

SYED DEEKASHAN  
22K-0055

Databases Assignment 3

BAI S-A

Q2)  $\pi_{COUNTRY} \text{Country\_Name}$

Q1)  $\pi_{COUNTRY} \text{Country\_Name} (\sigma_{THREAT\_ID} \text{Severity\_Level} = "Critical")$   
(THREAT  $\bowtie$  INCIDENT  $\bowtie$  COUNTRY)

Q2)  $\pi_{TEAM} \text{Team\_Name} ((\pi_{COUNTRY\_ID} \text{TEAM\_ID} (\sigma_{Resolution\_Status} = "Resolved"))$   
(ACTION\\_NAME))  
 $\div (\pi_{COUNTRY\_ID} \text{COUNTRY})) \bowtie \text{RESPONSE\_TEAM}$

Q3)  $\pi_{COUNTRY} \text{Country\_Name} ((\pi_{COUNTRY\_ID} \text{COUNTRY}) - (\pi_{COUNTRY\_ID} \text{RESPONSE\_TEAM})) \bowtie \text{COUNTRY}$

Q4)  $\pi_{THREAT} \text{Threat\_Name} ((\pi_{COUNTRY\_ID} \text{THREAT\_ID} \text{INCIDENT}))$   
 $\div (\pi_{COUNTRY\_ID} \text{COUNTRY}) \bowtie \text{THREAT}$

Q5).  
π INCIDENT\_ID, COUNTRY\_NAME, IMPACTSCORE  
(σ CATEGORY = "AI Attack" ∧ IMPACTSCORE > 80  
(THREAT ⋈ INCIDENT ⋈ COUNTRY))

Q2) 1. Display names of unavailable items that have a price > 500

SELECT itemName FROM MenuItem WHERE isAvailable=0 AND  
price > 500;

2. Display names of menu items that are either beverages with  
price > 30 or desserts (any price), ~~or both~~

SELECT itemName FROM MenuItem WHERE (category = 'Beverage' AND price > 30)  
OR category = 'Dessert';

3. Display names & prices of menu items that are snacks & currently  
available

SELECT itemName, price FROM MenuItem WHERE category = 'Snack' AND  
isAvailable = 1;

4. Select available snacks and display their names with prices converted to a  
different currency unit (divided by 100).

SELECT itemName, price / 100 AS convertedPrice FROM MenuItem WHERE  
category = 'Snack' AND isAvailable = 1;

5. Find all suppliers who supply 'Capuccino'

SELECT DISTINCT s.supplierID FROM Supplies s JOIN MenuItem m ON s.itemID = m.itemID WHERE m.ItemName = 'Capuccino';

6. Find employees whose address matches the city where their cafe is located, & display employee names & cafe names

SELECT e.name, c.cafeName FROM employee e JOIN cafe c ~~ORDER BY~~ ON e.cafeID = c.cafeID WHERE e.address = c.city;

7. Select employees whose salary isn't equal to 500, & display their employee IDs.

SELECT empID FROM EMPLOYEE WHERE salary != 5000;

8. Find suppliers in both Karachi & Lahore ~~INTERSECT~~ ~~SELECT supplierID FROM supplier WHERE city = 'Karachi' INTERSECT~~  
~~SELECT supplierID FROM supplier WHERE city = 'Lahore'~~

SELECT supplierID FROM supplier WHERE city = 'Karachi' ~~INTERSECT~~  
~~SELECT supplierID FROM supplier WHERE city = 'Lahore'~~

9. Find menu items that are not supplied by any supplier

SELECT itemName FROM MenuItem WHERE itemID NOT IN  
(SELECT itemID FROM SUPPLIES);