COURSE - 3 PYTHON PROGRAMMING

PANDAS PRACTICE

1. Retail Sales Performance Analysis: You are a data analyst at a retail company. Load the annual sales data from a CSV file, analyze monthly trends, and identify the top-performing months in terms of revenue.

2. Real Estate Investment Evaluation: Analyze a dataset of property listings to identify the best investment opportunities. Filter properties based on location and price, compute the potential return on investment, and categorize them into 'High', 'Medium', and 'Low' potential returns.

3. Social Media Data Insights: You are tasked with analyzing social media post engagements. Load the dataset, calculate average likes, shares, and comments for each post type, and identify which type of content is most effective.

4. Financial Market Risk Assessment: Analyze historical stock data to assess volatility. Calculate moving averages, standard deviations, and visualize price fluctuations over time to identify risk factors for investment portfolios.

5. Environmental Data Reporting: Analyze environmental sensor data from multiple locations. Aggregate data by region, calculate average pollution levels, and identify areas exceeding safe environmental thresholds.

6. Healthcare Patient Tracking: Develop a system using Pandas to track patient visits to a hospital. Load data from multiple sources, merge them based on patient ID, and calculate the average number of visits per patient per year.

7. Supply Chain Optimization: Using shipment and inventory data, create a report that tracks product availability across warehouses. Identify products that are understocked and recommend transfer from overstocked locations to balance inventory.