CSE202:DBMS

- BIG MART -

Online Retail Store

Relation Schema, MySQL Queries

Team 121

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The diverse *MySQL Queries* that showcase our relation model are as follows:

1. List of all Products and their details from Cart:

   $\Pi_{P.ProductName,\ C.Quantity,\ C.Price}(\rho_C(Cart) \bowtie_{Cart.ProdId\ =\ Product.ProdId}\ \rho_P(Products))$

2. Return the entire Cart of an single Customer:

   $\sigma_{CustId\ =\ xyz}(Customers)$

3. List names of all Products of a certain Category:

   $\Pi_{Product.Name}(\sigma_{Product.CatId\ =\ Category.CatId\ \wedge\ Category.Name\ =\ \text{“XYZ”}}(Products \times Category))$

   [here, xyz is an arbitrary Category Name]

4. List names of all Products which are cheaper in price:

   $\Pi_{Product.Name}(\sigma_{Price\ <\ XYZ}(Products))$ [here, xyz is an arbitrary amount]

5. List of all Products which are cheaper than another product:

   $\sigma_{A.Price\ <\ B.Price\ \wedge\ B.ProdId\ =\ xyz}(\rho_A(Products) \times \rho_B(Products))$

   Or, $\sigma_{R.Price\ <=\ S.Price}(\rho_R(Products))$ - $\sigma_{S.ProdId\ =\ xyz}(\rho_S(Products))$

   [here, xyz is an arbitrary Id of the referred product]

6. Get the Status, Delivery Time, Bill & Details of delivery agent for the current Order of a customer:

   $\Pi_{Status,\ Delivery\_Time,\ Bill,\ Delivery\_Agent\_Name,\ Delivery\_Agent\_Phone\_No}(Order\_Details)$

7. List of all Customers who have a subscription of certain Months:

   $\sigma_{Subsription\_Type\ =\ xyz}(Customers)$ [here, xyz is an arbitrary amount in Months]

8. Employees whose salary is greater than or equal to a certain value:

   $\sigma_{Salary\ >=\ xyz}(Employee)$ [here, xyz is an arbitrary amount]

9. List of all Employees who are available.

   $\sigma_{Availability\ =\ \text{“True”}}(Employee)$

10. Get the Full name of the Supplier conducting an order delivery:

    $\Pi_{FirstName,\ MiddleName,\ LastName}(\rho_S(Supplier) \bowtie_{S.SuppId\ =\ O.Delivery\_Agent\_Id\ \wedge\ O.OrderId\ =\ xyz} \rho_O(Order\_Details))$ [here, xyz is an arbitrary amount]

11. List of Customers whose Current Balance is greater than the total price of their Cart:

$$\sigma_{A.Account\_Balance > Sum(B.Price)}(\rho_A(Customer) \bowtie_{A.CustId = B.CustId} \rho_B(Cart))$$

12. List of all Admins who analyzes or reviews the products of a certain Category:

$$\sigma_{A.Role = \text{“Analyzes xyz”}}(\rho_A(Admin)) \cup \sigma_{A.Role = \text{“Review xyz”}}(\rho_A(Admin))$$

[here, xyz is an arbitrary Category Name]

13. List of all payments made by a Customer till date:

$$\rho_P(Payments) \bowtie_{P.CustId = O.CustId \wedge O.Order\_Date <= TODAY \wedge P.CustId = xyz} \rho_O(Order\_Details)$$

[here, xyz is an arbitrary Customer Id]

14. Names of Products of the same Category where discount is greater than 30% or less than 40%:

$$\Pi_{ProductName}(\sigma_{CatId = xyz \wedge Discount = (30\%, 40\%)}(Products))$$

15. The Average salary of employees and the Net salary of all employees:

$$\Pi_{AVG(Salary),\ SUM(Salary)}(Employee)$$

16. The count of all Products of the same Category in a Cart:

$$\Pi_{COUNT(ProdId)}((Cart) \bowtie_{Cart.ProdId = Product.ProdId \wedge Product.CatId = xyz} (ProdId))$$

[here, xyz is an arbitrary Cart Id]

17. The cheapest and most expensive Product of a certain category:

$$\Pi_{MIN(Price),\ Max(Price)}(\sigma_{CatId = xyz}(Products))$$

18. Find the employees who don't have a middle name:

$$\sigma_{MiddleName = NULL}(Employee)$$

19. Calculating the counts of each subscribed type of memberships.
20. Name of Customers who have placed orders between an amount range.
21. List of Products which are not added in Cart.