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Department of Information Technology
(NBA Accredited)

Loan Prediction System

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Project Guide
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Contents

1. Introduction

- Problem Identified :
  - The major problem faced by individual was they generally used to go to bank or any type of finance company to get the eligibility or knowledge about the loans.
  - Loan prediction is a very common real-life problem that every finance company faces in their lending operations.
- Solution Proposed :
  - By using our Loan Prediction System user will get and proper idea about his/her loan eligibility status and information about the loans within few clicks.
  - If the loan approval process is automated, it can save a lot of man hours and improve the accuracy and speed of service to the customers.

2. Objectives

1. To develop user friendly interface for the customer.
2. To develop an loan eligibility prediction system with less errors and high accuracy percentage.
3. To develop an system which will give a basic information related to different types of financial loans.
4. To develop an loan prediction system which can save a lot of man hours and improve the accuracy and speed of service to the customers.
5. To develop an system which will calculate the simple interest according to the amount entered.

3. Scope

1. Can be helpful for the customer to understand the loan eligibility status.
2. Can be useful for the customer to get the accurate prediction of the loan.
3. Can be useful for the customer to get the basic knowledge regarding the types of financial loans.
4. Can be useful for the user to calculate the simple interest rate within few clicks.
5. Can be useful for any individual as it will save a lot of time of the user to predict his/her loan approval.

4. Literature Survey

YEAR	AUTHOR	TITLE	ALGORITHMS	LIMITATIONS
2021	1]S. Sreesouthry 2]A. Ayubkhan 3]M. Mohamed 4]Rizwan D. 5]Lokesh K. 6]Prithivi Raj	Loan prediction using Logistic Regression in Machine Learning.	1.Min-Max normalization. 2.Linear Regression.	Imbalanced dataset was used.
2020	1]Veeraballi Nagajyothi ,	Loan approval prediction . (ICESC)	1.KNN. 2.Decision tree . 3.Naive Bayes .	Large number of attributes were prime for consideration.
2020	1] T Sunitha 2] M Chandravallika 3] M Ranganayak	Predicting loan status using Logistic Regression and Binary Tree. (ICICNIS)	1.Logistic Regression(LR). 2.Binary Tree.	No detailed information about dataset is mentioned in the paper i.e. no of instances (cases) used in it.

5. Proposed System

1. User Friendly and Easy To Use :
    - Customer panel allows user to enter the personal details and predict the eligibility of the loan.
    - Our loan prediction system is language independent.
2. Loans information section :
    - Customer can get an basic information regarding different types of financial loans.
3. Simple interest rate calculator :
    - Customer can calculate his/her simple interest rate by entering the values within few clicks.
4. Review section :
    - Customer can share their experience/opinion of prediction in the review section.

6. Algorithm used

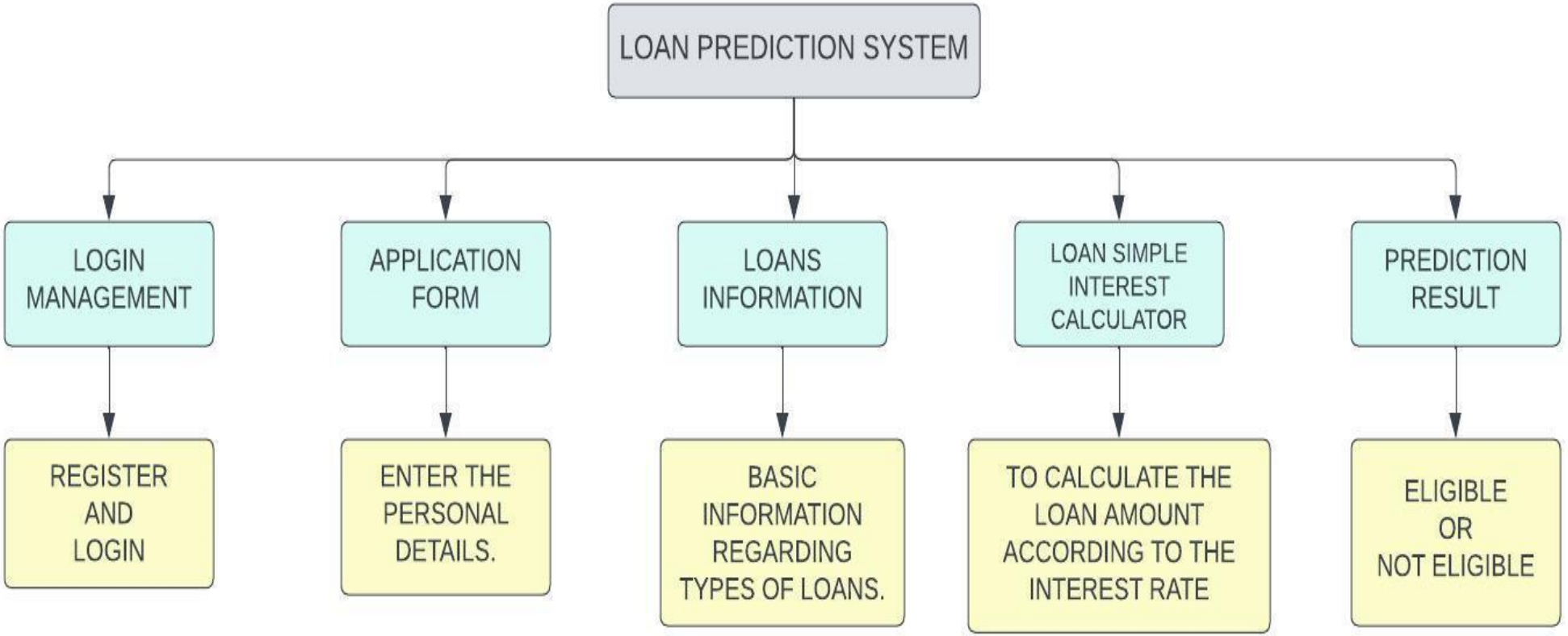
1. Decision trees.

- With a decision tree, you can visualize the map of potential results for a series of decisions. It enables companies to compare possible outcomes and then take a straightforward decision based on parameters.

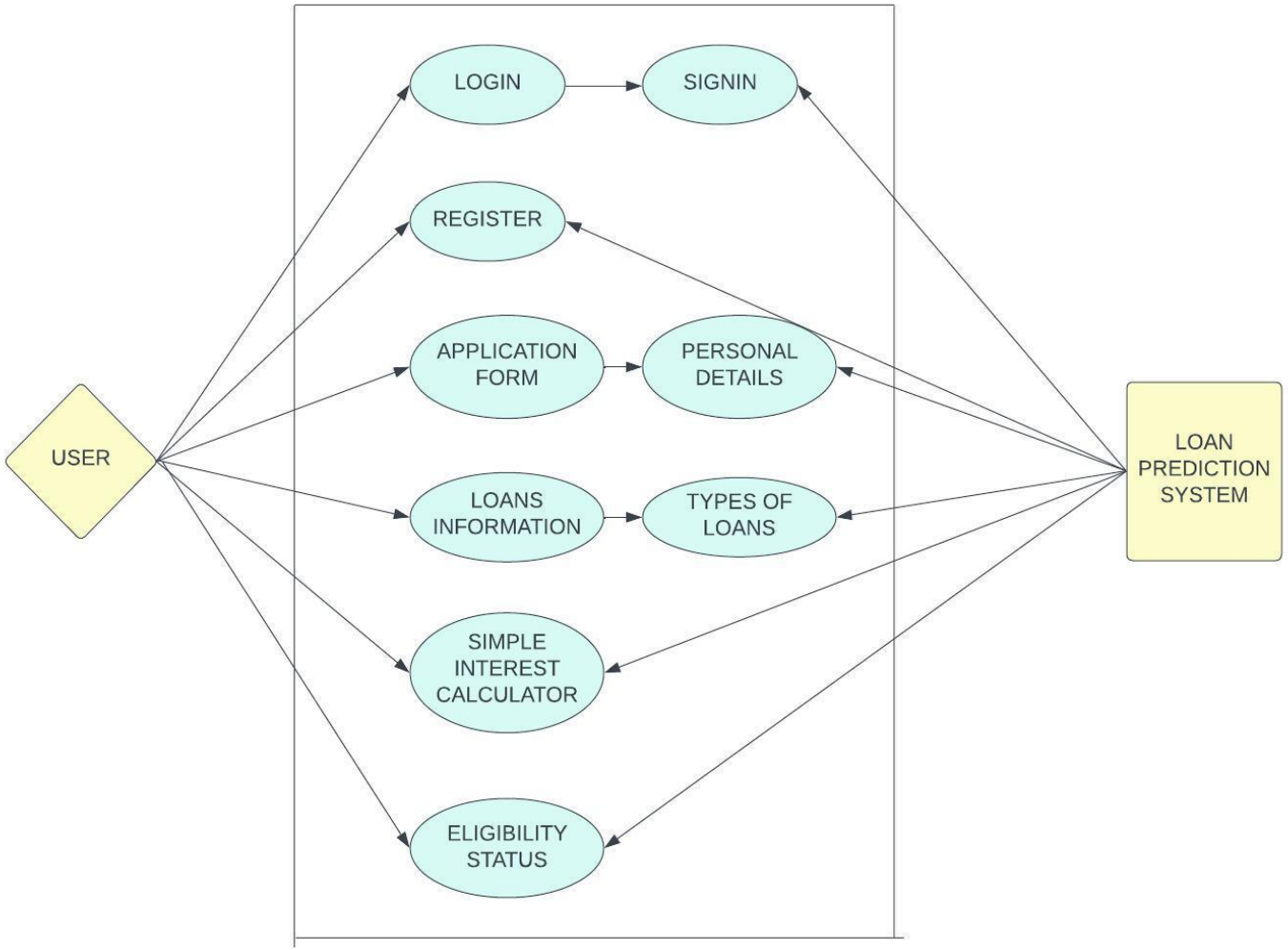
7. Outcome of Project

1. Customer can be able to predict their loan eligibility status with less errors and high accuracy.
2. User can get an proper and basic information regarding different types of loans.
3. User can be able to calculate the simple interest rate of the loan
4. As our loan prediction system is language independent any individual can be able to use it easily.
5. The main outcome of this project is that the user can be able to save his/her precious time by predicting the loan within few clicks.

8. Block Diagram

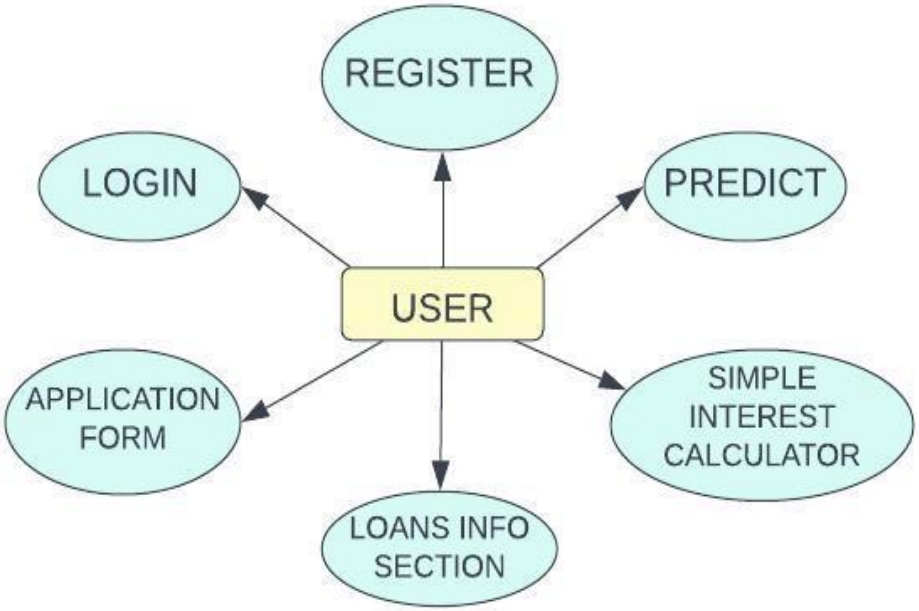


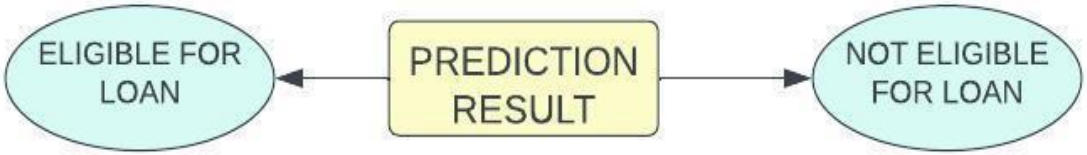
9. Use Case/Data Flow Diagram



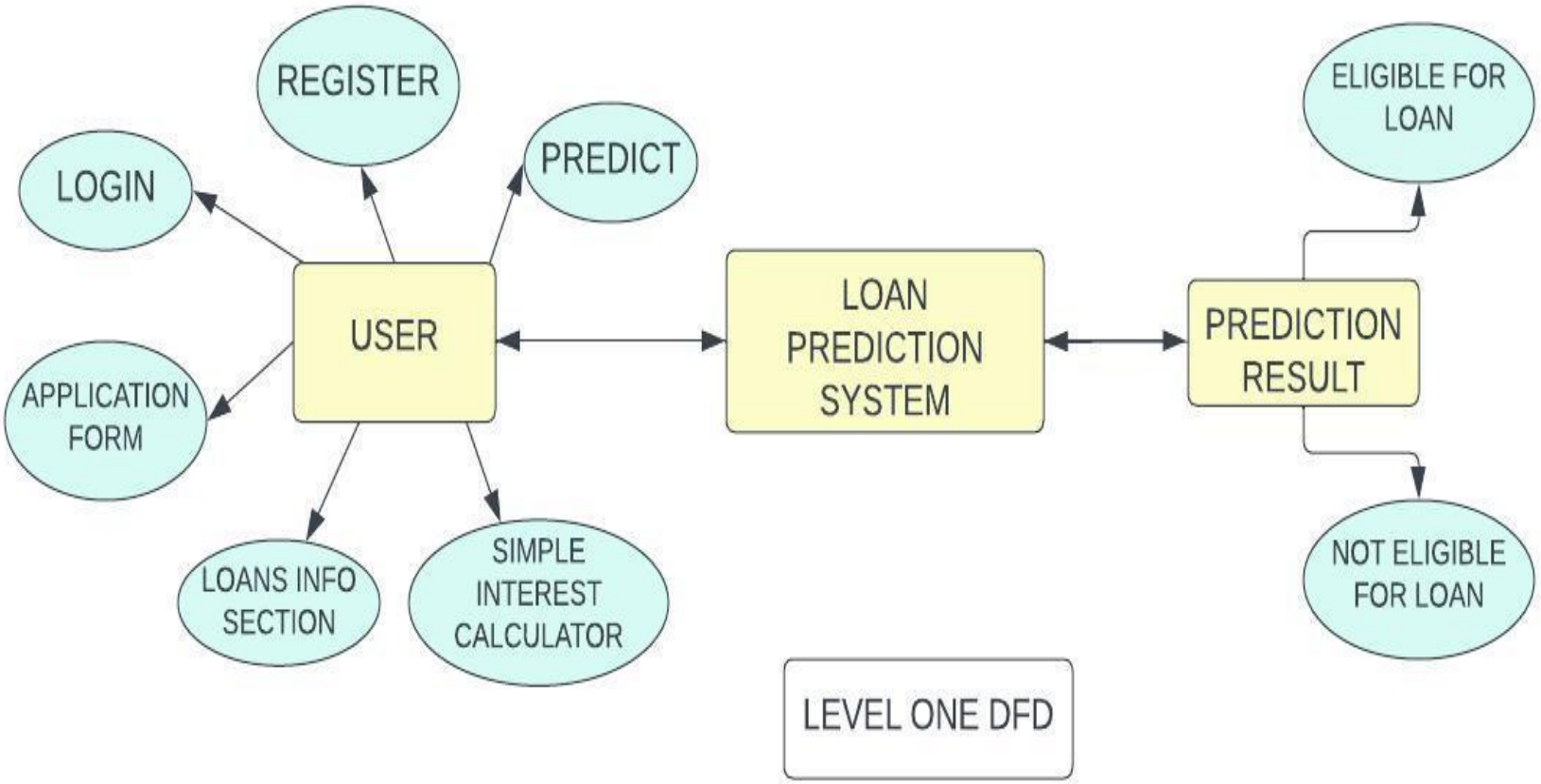
USE CASE DIAGRAM

LEVEL ZERO DFD (LOAN PREDICTION SYSTEM)





LEVEL ZERO DFD



LEVEL ONE DFD

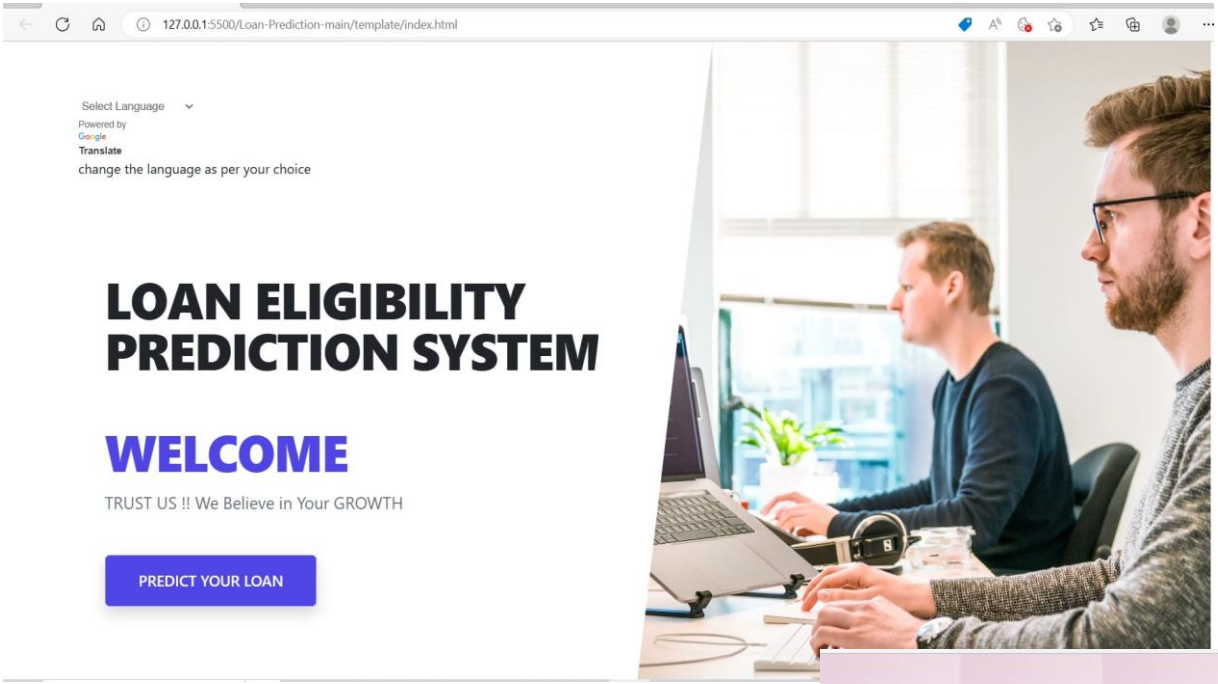
10. Technology Stack

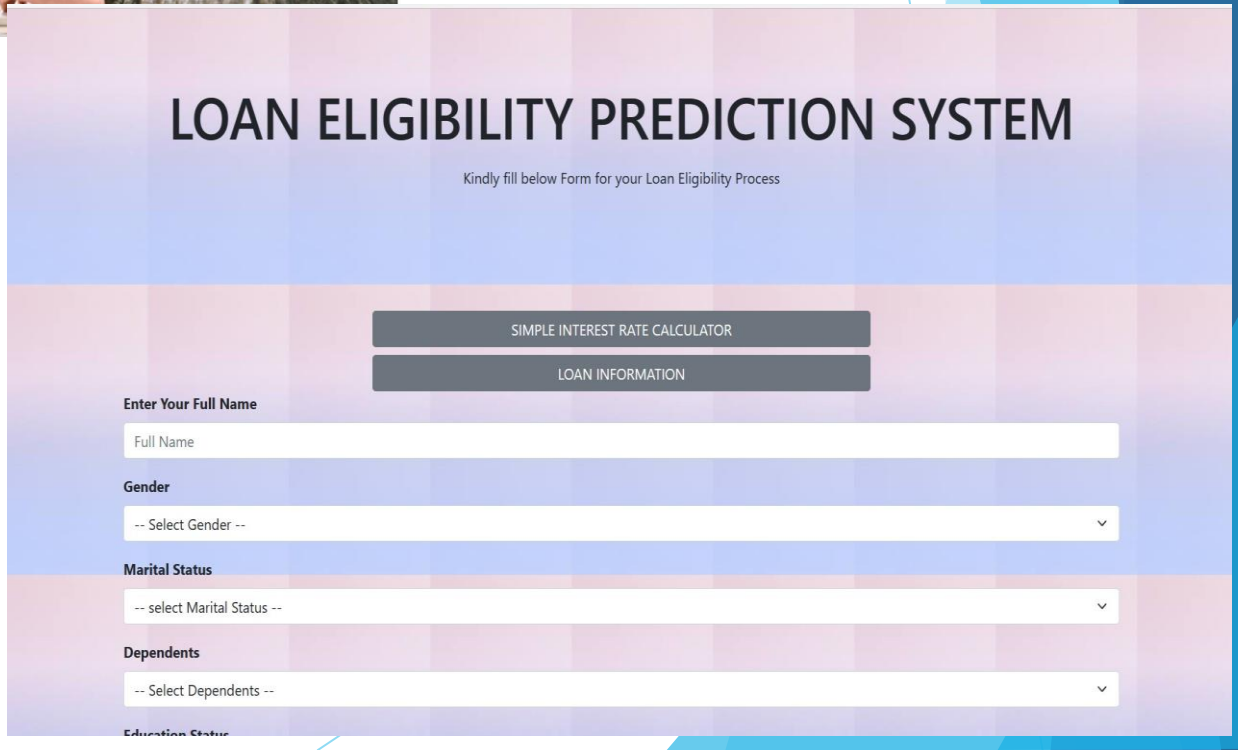
1. **Front-end –** Html ,CSS , Java script ,Python (Flask).
2. **Integrated Development Environment (IDE)** – VS code.
3. **Platform -** Windows 10/11.

Suggestions in Review-1

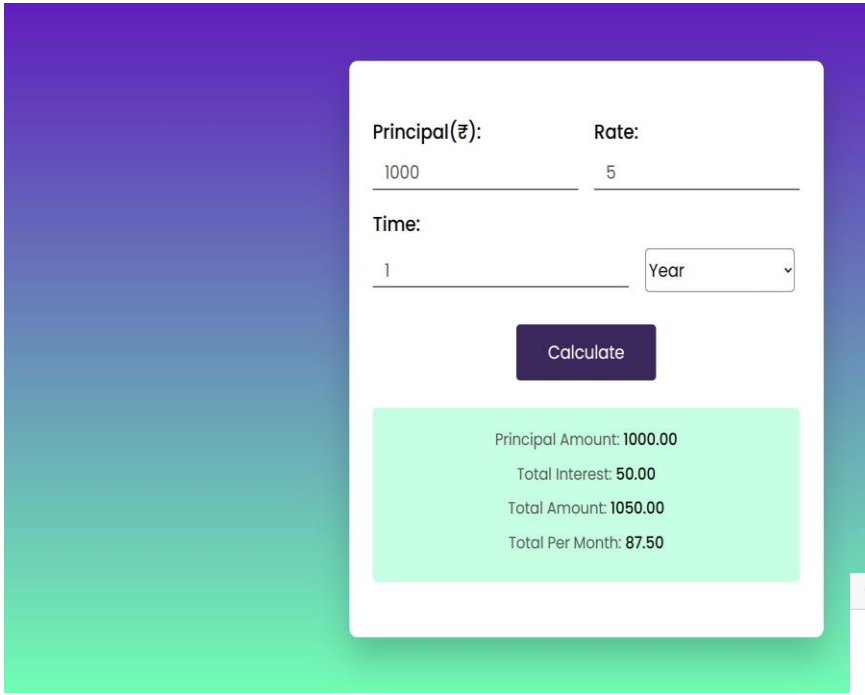
1. To add document upload option in Application form.

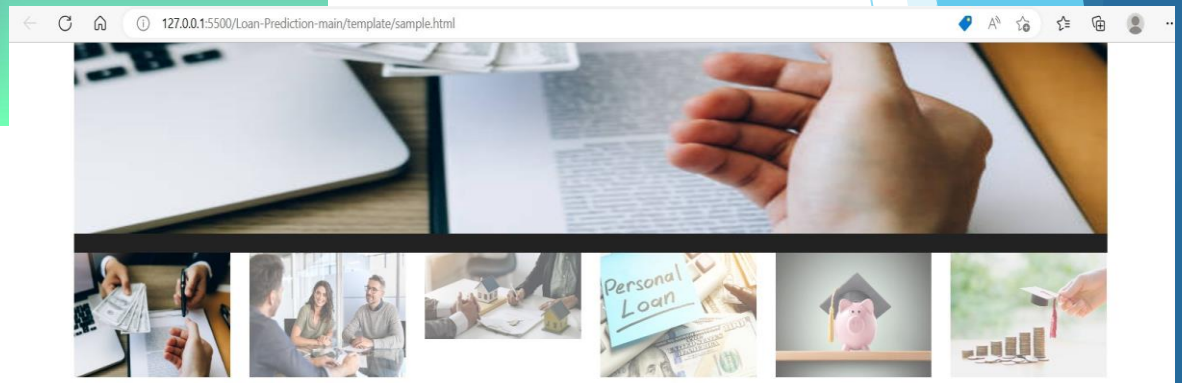
Result and discussion





Result and discussion





LOAN INFORMATION

No.	TYPES	DESCRIPTION	RATE OF INTEREST
1.	BUISNESS LOAN	A business loan is a loan specifically intended for business purposes. As with all loans, it involves the creation of a debt, which will be repaid with added interest.	11.9 p.a.
2.	PERSONAL LOAN	A personal loan (also known as a consumer loan) describes any situation in which an individual borrows money for personal need, including making investments in a company. All personal loans have three common elements: Evidence of the debt (promissory note) An amount borrowed (principal)	10.25 p.a
3.	EDUCATION LOAN	An education loan is a sum of money borrowed to finance post-secondary education or higher education-related expenses. Education loans are intended to cover the cost of tuition, books and supplies, and living expenses while the borrower is in the process of pursuing a degree.	8.95 p.a

ABOUT TEAM WORK CONTACT

CONGRATULATIONS !!

Your eligible to apply for Loan :))

ABOUT TEAM WORK CONTACT

BETTER LUCK NEXT TIME!!

Your not eligible to apply loan :((

Conclusion and Future Scope

The loan prediction system project is a valuable tool for financial institutions to evaluate the creditworthiness of potential borrowers. By using machine learning algorithms to analyze various factors such as credit history, employment status, income level, and loan amount, the system can provide accurate predictions on whether a borrower is likely to repay their loan on time or default. The loan prediction system not only helps financial institutions mitigate risks and make informed lending decisions but also provides borrowers with fair and transparent loan evaluation processes.

Moreover, the project can be further enhanced with the incorporation of new features such as real-time data analysis, automated loan processing, and personalized loan recommendations. Overall, the loan prediction system project has the potential to revolutionize the lending industry by improving efficiency, reducing costs, and promoting responsible lending practices.

Reference

1. S. Sreesouthry, A. Ayubkhan, M. Mohamed Rizwan, D. Lokesh, K. Prithivi Raj (2021). Loan Prediction Using Logistic Regression in Machine Learning. Annals of the Romanian Society for Cell Biology. http://annalsofrscb.ro/index.php/journal/article/view/2818

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3. Veeraballi Nagajyothi, “Loan approval prediction using KNN, decision Tree and Naïve Bayes models”(2020), International Journal of Engineering in Computer (IJECS) . Science. https://www.computersciencejournals.com/ijecs/archives/2020.v2.i1.A.30

4. Pidikiti Supriya, MyneediPavani, Nagarapu Saisushma, NamburiVimala Kumari, k Vikash (2019), “Loan Prediction by using Machine Learning Models”, International Journal of Engineering and Techniques. http://www.ijetjournal.org/volume5/issue2/IJET-V5I2P28.pdf

Thank You...!!