Name: TAYLOR 's Student ID: _____

ECON 0150 | MiniExam 2 | Demo

This MiniExam will take 16 minutes with a quick break to follow. MiniExams are designed to both test your knowledge and challenge you to apply familiar concepts in new environments. Treat it as if you're trying to show me that you understand the material. Answer clearly, completely, and concisely.

Academic Conduct Code

The following academic conduct code is designed to protect the integrity of your work. Print your name/initials beside the three academic honesty agreements. I pledge to my fellow students, the university, and the instructor, that:

✓ I will complete this MiniExam solely using my own work.
✓ I will not use any digital resources unless explicitly allowed by the instructor.
✓ I will not communicate directly or indirectly with others during the MiniExam.

Q1. Trace the Filter Operation (see Table 1)

Given the bookstore sales data, which rows remain after applying:
Filter: (Price < 30) OR (Category == 'Fiction')

Circle the Book_IDs that would remain in the filtered dataset:

[B001] [B002] [B003] [B004] [B005] [B006]

Q2. Multi-Step Data Operation (see Table 2)

Fill in the exact result of the following operations using the restaurant ratings data:

1. Filter for Rating >= 4
2. Group by Cuisine
3. Count rows in each group

Cuisine	Count
Italian	2
Thai	1
Mexican	1

Q3. Build the Correct Filter

Find all transactions from the weekend with amounts between $50 and $200. Write out the correct expression using the following operations.

1. (Amount >= 50)
2. (Day == 'Saturday')
3. (Amount <= 200)
4. (Day == 'Sunday')

(2 OR 4) AND (1 AND 3)

(WEEKEND) AND (BETWEEN 50 and 200)

(2 OR 4) AND (1 AND 3)

Q4. Understanding Transformations (see Table 4)

efficiency = dollars per delivery

The delivery company wants to compare driver efficiency across regions with different wage levels. They have: `Deliveries_per_hour`, `Local_minimum_wage`. Circle the best transformation ~~and explain why in ONE sentence~~:

a) Deliveries_per_hour + Local_minimum_wage
b) Deliveries_per_hour - Local_minimum_wage
c) Deliveries_per_hour / Local_minimum_wage
d) Deliveries_per_hour * Local_minimum_wage

Q5. Predict the Grouping Output (see Table 5)

After grouping the employee data by Department and calculating MEDIAN Salary:

How many rows will the output have? 3

What will be the median salary for Sales?
[52,000] [55,000] [58,000] [60,000]

Which aggregation would give Sales the HIGHEST value?
[mean] [median] [min] [max] [sum]

Data Tables

Table 1: Bookstore Sales

Book_ID	Category	Price
B001	Fiction	24.99
B002	Non-Fiction	34.99
B003	Fiction	18.50
B004	Textbook	89.00
B005	Textbook	25.00
B006	Non-Fiction	28.75

Table 2: Restaurant Ratings

Restaurant_ID	Cuisine	Rating
R001	Italian	4.5
R002	Thai	3.8
R003	Italian	4.2
R004	Mexican	3.5
R005	Thai	4.7
R006	Mexican	4.1

Table 3: Customer Ages

Customer_ID	Age
C001	twenty-five
C002	32 years
C003	N/A
C004	45

Table 4: Delivery Efficiency

Region	Deliveries_per_hour	Local_minimum_wage
Downtown	3.2	$15
Suburbs	4.8	$12
Rural	2.4	$10

Table 5: Employee Salaries

Emp_ID	Department	Salary
E001	Sales	52,000
E002	Tech	75,000
E003	Sales	60,000
E004	Tech	82,000
E005	Sales	55,000
E006	Admin	48,000