Assignment (5)

Projects

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1. City Traffic Analysis Dashboard

1. Clean data using Power Query: for ex, remove duplicates, and transform formats.
2. Model relationships in Power Pivot (time of day, type of incidents, location).
3. Build a dashboard to display peak congestion times, traffic patterns, and areas needing infrastructure improvements.

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2. Restaurant Chain Performance Dashboard

1. Import branch-level data from multiple files into Power Query.
2. Merge with customer satisfaction survey results and transform to include KPIs like revenue per customer.
3. Use Power Pivot to connect branches with geographic and demographic data.
4. Create a dashboard to monitor branch performance, visualize popular menu items, and recommend expansion areas.

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3. Hospital Patient Flow Optimization

1. Import data for different hospital departments using Power Query.
2. Shape the data to calculate average wait times, bed utilization rates, and discharge efficiency.
3. Model data in Power Pivot to find relationships between departments and time slots.
4. Develop a dashboard for administrators to improve patient flow and reduce waiting times.

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4. E-Commerce Order Fulfillment Dashboard

1. Import and clean the data with Power Query (fix date formats, filter incomplete rows).
2. Transform it to calculate shipping times, return rates, and on-time delivery percentages.
3. Build a Power Pivot model linking orders with shipment providers and regions.
4. Create a dashboard for fulfillment teams to monitor performance and improve delivery.

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5. Personal Finance Tracker

1. Import bank statement data and categorize transactions using Power Query.
2. Add calculations for budget vs. actual spending and investment ROI.
3. Use Power Pivot to link expenses, income, and investment categories.
4. Create a personal finance dashboard with visualizations for savings goals and spending patterns.

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6. Sustainable Energy Monitoring Dashboard

1. Import energy usage data and weather forecasts via Power Query.
2. Clean and combine datasets to calculate energy surplus/deficit.
3. Model relationships between energy output, consumption, and weather conditions.
4. Create a dashboard to track energy efficiency and identify potential improvements in renewable usage.

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7. Event Management Insights Dashboard

1. Combine ticket sales and survey results into a unified dataset using Power Query.
2. Calculate metrics like attendance rate, revenue per attendee, and feedback scores.

3. Build a Power Pivot model linking events with engagement metrics.
4. Develop a dashboard to identify successful marketing strategies and improve event planning.

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8. Fitness Center Membership Analysis

1. Import membership and activity data using Power Query.
2. Transform data to calculate retention rates and popular fitness classes.
3. Model data in Power Pivot to correlate member profiles with attendance trends.
4. Create a dashboard for management to improve services and target inactive members.

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9. Smart Home Energy Usage Dashboard

1. Import and clean energy usage logs using Power Query.
2. Calculate energy usage patterns by time of day and device.
3. Model data in Power Pivot to find relationships between device types and peak usage.
4. Build a dashboard to help homeowners optimize energy use and reduce bills.

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10. Education Progress Tracker

1. Combine data from multiple schools or classes using Power Query.
2. Calculate attendance rates, average grades, and activity participation.
3. Model relationships in Power Pivot between student performance and extracurricular involvement.
4. Create a dashboard for educators to monitor student progress and identify those needing extra support.