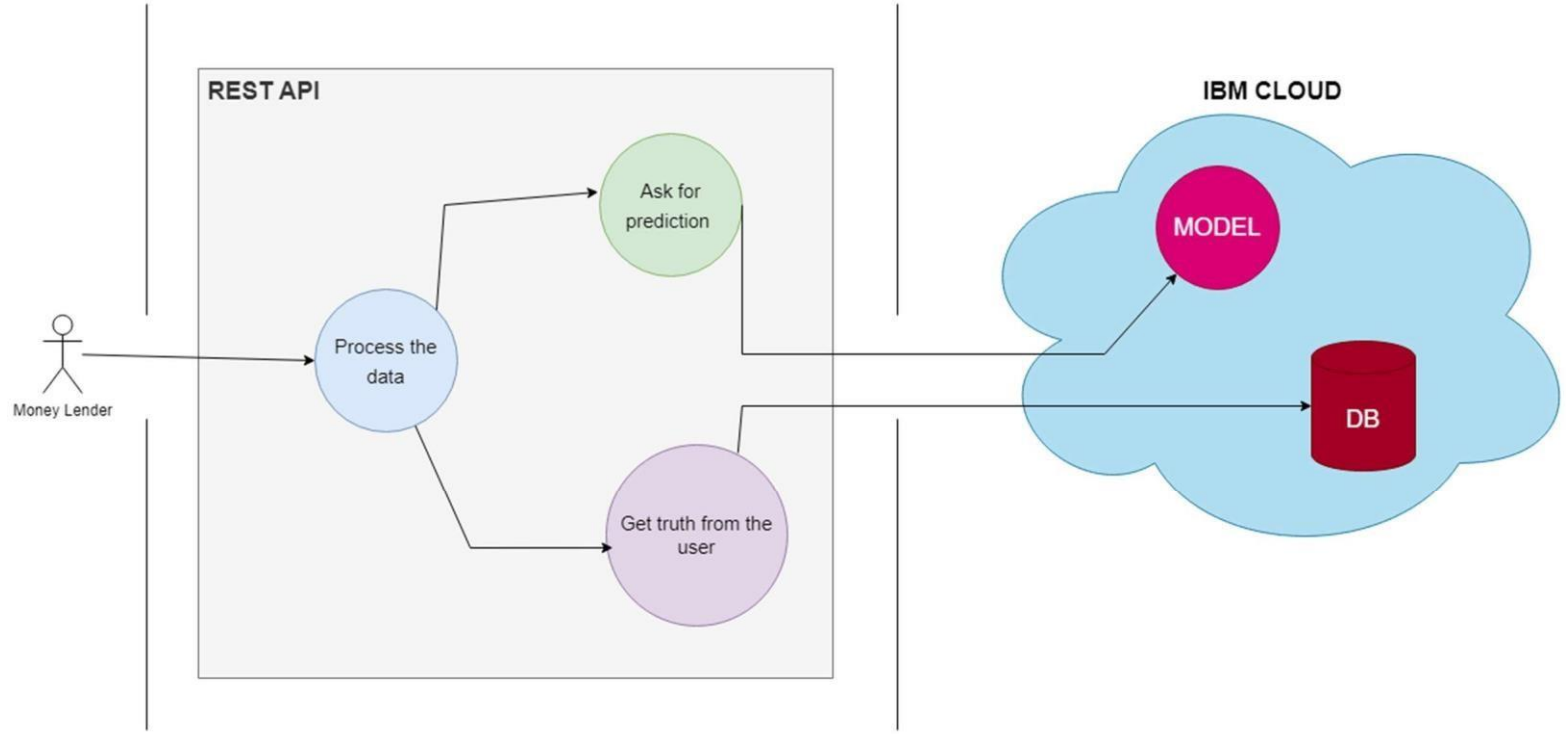

Table-1: Components & Technologies:

S, No	Component	Description	Technology
1.	User Interface	Web Application	JavaScript, React JS, React Styled Components, Tailwind CSS
2.	Building User Application	Getting user information from the UI	JavaScript, ReactJS.
3.	REST API	Processing the user information and sending it to the server	JavaScript, Node JS, Express JS
4.	Chatbot	Handles basic queries of customer on loan approval	IBM Watson Assistant
5.	Data Pre-processing and Visualization	Data Munging/Wrangling, Data Visualization and Analysis	NumPy, Pandas, -learn, Matplotlib, Seaborn
6.	Cloud Database	Storing User information which could be used for further user analytics	IBM Cloud
7.	Machine Learning Model	Prediction of borrower eligibility or loan approval, approvable amount of loan	Cat Boost XG Boost, Decision Tree, Random Forest, KNN, Naive Bayes.
8.	Infrastructure (Server / Cloud)	Application Deployment on Cloud for Platform-as-aService.	Cloud Foundry

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	ReactJS – framework for User Interface Tailwind CSS – utility-based CSS frameworks NodeJS – JS Runtime	ReactJS, Tailwind CSS, NodeJS
2.	Scalable Architecture	MVC Architecture can be scaled on-demand Cloud Database – Model, ReactJS – View, NodeJS – Controller	IBM Cloud, ReactJS, Tailwind CSS NodeJS
3.	Availability	Application is available 24 / 7 as it is hosted on IBM cloud. Simple web browser is enough to access the website.	IBM Cloud