Project Design Phase-I
Proposed Solution

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The business intends to automate (in real-time) the loan eligibility process using information that customers supply on online application forms. They have offered a dataset to determine the client segments that are eligible for loan amounts in order to automate this procedure and target these customers directly. The profitability or loss of a bank is mostly determined by the loans it makes, namely whether or not its customers are making their loan repayments. The bank can lower its Non-Performing Assets by anticipating loan defaulters. Predicting whether a certain loan will default based on the initial information provided by the borrowers and their credit report will increase the bank's profit.
2.	Idea / Solution description	The project implements machine learning techniques such as decision tree models, random forest models, KNN models, and XGBoost models to predict loan defaults. We train and test these models on the given dataset. The best model is selected by comparing the accuracy and this model is saved. This model is integrated into a flask-based web application.
3.	Novelty / Uniqueness	This project optimizes the model by continuously changing the parameters of the model so that the right model with the right parameters is selected as the best model.
4.	Social Impact / Customer Satisfaction	This application evaluates a borrower's credibility before approving a loan. Credit score or prediction is used in this case to assist bank staff in precisely and efficiently categorising credit defaulters. So the loan is recovered by the bank with little loss. Additionally, this application gets rid of intermediaries. With the use of this app, everyone in the nation will be able to contact a bank, and users in remote areas can access the bank's loan approval procedure.
5.	Business Model (Revenue Model)	While providing good performance and yielding effective results, this application can be implemented with minimum cost. A pay per month use plan for the model is an option. Employees of the bank can purchase a subscription on a monthly or annual basis.

		Selling the model to the bank that pays the sum that is most advantageous to developers is an additional choice.
6.	Scalability of the Solution	This application's front end is developed using the Python Web Framework, while the bank end makes use of a flask integration. Consequently, it is simple to add new features. The application is hence scalable.