

Joins- Self, Natural and Joins on more than 2 tables

Q.1 When to use self join? Explain with examples.

Q.2. What is the difference between a Natural Join and an Inner Join?

Q.3. Write a SQL query to find the salesperson and customer who belong to the same city. Return Salesman, cust_name and city.

Table : salesman

salesman_id	name	city	commission
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5001	James Hoog	New York	0.15
5002	Nail Knite	Paris	0.13
5005	Pit Alex	London	0.11
5006	Mc Lyon	Paris	0.14
5007	Paul Adam	Rome	0.13
5003	Lauson Hen	San Jose	0.12

Table : Customer

customer_id	cust_name	city	grade	salesman_id
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3002	Nick Rimando	New York	100	5001
3007	Brad Davis	New York	200	5001
3005	Graham Zusi	California	200	5002
3008	Julian Green	London	300	5002
3004	Fabian Johnson	Paris	300	5006
3009	Geoff Cameron	Berlin	100	5003
3003	Jozy Altidor	Moscow	200	5007
3001	Brad Guzan	London		5005

Q.4. Write a SQL query to find those orders where the order amount exists between 500 and 2000. Return ord_no, purch_amt, cust_name, city.

Table : orders

ord_no	purch_amt	ord_date	customer_id	salesman_id
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70001	150.5	2012-10-05	3005	5002
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70009	270.65	2012-09-10	3001	5005
70002	65.26	2012-10-05	3002	5001
70004	110.5	2012-08-17	3009	5003
70007	948.5	2012-09-10	3005	5002
70005	2400.6	2012-07-27	3007	5001
70008	5760	2012-09-10	3002	5001
70010	1983.43	2012-10-10	3004	5006
70003	2480.4	2012-10-10	3009	5003
70012	250.45	2012-06-27	3008	5002
70011	75.29	2012-08-17	3003	5007
70013	3045.6	2012-04-25	3002	5001

Table : customer

customer_id	cust_name	city	grade	salesman_id
3002	Nick Rimando	New York	100	5001
3007	Brad Davis	New York	200	5001
3005	Graham Zusi	California	200	5002
3008	Julian Green	London	300	5002
3004	Fabian Johnson	Paris	300	5006
3009	Geoff Cameron	Berlin	100	5003
3003	Jozy Altidor	Moscow	200	5007
3001	Brad Guzan	London		5005

Q.5. Write a SQL query to select all rows from both participating tables as long as there is a match between pro_com and com_id.

Table : company_mast

COM_ID	COM_NAME
11	Samsung
12	iBall
13	Epsion
14	Zebronics
15	Asus
16	Frontech

Table : item_mast

PRO_ID	PRO_NAME	PRO_PRICE	PRO_COM
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101 Motherboard	3200.00	15
102 Keyboard	450.00	16
103 ZIP drive	250.00	14
104 Speaker	550.00	16
105 Monitor	5000.00	11
106 DVD drive	900.00	12
107 CD drive	800.00	12
108 Printer	2600.00	13
109 Refill cartridge	350.00	13
110 Mouse	250.00	12

Q.6. Import the following datasets:

Customers.csv Orders.csv Order_Details.csv Product_Details.csv

Understand the variables and connectors between the tables. After that, Do the following:

(1) Find the Country wise distinct count of customers

(2) Create the following table:

City	Country	Customer_Count	Total_orders

(3) Create the following table:

Year	Total_Orders	Total_Quantity	Total_Sales

(4) Find the Best Performing product in terms of Total Quantity Consumed

Q.7. You are given a schema of 4 tables, Actors, Directors, Movie and Movie_director_actor.

Table 1 : Actor
act_id
act_name

Table 2 : Director
dir_id

dir_name

Table 3 : Movie
movie_id
movie_name

Table 4 : movie_director_actor
act_id
dir_id
movie_id

Write a query to find the actor and director's name who have done atleast 3 movies together.

Q.8.Find the cumulative sum of Sales, refer Input and Output mentioned in the below snippet:

Input		
Customer_ID	Month	Sales
X101	Jan-20	20
x101	Feb-20	45
X101	Mar-20	23
X101	Apr-20	76
X101	May-20	45
X101	Jun-20	76
X101	Jul-20	35
X101	Aug-20	27
X101	Sep-20	44
X101	Oct-20	90
X101	Nov-20	75
X101	Dec-20	78

Desired Output		
Customer_ID	Month	Cumulative Sales
X101	Jan-20	20
x101	Feb-20	65
X101	Mar-20	88
X101	Apr-20	164
X101	May-20	209
X101	Jun-20	285
X101	Jul-20	320
X101	Aug-20	347
X101	Sep-20	391
X101	Oct-20	481
X101	Nov-20	556
X101	Dec-20	634