

Assignment-1
Database Systems

Roll number _____

Name _____

BSCS 4th M-A

Question A:

salesperson_id	region	product_id	sale_amount	sale_date
1	North	101	1500	2024-10-05
2	East	102	2000	2024-10-10
1	North	103	5000	2024-10-12
3	South	101	800	2024-10-08
4	West	104	3000	2024-10-15
2	East	105	4000	2024-10-16
5	North	106	7000	2024-10-18
1	South	101	2500	2024-10-20
2	West	107	1500	2024-10-21
3	East	108	6000	2024-10-22
4	North	109	3500	2024-10-25
5	South	110	1200	2024-10-26

Analyzing Sales Performance: A sales company has a table sales with columns salesperson_id, region, product_id, sale_amount, and sale_date.

- **Question:** Write an SQL query to find the total sales amount made by each salesperson in each region for the current year. Ensure that only regions with a total sales amount greater than \$10,000 are displayed.

Question B:

customer_id	purchase_date	amount	category
1	2023-11-10	120	Electronics
2	2023-12-05	80	Clothing
1	2024-02-14	200	Electronics
3	2024-03-20	150	Home Decor
4	2024-04-15	300	Clothing
2	2024-05-05	220	Electronics
3	2024-06-18	250	Electronics
5	2024-07-22	90	Clothing
1	2024-08-30	110	Clothing
2	2024-09-12	75	Electronics
4	2024-10-01	180	Electronics
5	2024-10-11	150	Home Decor

Customer Insights for Marketing: A retail store keeps customer purchase data in a table purchases with columns customer_id, purchase_date, amount, and category.

- **Question:** Write an SQL query to identify customers who made purchases in both the “Electronics” and “Clothing” categories within the last year.

Question C:

Employee Department Analysis: An HR system stores data in a table employees with columns employee_id, name, department, salary, and hire_date.

Question: Write an SQL query to find the average salary of employees in each department who have been with the company for more than 5 years.

Question D:

Product Stock Management: A warehouse database has a table inventory with columns product_id, product_name, category, quantity, and last_restocked.

- **Question:** Write an SQL query to identify products in the “Perishables” category that have less than 10 units in stock and were last restocked more than 30 days ago.