Databases and SQL Report
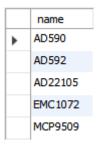
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Factory Information Systems

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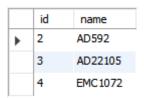**Querying Database:**

- 1. SELECT name FROM fis_assignment2.items;

name
AD590
AD592
AD22105
EMC1072
MCP9509

- 2. SELECT name, phone, city FROM fis_assignment2.customers WHERE id = 2;

name	phone	city
ABC Inc	333-33-33	Helsinki

- 3. SELECT items.id, items.name FROM fis_assignment2.items, fis_assignment2.order_details WHERE order_id = 4 AND items.id = order_details.item_id;

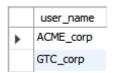| id	name
2	AD592
3	AD22105
4	EMC1072

● 4.   SELECT items.name, order_details.price_per_item, order_details.quantity FROM fis_assignment2.items, fis_assignment2.order_details WHERE order_id = 3 AND order_details.item_id = items.id;

	name	price_per_item	quantity
▶	AD590	10	5
	AD590	15	2
	MCP9509	18	2

● 5.   SELECT order_details.order_id, customers.name, SUM(order_details.quantity*order_details.price_per_item) AS total_price FROM fis_assignment2.orders, fis_assignment2.customers, fis_assignment2.order_details WHERE order_details.order_id = 5 AND order_details.order_id = orders.id AND orders.customer_id = customers.id;

	order_id	name	total_price
▶	5	GlobalTech Corp	202

● Explanation: for retrieving aforementioned results, although the results contain only the fields from 'order_details' and 'customers' table, 'orders' has just taken the role of relating 'customers' table to 'order_details' through 'customer ID' field which is common in both of them (this is also evident in EER). Moreover, the keyword 'SUM' is used to sum up the multiplication of quantity and price of the items.

● 6.   SELECT DISTINCT customer_accounts.user_name FROM fis_assignment2.customer_accounts, fis_assignment2.items, fis_assignment2.order_details, fis_assignment2.orders WHERE (items.name = 'MCP9509' OR items.name = 'AD590') AND items.id = order_details.item_id AND order_details.order_id = orders.id AND Orders.customer_id = customer_accounts.customer_id;

	user_name
▶	ACME_corp
	GTC_corp

● Explanation: in this query again for retrieving 'user_name' through name of the items, a connection is needed among tables ('customer_accounts', 'orders', 'order_details' and 'items') which is also obvious in EER. Knowing name of the items, their 'id' is related to 'item_id' in 'order_details' table whose corresponding 'order_id's are related to the 'id's in 'orders' table. Finally in 'orders' table there exist 'customer_id' filed which is also available in customer_accounts. In order not to show the 'user_name's multiple times, SELECT DISTINCT is used.