**PROJECT REPORT**

**ON**

**KANBAN: A DASHBOARD FOR MANAGEMENT OF BANKING**

*This Report is submitted for the partial fulfillment of the Course Project Report of the 2nd Semester of Post Graduate Diploma in Information Technology*

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**APPROVAL**

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**ABSTRACT**

This report outlines the development process, design considerations, and implementation of an interactive dashboard designed to analyze and visualize key performance metrics for a bank. The dashboard was developed using Chartjs, and it integrates real-time data feeds to provide actionable insights. Key features of the dashboard include dynamic filtering, real-time updates, and interactive visualizations such as bar charts, line graphs, and pie charts. The development process followed an iterative approach, incorporating user feedback to ensure usability and functionality. This project highlights the importance of data visualization in decision-making and demonstrates the application of data analytics, UI/UX design, and software development principles in creating an effective dashboard. The final product serves as a valuable tool for stakeholders, managers to monitor trends, identify patterns, and make data-driven decisions.

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**INTRODUCTION**

### Objectives:

The primary objective of this project is to develop a **Bank Management Dashboard** that provides a real-time overview of key financial indicators, including **total deposits, loan portfolio, net profit, and non-performing loan (NPL) positions**. The dashboard aims to enhance operational monitoring, automate financial reporting, and facilitate data-driven decision-making for banking professionals.

### Motivations:

The banking industry generates vast amounts of financial data daily, requiring efficient tools to process and visualize key metrics. Traditional reporting methods are often **manual, time-consuming, and prone to errors**. The motivation behind this project is to **develop a user-friendly, automated, and interactive dashboard** that simplifies financial data interpretation and improves efficiency.

### Scope:

The dashboard is designed for use by **banking professionals, financial analysts, and management teams** to track and monitor financial performance. The scope includes:

* Displaying **real-time financial data** (Deposits, Loans, Net Profit, NPL position).
* **Data visualization** using charts (Deposit Mix, Loan Mix) for better analysis.
* **User-friendly UI/UX** for easy navigation and interpretation.
* Integration with a **MySQL database** for real-time data retrieval.

### Project Description:

The **Bank Management Dashboard** is a **web-based application** featuring a **side menu for navigation, a key financial metrics display, and interactive charts** for in-depth analysis. The system leverages **PHP, JavaScript, HTML, CSS, MySQL, and Chart.js** for data visualization.

**METHODOLOGY**

### Requirements:

* **Hardware:** Computer with a web browser, MySQL Server
* **Software:** PHP, MySQL, Apache, Chart.js, JavaScript, HTML, CSS
* **Database Schema:** Tables for deposits, loans, profit, and NPL

### System Design & Diagrams:

* **ER Diagram:** Illustrates the database structure (e.g., relationships between deposit, loan, and profit tables)
* **Use Case Diagram:** Depicts user interactions with the system
* **Data Flow Diagram (DFD):** Shows how data flows between components

### Technologies Used:

* **Frontend:** HTML, CSS, JavaScript, Chart.js
* **Backend:** PHP
* **Database:** MySQL
* **Server:** Apache

### Methodology:

The **Agile Development Model** was followed, ensuring iterative development with continuous feedback. The project was implemented in phases:

1. **Requirement analysis & system design**
2. **Database development**
3. **Frontend and backend implementation**
4. **Integration of Chart.js for data visualization**
5. **Testing & debugging**
6. **Final deployment**

**IMPLEMENTATION**

### Database Implementation:

A **MySQL database** was designed with structured tables for:

* deposit: Stores account balance data
* loan: Tracks loan amounts and outstanding balances
* profit: Stores net profit values
* npl: Tracks non-performing loans

### Web Application Development:

* **Frontend:** HTML, CSS, JavaScript for UI design and user interactions.
* **Backend:** PHP for database connections and dynamic data retrieval.
* **Data Visualization:** Chart.js for real-time financial data representation.

### Functionality Implemented:

1. **Dynamic Data Fetching:** Real-time retrieval from the database.
2. **Financial Summary Display:** Total Deposits, Loans, Net Profit, and NPL values.
3. **Charts:** Graphical representation of **Deposit Mix & Loan Classification**.

**RESULTS**

### Dashboard Overview:

The developed dashboard successfully **retrieves, processes, and visualizes financial data** from the banking database. The key results include:

* **Real-time display of key financial metrics**
* **Interactive charts** that improve financial data interpretation
* **Automated data aggregation**, reducing manual effort
* **User-friendly interface**, enhancing usability for banking professionals

### Operational Details/User Manual:

1. **Login & Access:** Users access the dashboard via a web browser.
2. **Navigation:** The side menu allows easy access to different financial sections.
3. **Key Figures Display:** Users can view total deposits, loans, net profit, and NPL data.
4. **Charts & Analytics:** Interactive visualization provides deeper insights.

**CONCLUSION**

### Final Remarks:

The **Bank Management Dashboard** successfully integrates financial data visualization with an intuitive UI, **enhancing decision-making and operational efficiency**. The system **automates financial reporting** and reduces dependency on manual processes, ensuring accuracy and speed.

### Limitations:

* **No AI-based predictive analytics** for financial forecasting.
* **Limited to MySQL database**, requiring future expansion for multi-database support.

### Future Directions:

* **Integration with Core Banking Systems (CBS)** for live financial data updates.
* **Role-based access control** to ensure security and restricted access.

# REFERENCES

1. Chart.js Documentation - <https://www.chartjs.org/>
2. Web Technologies: HTML, CSS, JavaScript, PHP – W3Schools (<https://www.w3schools.com/>)

# APPENDIX A

<You can add supplementary topics, formulas, etc. under this section. If you have more than 1 appendix, label them APPENDIX A, B, etc.>