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## BANK RECORD STORAGE THROUGH BLOCKCHAIN

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### ABSTRACT

Financial service providers find blockchain technology useful to enhance authenticity, security, and risk management. Several institutions are adopting blockchain in trade and finance systems to build smart contracts between participants, improve efficiency and transparency, and open up newer revenue opportunities. Blockchain's unique recording capabilities make the existing clearing and settlement process redundant. Banks and other financial entities are adopting blockchain-enabled IDs to identify people. Better results come from organisations' capacity to foresee emerging trends in financial blockchain applications and develop blockchain functionality. The transfer of asset ownership and addressing the maintenance of a precise financial ledger. Measurement, communication, and analysis of financial information are three significant areas to be focussed on by accounting professionals. Blockchain clarifies asset ownership and the existence of obligations for accountants, and it has the potential to improve productivity. This paper identifies and studies relevant articles related to blockchain for finance. This paper focuses on Blockchain technology and its importance for financial services. Further takes up various tools, strategies, and featured services in Blockchain-based financial services. Finally, the paper identifies and evaluates the significant applications of Blockchain technology in financial services. Credit reports significantly impact the financial lives of customers. Recent data breaches demonstrate the superior security of blockchain-based credit reporting over conventional server-based reporting. Blockchainbased systems enable the faster, more cost-effective, and more customised issuance of digital securities. With its adoption, the market for investors can be expanded, costs for issuers can be reduced, and counterparty risk can be reduced due to the ability to customise digital financial instruments to the demands of investors. It uses mutualised standards, protocols, and shared procedures to give network users a single common source of truth. Participants in the business network can now more easily collaborate, manage data, and agree with this technology's application.

### 1 INTRODUCTION

Users can update the block chain network using a decentralized approach provided by block chain. Block chain networks are free from financial institutions'

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intervention. Block chains can be used to store information, and the distributed ledger technology makes it easier to share information. It can be used to have direct communication with network users. Block chain offers a safe network for conducting transactions. Block chain technology appeals to a variety of enterprises due to its strong security system. As a result of the independence of each company's accounting operations, data reconciliation takes time and resources. By enabling the real-time recording of transactional, contractual, and other information in a shared ledger, block chain technology can solve this problem. It alludes to the possibility of improving the customer experience and making data transfers and identities more secure. Wire transfers, which require time, and money, however, cannot be combined. Block chain technology payments eliminate these issues and boost client confidence. Real time cash transfers between financial institutions are made feasible by technology, which reduces friction and speeds up settlement. This technology is excellent for tracking transactions and has the potential for automation. Smart contracts can be used by financial service providers to track customer payments and seller deliveries This article examines block chain technology, including its benefits, uses in banking, and tools and features.

## Literature Survey

Blockchain technology has emerged as a potential game-changer for the financial industry, offering a secure and transparent way to store and manage data. This literature survey explores the application of blockchain in bank record storage, highlighting its advantages, challenges, and existing research.

### **Benefits of Blockchain for Bank Records:**

- **Enhanced Security:** Blockchain's distributed ledger technology ensures immutability, meaning records cannot be tampered with once added. This significantly reduces the risk of fraud and data breaches. (e.g., [1])
- **Improved Transparency:** All participants in the network can access a verifiable record of transactions, fostering trust and accountability. (e.g., [3])
- **Streamlined Audits:** Blockchain simplifies audits by providing a tamper-proof record of all bank activities. (e.g., [4])
- **Increased Efficiency:** By eliminating the need for reconciliation between multiple parties, blockchain can streamline processes and reduce costs. (e.g., [3])

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### 3 IMPLEMENTATION STUDY

#### Existing System:

- **Storage:** Banks maintain their own centralized databases to store customer information and transaction history. These databases are typically managed by internal IT teams.
- **Security:** Security measures like firewalls and encryption are used to protect data, but the system is still vulnerable to hacking attempts.

#### Disadvantages:

- **Established Infrastructure:** Banks are familiar with managing centralized databases and have existing infrastructure in place.
- **Regulatory Compliance:** Existing regulations are well-defined for centralized databases, making compliance easier for banks.

#### Proposed System & algorithm

- **Data Hashed and Stored:** Bank transactions are converted into a unique code (hashed) and stored on a distributed ledger called a blockchain.
- **Record Secured:** The hashed record, along with timestamps and digital signatures, is added to a new block on the blockchain.
- **Block Added to Chain:** The new block is cryptographically linked to the previous block, forming an immutable chain.

#### 4.1 Advantages:

- **Enhanced Security:** Blockchain's cryptography and distributed ledger system significantly reduce the risk of data breaches. Tampering with records is extremely difficult.
- **Increased Transparency:** All authorized participants (banks, regulators, customers) can access a shared, immutable record of transactions, fostering trust and reducing errors. Customers have more control over their data visibility.

### IMPLEMENTATION

#### 1) MODULES:

1. Upload Historical Trajectory Dataset: Upload Historical Trajectory Dataset' button and upload dataset.
2. Generate Train & Test Model: Generate Train & Test Model' button to read dataset and

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to split dataset into train and test part to generate machine learning train model

- 4) 3. Run MLP Algorithm: Run MLP Algorithm' button to train MLP model and to calculate its accuracy.

## **IMPLEMENTATION MODULES:**

### **Admin:-**

In this module, the Service Provider has to login by using valid user name and password. After login successful he can do some operations such as Login , View All Users and Authorize, View All Datasets, View All Bank Record Type By Block chain, View All Bank Data Type Results, View All Hash Credit Card Results.

### **View and Authorize Users:-**

In this module, the admin can view the list of users who all registered. In this, the admin can view the user's details such as, user name, email, address and admin authorizes the users.

### **User:-**

In this module, there are n numbers of users are present. User should register before doing any operations. Once user registers, their details will be stored to the database. After registration successful, he has to login by using authorized user name and password. Once Login is successful user will do some operations like Register and Login, View Your Profile, Upload Datasets, Find Bank Transaction Type, Find Bank Transaction Type By Hash code.

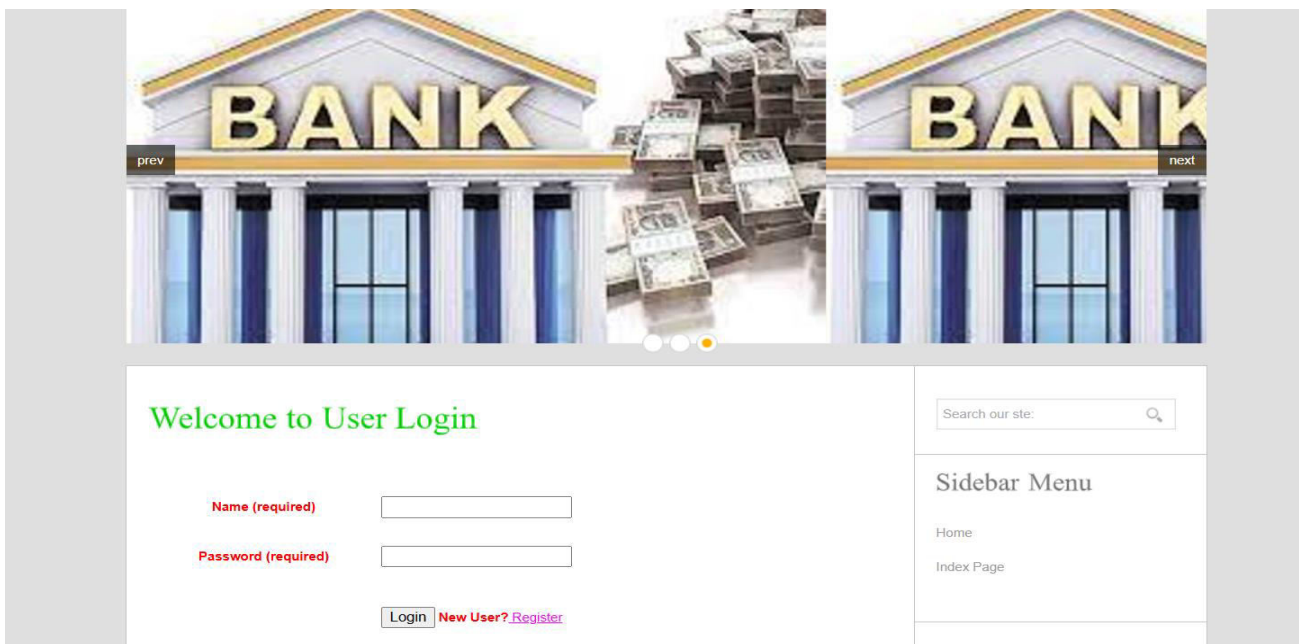
## **5 RESULTS AND DISCUSSION SCREENSHOTS:**

## Home page



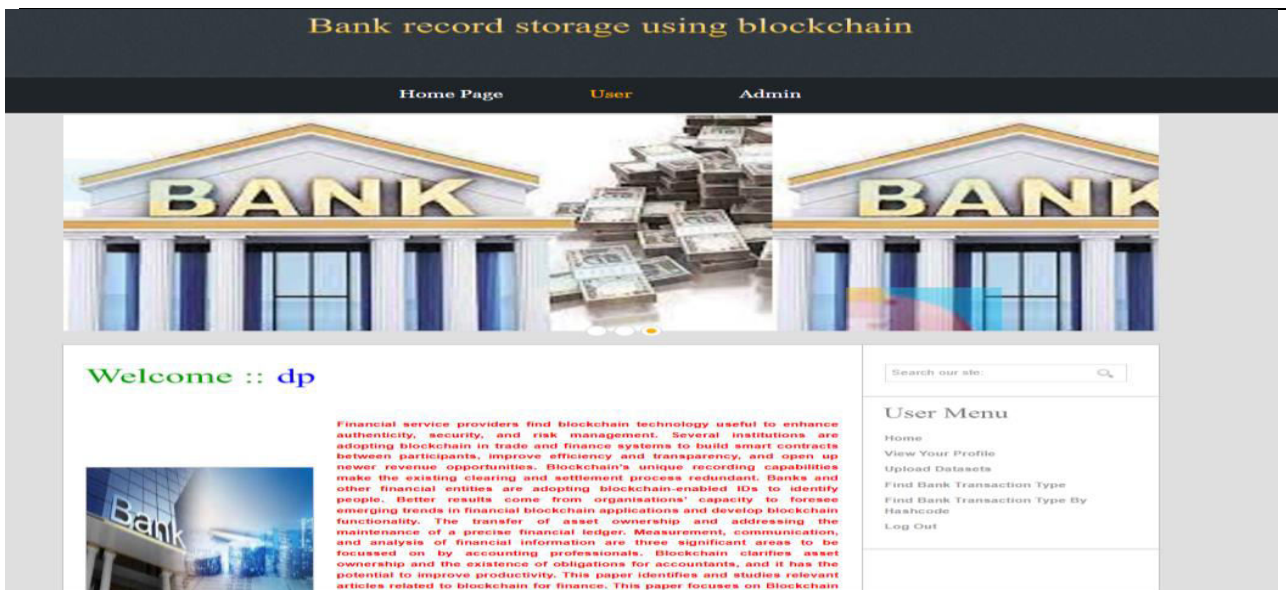
5.1 Home Page

## User login page



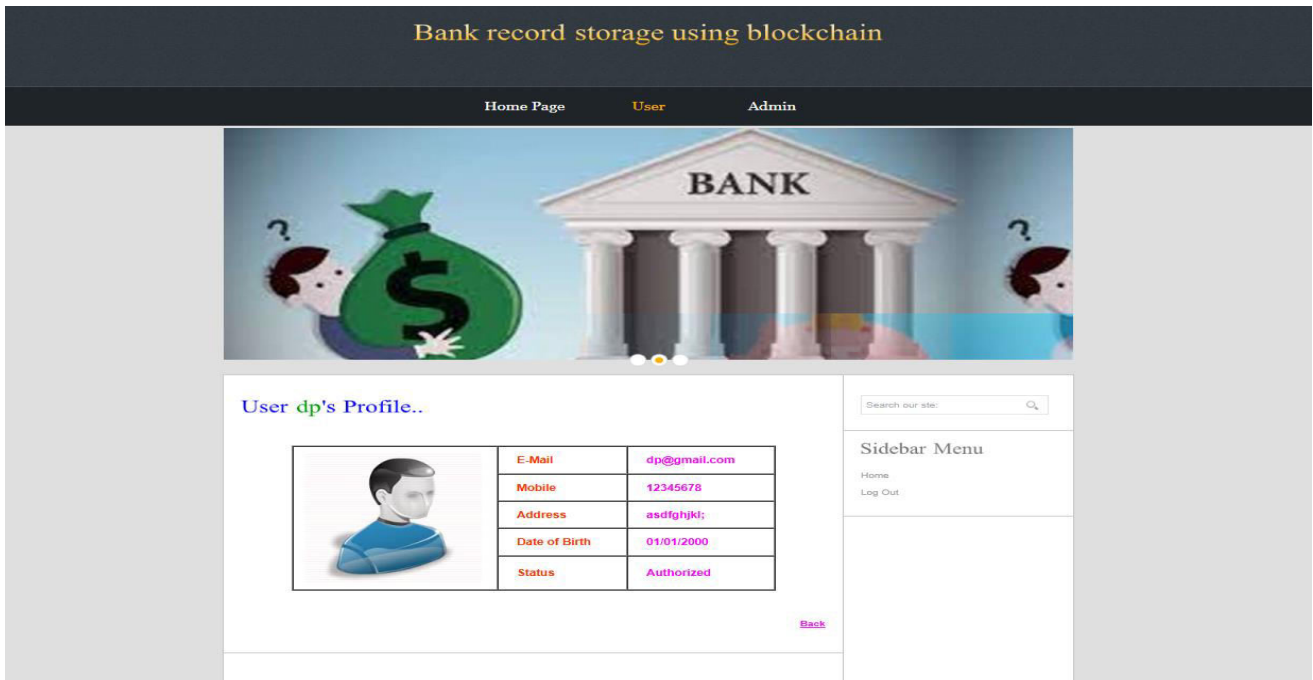
5.2 User Login Page

## User home page



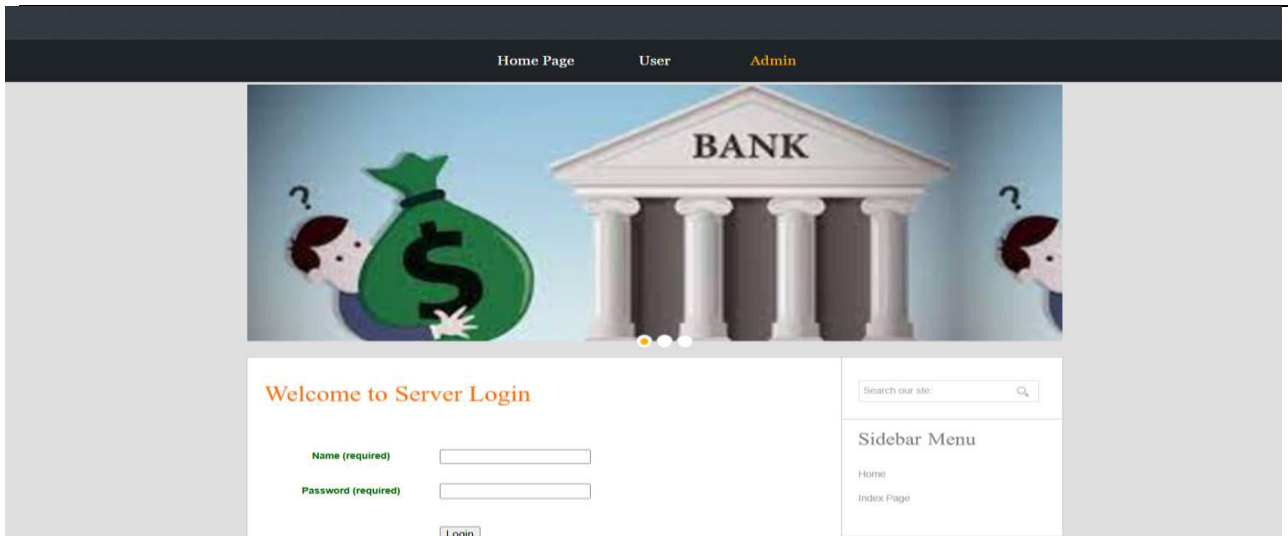
5.3 User Home Page

## User profile



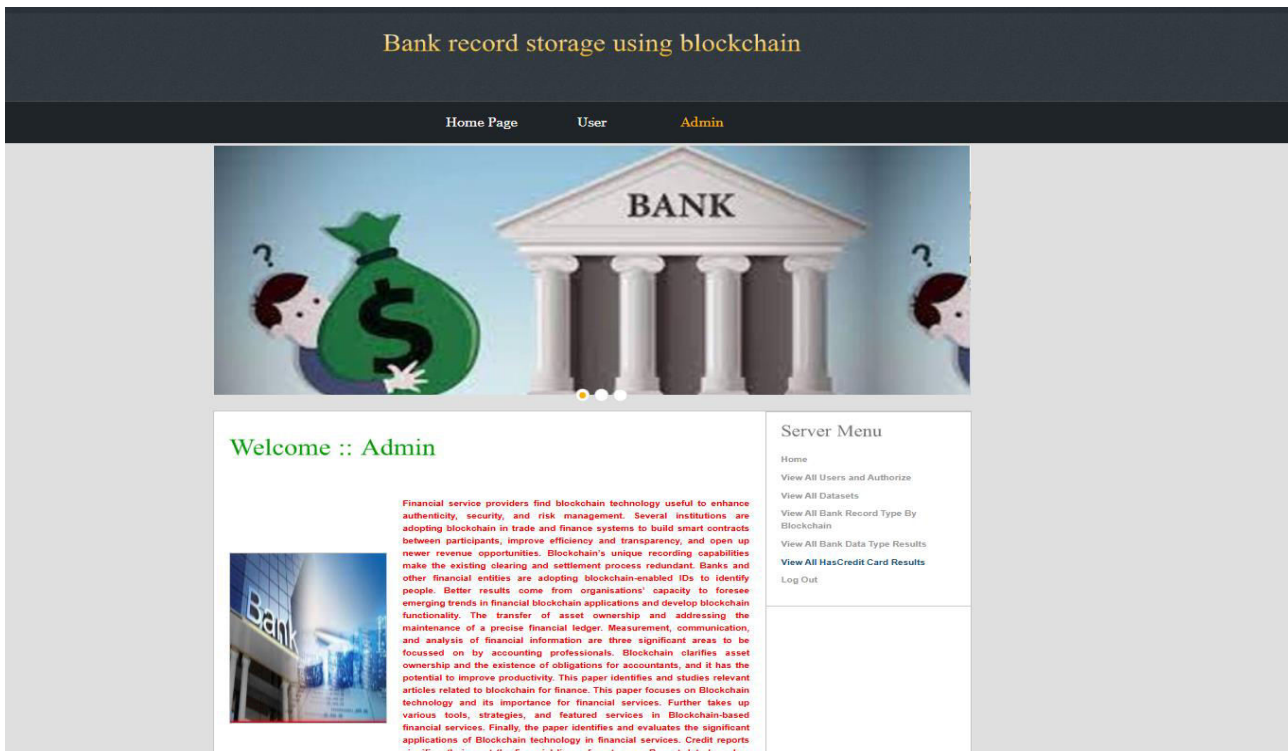
5.4 User Profile

## Admin login page



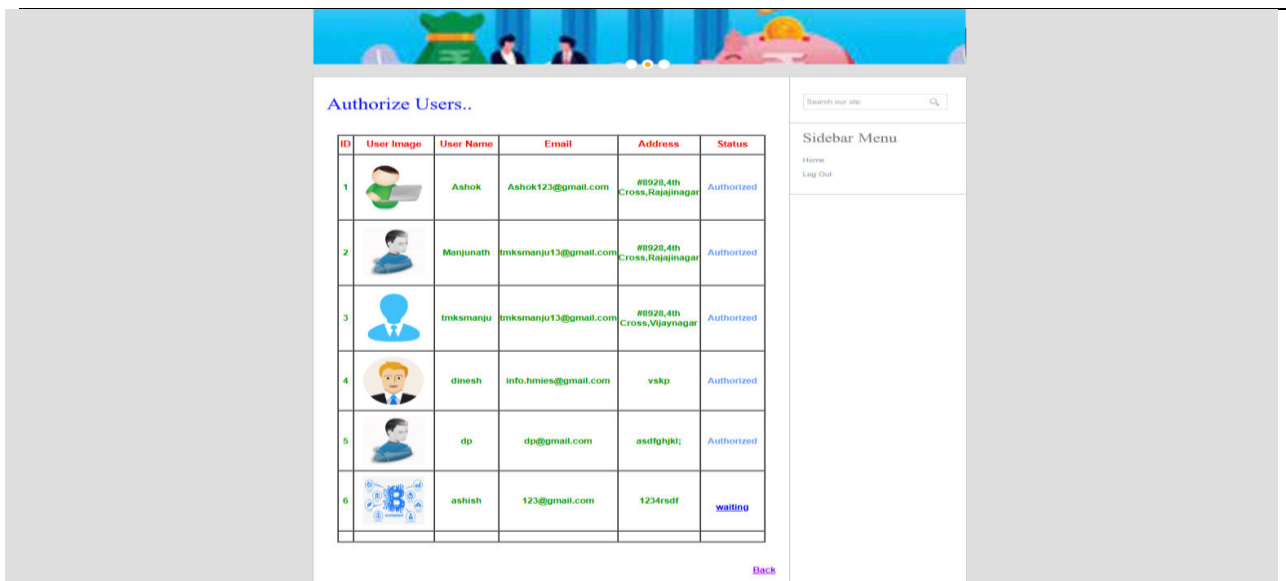
5.6 Admin Login Page

### Admin Home page



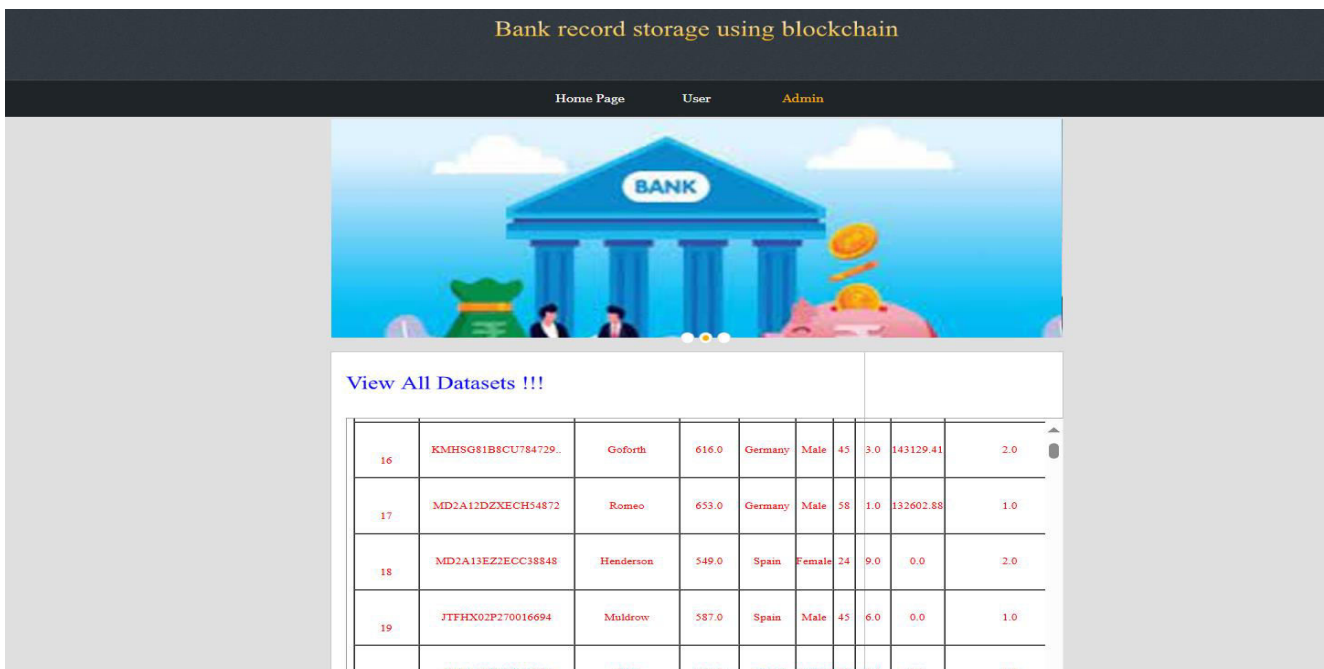
5.6 Admin Home Page

### Admin authorization page



### 5.7 Admin authorization page

### Data sets page



### 5.8 Data sets page

### Bank Data Type BlockChain



Bank record storage using blockchain

Home Page    User    Admin

View All Bank Record Type By Blockchain1 !!!

RowNumber	CustomerId	Surname	CreditScore	Geography	Gender	Age	Tenure	Balance	NumOfBitcoin
1	JMYSTCY4ASU738431	Hargrave	619.0	France	Female	42	2.0	0.0	1.0
3	WBAHNS1088DT22937	Onio	802.0	France	Female	42	8.0	159660.8	3.0
6	JTEBX9FJ9DK110267	Chu	645.0	Spain	Male	44	8.0	113755.78	2.0

### 5.9 Bank Data Type BlockChain

#### Hash Credit Card Results

View Credit Card Results !!!..

JS charts

JS Chart

Category (X)	Value (Y)
0	450
1	1101

[Back](#)

### 5.10 Hash Credit Card Results

## 6. CONCLUSION AND FUTURE WORK

### CONCLUSION

Block chain technology is being adopted by factories worldwide as they get more and more connected. The future factory will comprise a vast network of equipment, accessories, goods, and value-chain partners, like equipment suppliers and logistics companies. The main goal of this

technology is to develop a tamper-proof ledger for digital assets like crypto currencies. Block chain applications maintain data integrity, enabling marketers to target the relevant consumer segments and musicians to obtain fair royalties for their original compositions. This technology is gaining ground in banking payments. People exchange money mainly through their bank accounts; therefore, payments are crucial. Banks have long been at the forefront of the digital revolution, accepting disruptive developments in exchange for reliable payments and printing their digital currencies. Block chain technology allows banks to track every transaction in real-time. This technology will enable banks to settle transactions on a public block chain. Banking executives need to fulfill several requirements to become a widely used technology in the banking sector. Block chain's ability to share information and temporarily make the property available to someone else would dramatically change our mobility. By utilizing intelligent contracts over the Block chain, it would be feasible to directly pay for and utilize a car while finding solutions to issues like electro mobility. Smart contracts can be used by businesses using Block chain in finance to upload invoices to the Block chain. The Block chain can contain data like payment due dates, amounts, and client information. The smart contract updates the invoice status to paid when the customer pays the bill and notifies the businesses that.

## 7. REFERENCES

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