**DAB July 2025 Week 8 Assignment – Francky Ciceron**

**Advanced Pandas Retail Chain Performance Analysis**

**Discussion Questions**:

1. **DateTime Benefits**: How can extracting day of the week and month from dates help a retail business make better decisions?

Extracting the day of the week and month helps a retail business:

* See which days or months bring more sales.
* Plan promotions on busy days (like weekends).
* Add staff during high-traffic times.
* Understand seasonal trends (like holiday shopping in December).

**Example:** If Friday has the highest average spending, the store can offer Friday deals to boost sales even more.

1. **GroupBy Value**: Why is it useful to group data by categories, states, or time periods rather than looking at individual transactions?

Grouping data helps you:

* See patterns that are hard to spot in single transactions.
* Compare performance across categories, states, or time periods.
* Make decisions based on totals or averages, not just one sale.

**Example:** Grouping by state shows where most customers live, so the business can focus marketing there.

1. **Business Applications**: Based on your findings, what simple recommendations would you give to help the retail chain improve their performance?

Based on my findings, I would recommend the retail chain to:

* Focus ads and promotions on the most active days of the week.
* Stock more of the best-selling product categories.
* Reward top customers to keep them loyal.
* Hire more staff or extend hours in states with the most customers.