**Dannie Suwannum’s Report on Coffee Sales from Vending Machines**

**Project Summary**

This project involves analyzing a dataset containing coffee purchase transactions, visualized and interpreted using Power BI. The dataset includes information on the date and time of transactions, type of payment used, card identifier, amount spent, and type of coffee purchased.

**Methodology Used**

1. **Data Collection**: Collected from coffee purchase transactions.
2. **Data Cleaning and Preparation**: Processed to ensure accuracy and consistency.
3. **Data Modeling**: Created relationships between data tables in Power BI.
4. **Data Analysis**: Used Power BI to create visualizations and uncover trends.
5. **Reporting**: Generated interactive dashboards to present insights.

**Predicted Target**

The primary goal was to predict future coffee sales based on historical data.

**Achieved Target**

The predictive models achieved an accuracy of [X]% in forecasting future coffee sales. The dashboards provided clear insights into sales trends, customer preferences, and peak buying times.

**Visualizations and Insights**

* **Sales Trends**: Line charts showing daily, weekly, and monthly sales trends.
* **Customer Preferences**: Bar charts displaying the popularity of different coffee types.
* **Peak Buying Times**: Heatmaps indicating the busiest times of day and days of the week.
* **Payment Methods**: Pie charts showing the distribution of payment types (cash vs. card).

**From MySQL file**

**Summary**

This script includes commands to view existing data, create a new table, and generate various summaries and insights from the sales data, including total sales by date and coffee type, the number of new customers per day, and the average order value.

**MySQL Code**

SELECT \* FROM careersim2try2.careersim2try2;

CREATE TABLE CoffeeSales (

id INT AUTO\_INCREMENT PRIMARY KEY,

date DATE,

datetime TIME,

cash\_type VARCHAR(10),

card VARCHAR(20),

money DECIMAL(10, 2),

coffee\_name VARCHAR(50)

);

SELECT date, SUM(money) AS total\_sales

FROM sales

GROUP BY date

ORDER BY date;

SELECT coffee\_name AS product\_category, SUM(money) AS total\_sales

FROM sales

GROUP BY coffee\_name

ORDER BY total\_sales DESC;

SELECT date, COUNT(DISTINCT card) AS new\_customers

FROM sales

GROUP BY date

ORDER BY date;

SELECT AVG(money) AS average\_order\_value

FROM sales;