

DBMS practice prblem

H Harinip.
To MVS-Ju25-SE12-Generic-D
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A retail outlet "EverydayShop" sells products to its customers. The outlet also offers servicing on sold products. To manage the details of customers, products and services, following database schema is used.

Click to see table structure and data:

- Product (This table provides the details of all the products)
- Customer (This table provides the details of the customers)
- Service (This table provides the details of the products that have come for servicing)

Table Structure Product

mn Name	Data Type and Size	Constraint	Description
ictId	VARCHAR(5)	PRIMARY KEY, CHECK	Unique Id for each product, should start with P'
ictName	VARCHAR(35)	NOTNULL, UNIQUE	Name of the product
orName	VARCHAR(20)	NOT NULL	Name of the vendor
NUMERIC	NOT NULL, CHECK		Price of the product in INR, should be more than 0



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Table Data: Product

ProductID	ProductName	VendorName	Price
P101	Microwave oven	Kent	2500
P102	Induction Cooktop	Prestige	3200
P103	Ceiling fan	Prestige	1500
P104	Induction Cooktop	Philips	1200
P105	Refrigerator	Samsung	12500
P106	Water Purifier	Kent	6000
P107	Microwave oven	Samsung	15500

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Table Structure: Customer

Column Name	Data Type and Size	Constraint	Description
CustId	VARCHAR(5)	PRIMARY KEY, CHECK	Unique Id of the customer, must begin with character 'C'
CustName	VARCHAR(35)	NOT NULL	Name of the customer
Area	VARCHAR(20)	NOT NULL	Area in which customer resides
CustType	VARCHAR(20)	NOT NULL, CHECK	Type of the customer, should be in ('Occasional', 'Regular', 'Premium')

Table Data: Customer

CustId	CustName	Area	CustType
C101	Usha	Tarnaka	Occasional
C102	Rama	Ameerpet	Premium
C103	Deep	Begumpet	Regular

Column Name	Data Type and Size	Constraint	Description
ServiceId	VARCHAR(5)	PRIMARY KEY, CHECK	Unique ServiceId for every Service, should start with 'S'
ProductId	VARCHAR(5)	FOREIGN KEY	Refers to ProductId present in Product Table
CustId	VARCHAR(5)	FOREIGN KEY	Refers to CustId present in Customer Table
Status	VARCHAR(15)	NOT NULL, CHECK	Status of service request, should be in ('Completed', 'In-Process')
ServiceCharges	NUMERIC(4)		Amount charged for servicing in INR
			Date on which service



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ProductId	VARCHAR(5)	FOREIGN KEY	present in Product Table
CustId	VARCHAR(5)	FOREIGN KEY	Refers to CustId present in Customer Table
Status	VARCHAR(15)	NOT NULL, CHECK	Status of service request, should be in ('Completed', 'In-Process')
ServiceCharges	NUMERIC(4)		Amount charged for servicing in INR
ServiceRequestDate	DATE	DEFAULT SYSDATE	Date on which service request has been logged

Table Data: Service

CustomerID	ProductID	ServiceID	Status	CustomerName	ServiceDescription
1001	1001	1001	Completed	John Doe	Service A
1002	1002	1002	In-Process	Jane Doe	Service B
1003	1003	1003	Completed	Mike Smith	Service C
1004	1004	1004	Completed	Sarah Johnson	Service D

ServiceId	ProductId	CustId	Status	ServiceCharges	ServiceRequestDate
S101	P104	C104	Completed	100	2024-09-05
S102	P105	C104	In-Process	600	2024-08-04
S103	P106	C103	In-Process	0	2024-06-04
S104	P107	C101	Completed	200	2024-04-07
S105	P103	C105	Completed	100	2024-04-18
S106	P101	C102	In-Process	200	2024-04-01
S107	P107	C101	Completed	500	2024-03-12
S108	P107	C101	Completed	300	2024-08-25
S109	P103	C105	Completed	0	2024-06-15

Question 1:



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Question 1:

Identify the details of products offered by either 'Samsung' or 'Philips', whose servicing have been completed.

For the given sample data, the following records will appear in the output along with other records. [2 Marks]

Sample Output:

PRODUCTID	VENDORNAME	SERVICEID
P104	Philips	S101
P107	Samsung	S104

Question 2:



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Question 2:

Display product name and vendor name separated by 'By' along with price as shown in sample output for the vendors whose name starts with 'P'.

For the given sample data, the following is the expected output. [2 Marks]

Sample Output:

PRODUCT	PRICE
Induction Cooktop By Prestige	3200
Ceiling fan By Prestige	1500
Induction Cooktop By Philips	1200

Question 3:

Identify the total number of customers of each type in 'Ameerpet' and 'Tarnaka' areas.

For the given sample data, the following is the extracted output. [2 Marks]



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Question 3:

Identify the total number of customers of each type in 'Ameerpet' and 'Tarnaka' areas.

For the given sample data, the following is the expected output. [2 Marks]

Sample Output:

CUSTTYPE	CUSTOMERS
Occasional	2
Premium	2
Regular	1

Question 4:

Find the products that are costlier than minimum price of any 'Prestige' product.

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Question 4:

Find the products that are costlier than minimum price of any 'Prestige' product.

For the given sample data, the following records will appear in the output along with other records. [2 Marks]

Sample Output:

PRODUCTID	PRICE
P101	2500
P105	12500

Question 5:

Identify the customer(s) who have brought same product for servicing, highest number of times.

For the given sample data, the following is the expected output. [3 Marks]

Sample Output:

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CUSTID	CUSTNAME
C101	Usha

Question 6:

Identify the details of service for which a customer has paid different service charges for same product.

For the given sample data, the following records will appear in the output along with other records. [3 Marks]

Sample Output:

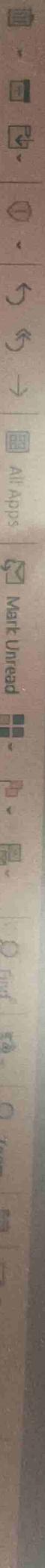
CUSTID	PRODUCTID
C101	P107
C105	P103

Question 7.



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Question 7:

For all the products whose price is atleast 3000, if it has been brought for service, display the product ids along with their service ids. Otherwise, display service id as 'No Service Availed'.

For the given sample data, the following records will appear in the output along with other records. [3 Marks]

Sample Output:

PRODUCTID	SERVICEID
P105	S102
P102	No Service Availed

Question 8:

Identify the details of costliest product of each vendor along with their ServiceRequestDate.

For the given sample data, the following is the expected output. [3 Marks]



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Question 8:

Identify the details of costliest product of each vendor along with their ServiceRequestDate.

For the given sample data, the following is the expected output. [3 Marks]

Sample Output:

PRODUCTID	PRODUCTNAME	VENDORNAME	SERVICEREQUESTDATE
P104	Induction Cooktop	Philips	2024-09-05
P106	Water Purifier	Kent	2024-06-04
P107	Microwave oven	Samsung	2024-04-07
P107	Microwave oven	Samsung	2024-03-12
P107	Microwave oven	Samsung	2024-08-25



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