Banking Transactions Management System (Pandas Project)

Project Overview

This project simulates a real-world banking transactions management system using Python and Pandas. It includes end-to-end data preparation, analysis, and fraud detection workflows over a dataset containing customers, accounts, branches, and transactions.

Tools & Technologies Used

- Python 3  
- Pandas  
- Matplotlib  
- Jupyter Notebook

Key Features

- Cleaned and structured raw transaction data  
- Joined multiple datasets into a unified DataFrame  
- Converted and formatted datetime fields  
- Generated KPIs: total transactions, volumes, top customers  
- Identified and flagged suspicious withdrawals using rule-based logic  
- Exported summary results to CSV  
- Prepared visual-ready summaries and dashboard-style outputs

Skills Demonstrated

- Data Wrangling  
- Data Merging and Joining  
- GroupBy Aggregations  
- Conditional Logic for Anomaly Detection  
- Report Generation and Exporting

Output Files

- Full\_Cleaned\_Banking\_Data.csv  
- Suspicious\_Transactions\_Report.csv  
- Jupyter Notebook (.ipynb) file  
- This Documentation (PDF & DOCX)