ABSTRACT

The Digital Bank project is a comprehensive and secure web-based banking system developed using the Django framework and built with a focus on enhancing the digital banking experience for both users and administrators. As the demand for online financial services continues to grow, this project aims to provide a reliable, efficient, and user-friendly platform that facilitates all core banking operations while prioritizing data security and operational transparency.

This system is designed to serve four primary user roles—Admin, Customers, Branch Managers, and Loan Officers—each having their own dedicated dashboard with role-specific features. The User Dashboard allows customers to register and verify their identity, open savings or current accounts, request debit or credit cards, perform fund transfers, make fixed deposits, apply for loans, and download PDF account statements. Every critical action, such as account creation or loan application, is subject to admin approval to maintain regulatory compliance and prevent unauthorized access or fraudulent activities.

From the administrative perspective, the Admin Dashboard provides full control over the system. Admins can view and manage all users, approve or reject applications for loans, accounts, or cards, monitor transaction history, and track overall bank performance. Branch Managers are given branch-specific control, allowing them to view transactions, deposits, and user activities within their respective branches. Meanwhile, Loan Officers handle loan application processing, including document verification, EMI calculations, and loan status updates.

The Digital Bank platform is fortified with advanced security features, including Two-Factor Authentication (2FA), Cross-Site Request Forgery (CSRF) protection, input validation, secure password hashing, and encrypted data transmission. These measures ensure that user data is protected at all levels of interaction. Furthermore, the system supports automated email notifications using SMTP, which keep users updated about important activities such as successful transactions, loan status changes, or account updates.

Technologically, the system uses Python, HTML, CSS, JavaScript, and SQLite as its core stack. Features like PDF generation using ReportLab, responsive design for mobile access, and modular architecture make the application both functional and future-ready. Potential enhancements include AI-based fraud detection, cryptocurrency integration, and dedicated mobile applications, ensuring long-term scalability and relevance in a rapidly evolving financial environment.

In summary, Digital Bank is more than just a project—it is a complete digital banking solution that improves customer convenience, streamlines banking processes, strengthens security protocols, and sets a strong foundation for the future of digital finance

DIGITAL BANK

Main Project report submitted to
Kristu Jyoti College of Management and
Technology, Changanassery

In partial fulfilment of the requirements for the award of the
BACHELOR OF COMPUTER APPLICATIONS

BY
AROMAL K R
(220021085142)

Under the guidance of
MS. TINTU VARGHESE

DEPARTMENT OF COMPUTER APPLICATIONS

**KRISTU JYOTI COLLEGE OF MANAGEMENT AND
TECHNOLOGY, CHANGANASSERY,**

APRIL, 2025

Kristu Jyoti College of Management and Technology, Changanassery
DEPARTMENT OF COMPUTER APPLICATIONS

CERTIFICATE

Certify that the report entitled *"DIGITAL BANK"* is a bonafide record of the mini-project work done by *AROMAL K R(220021085142)* under our guidance and supervision is submitted in partial fulfilment of the Bachelor Degree in Computer Applications, awarded by Mahatma Gandhi University Kerala and that no part of this work has been submitted earlier for the award of any other degree.

Rev Fr.Joshy Cheeramkuzhy CMI　　　　　　**Mr. Roji Thomas**

Principal　　　　　　　　　　　　　　　　**HOD**

Ms.Tintu varghese　　　　　　　　　　**Ms.Aby Rose Varghese**

Project Guide　　　　　　　　　　　　**Project Coordinator**

Submitted for project evaluation and viva-voce held on ……………………
 Evaluator(s)
1.
2.

DECLARATION

I hereby declare that the project titled **"DIGITAL BANK"** submitted to Mahatma Gandhi University in partial fulfilment of the requirements for the award of degree of Bachelor of Computer Applications, is a record of original work done by me under the guidance of **Ms.TINTU VARGHESE**, project guide, Kristu Jyoti College of Management and Technology. This project work has not been submitted in part or full of any other degree of this University or any other University.

Place: Changanassery   **AROMAL KR**

 Date: April 2025   **220021085142**

ACKNOWLEDGEMENT

Foremost, I thank Almighty God for His grace and blessings that enabled me to successfully complete this project dissertation.

I am deeply grateful to **Rev. Fr. Joshy George CMI**, Principal of Kristu Jyoti College of Management & Technology, for his encouragement and motivation to undertake this project. I extend my heartfelt gratitude to **Mr. Roji Thomas**, Head of the Department of Computer Applications, for his invaluable support and guidance through innovative ideas.

A special note of thanks goes to my project guide, **Ms.Tintu Varghese** for her unwavering support, encouragement, and expertise, which were instrumental in completing this work.

I also thank the faculty members of my department for their valuable suggestions and assistance. Finally, I express my heartfelt appreciation to my parents and friends for their constant support and encouragement throughout this journey.

AROMAL K R
220021085142

INDEX