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

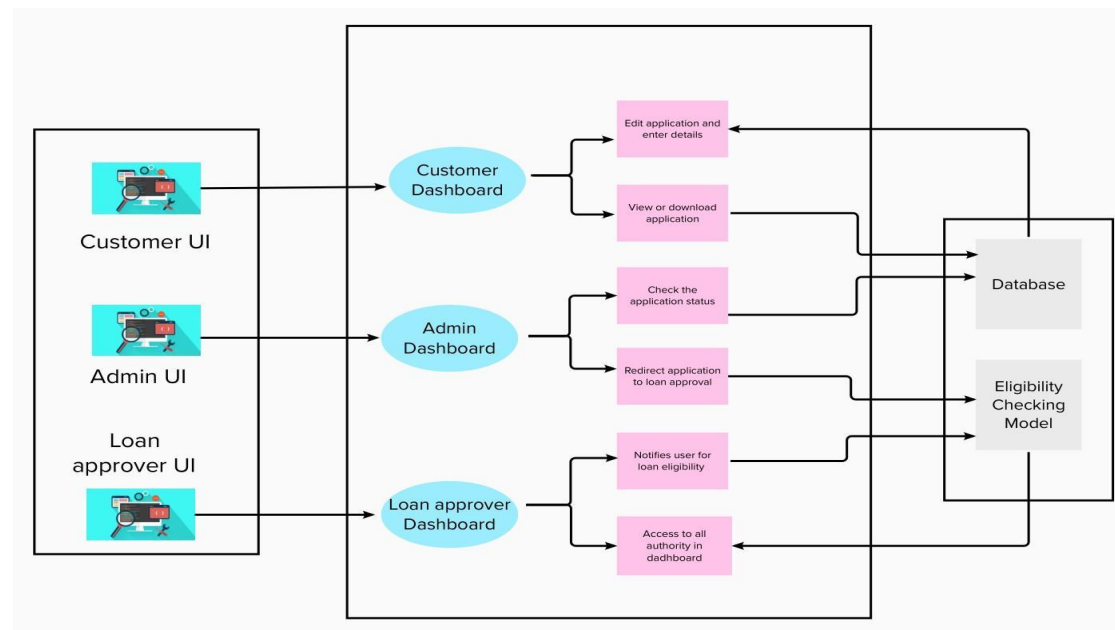| Date	20 October 2022
Team ID	PNT2022TMID036723
Project Name	Smart Lender-Applicant credibility prediction for loan approval
Maximum Marks	4 Marks

Technical Architecture:

Table - 1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Here the user interaction with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / React Js.
2.	Application Logic-1	To develop the code to run the device application	Python /Jupyter notebook
3.	Application Logic-2	To connect the end user application to cloud platform	IBM Watson STT service /Cloud service
4.	Application Logic-3	To build a connectivity model that generates user eligibility output	IBM Watson Assistant
5.	Database	User data values are stored and retrieved	MySQL, NoSQL, etc.
6.	Cloud Database	To store the data on the cloud database service as a backup.	IBM DB2
7.	External API-1	Prediction based on credit score requires external Api	Loan Details API
8.	Machine Learning Model	Usage of machine learning model for prediction of loan approval	Classification algorithm model Such as, Decision tree,Random forest,KNN and Xgboost
9.	Infrastructure (Server / Cloud)	Application Deployment on Cloud Server Configuration:	IBM cloud

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Python flask, etc are the open-source frameworks used	Python flask,web2py framework are used
2.	Security Implementations	Application is protected by Firewalls and cloud security	e.g.End to end encryption, Ibm cloud services.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Web 3.0, IBM cloud
4.	Availability	Design of Frontend UI and connected to protected servers	Html,Css,Js,Protected servers

| 5. | Performance | Design is implemented to accurately predict the credit score | IBM flask, Python, etc… |