Marwadi University	**Marwadi University** **Faculty of Technology** **Department of Information and Communication Technology**	
Subject:Capstone Project	**Documentation and Reporting**	
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Project Title: Welth- AI-Powered Finance Management Platform

1. Technical Report

1.1 Introduction

Financial literacy and effective money management are essential in today's digital economy. Traditional tools like spreadsheets and manual bookkeeping are limited in usability, scalability, and intelligence.

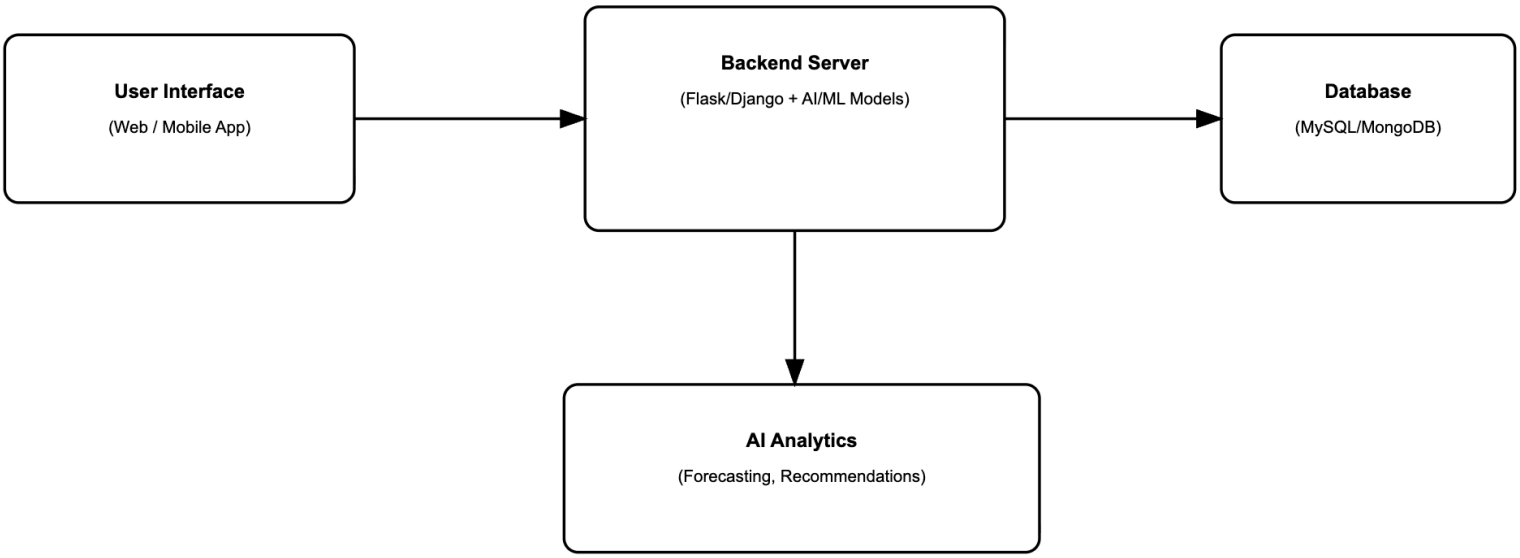
Welth – AI-Powered Finance Management Platform addresses this gap by integrating **AI-driven analytics, financial tracking, and forecasting** into a unified system for individuals and businesses.

1.2 System Design

Welth follows a **modular architecture** with three core layers:

- **Frontend (UI/UX):** Developed using **HTML, CSS, and JavaScript** for a clean and interactive user interface.
- **Backend (Server & AI):** Python (Flask/Django) with AI/ML models for sales forecasting and spending insights.
- **Database:** MySQL/MongoDB for structured storage of income, expenses, and reports.
- **Visualisation:** Chart.js and Matplotlib for financial graphs and dashboards.

1.3 System Architecture Diagram



1.4 Implementation Highlights

- **AI Models:** Implemented regression models for sales forecasting and clustering for spending patterns.
- **Automation:** Auto-generation of receipts and financial reports in PDF/Excel.
- **Security:** End-to-end encryption for transaction and user data.

1.5 Key Outcomes

- Real-time tracking of expenses, income, and savings.
- Personalised financial insights for better decision-making.
- Predictive sales analysis for small businesses.
- Professional documentation and a user-friendly reporting interface.

2. User Manual

2.1 Getting Started

1. Login/Register: Open the Welth platform and create an account.

2. **Dashboard Access:** After login, you will see the dashboard with expense, income, and investment sections.
3. **Add Data:** Use "+ Add Transaction" to record income/expenses.
4. **Generate Reports:** Click **Reports → Download PDF/Excel** for financial summaries.
5. **Forecasting:** Navigate to **Trends** to view AI-driven predictions for future spending and sales.

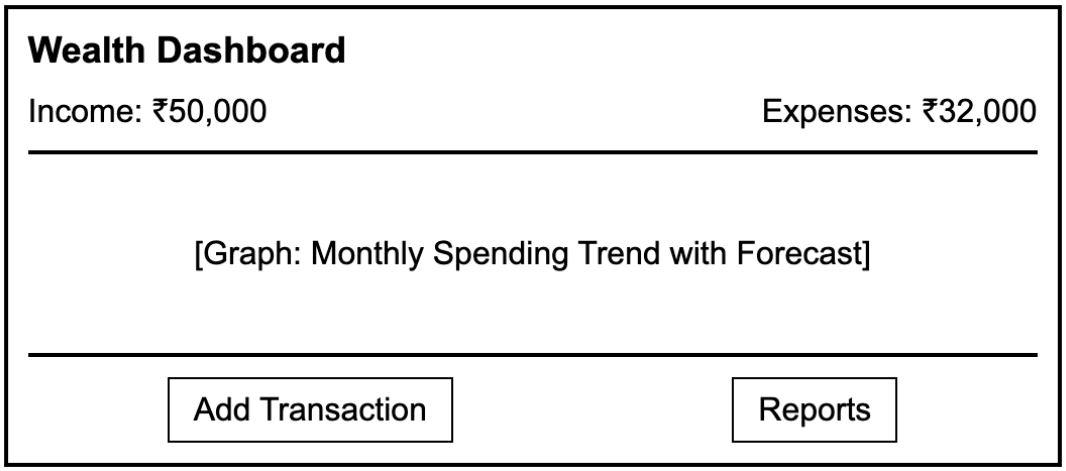
2.2 Primary Use Case

- Example: A small business records sales and expenses weekly. Welth provides a **trend graph** predicting next month's revenue and suggests areas to optimise spending.

2.3 Troubleshooting

- **Issue: Dashboard not updating** → Refresh browser and ensure internet connectivity.
- **Issue: Cannot generate PDF report** → Check browser permissions for downloads.
- **Issue: Wrong forecast values** → Ensure sufficient historical data is entered (at least 1–2 months).

2.4 Screenshot (Sample Dashboard)



3. Code Documentation

3.1 Codebase Summary

- **app.py (Flask Server):** Handles routes for dashboard, reports, and forecasting.
- **models.py (AI/ML Models):** Contains regression models for prediction.
- **database.py:** CRUD operations for user transactions.
- **static/**→ CSS, JS files for frontend.
- **templates/** → HTML templates for pages.

3.2 Example (Python with Docstrings)

```python
def forecast_sales(data):
"""
Forecast future sales based on historical transaction data.

Parameters:
data (list): List of past sales values.

Returns:
float: Predicted sales for the next period.
"""
model = LinearRegression()
model.fit(X_train, y_train)
return model.predict(X_test)
```

3.3 Dependencies

- Python 3.10+
- Flask / Django
- scikit-learn (AI models)
- Matplotlib / Chart.js (Visualisations)
- MySQL / MongoDB (Database)