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

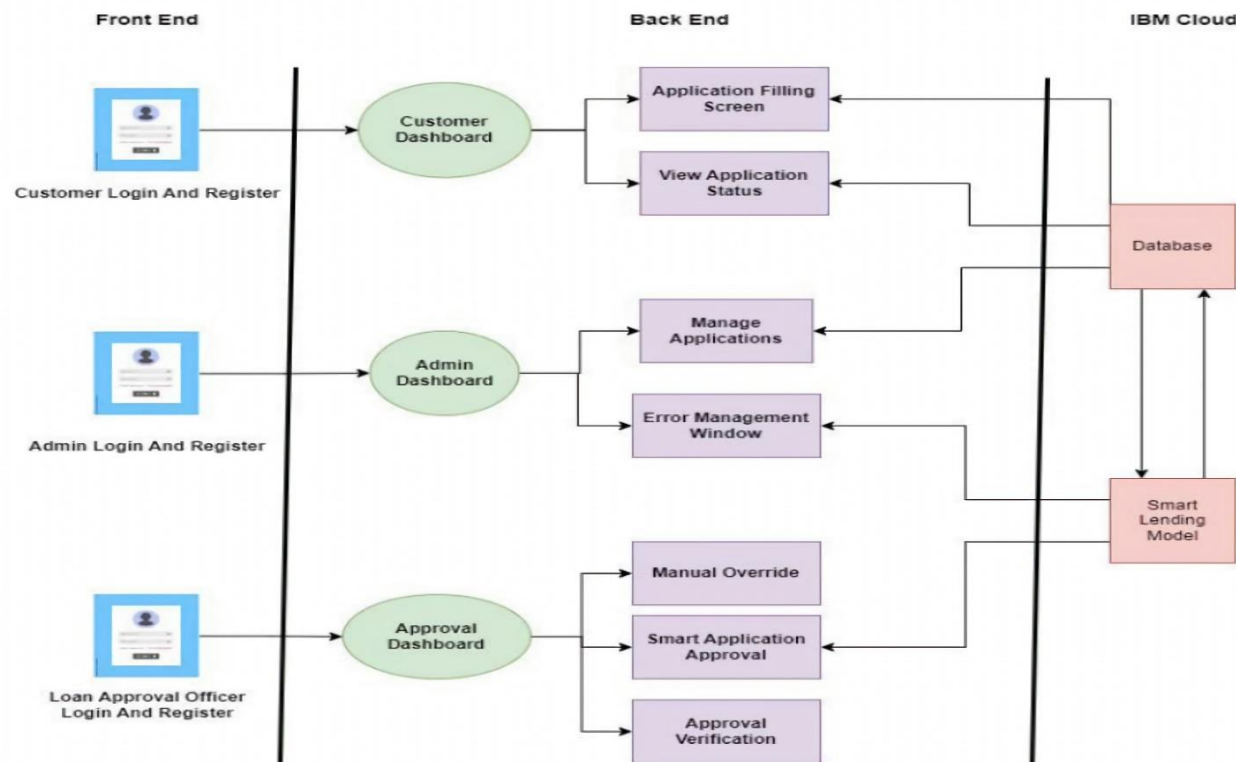| Date	03 October 2022
Team ID	PNT2022TMID00272
Project Name	Project - Smart Lender - Applicant Credibility Prediction for Loan Approval
Maximum Marks	4 Marks

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Users interact with the application with the help of a web UI	HTML, CSS etc.
2.	Building application	Getting user information from UI and feeding it to ML model	Python Flask
3.	Visualizing and analysing data	Reading and understanding the data properly with the help of visualization and analysing techniques.	Python pandas, matplotlib, seaborn, numpy, pickle
4.	Pre-processing or cleaning data	Handling missing values. Handling categorical data Handling outliers, Scaling Techniques	Python pandas
5.	Database	Loan Approval dataset	.csv file
6.	Cloud Database	Deploying the model on cloud	IBM cloud
7.	Machine Learning Model	Using machine learning model for predicting loan approval	Model building using classification algorithms such as Decision tree, Random forest, KNN, and xgboost.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	IBM Cloud
2.	Security Implementations	Secure information and data.	IBM cloud provides layered security controls across network and infrastructure.
3.	Scalable Architecture	Supports various data sizes.	Web 3.0 IBM Cloud
4.	Availability	Creating multiple pages for comfortable user interface experience.	HTML, CSS, JavaScript
5.	Performance	Withstand huge data and process them without crashing.	Python

References:

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d