

Question - 4 \Rightarrow Reference Table

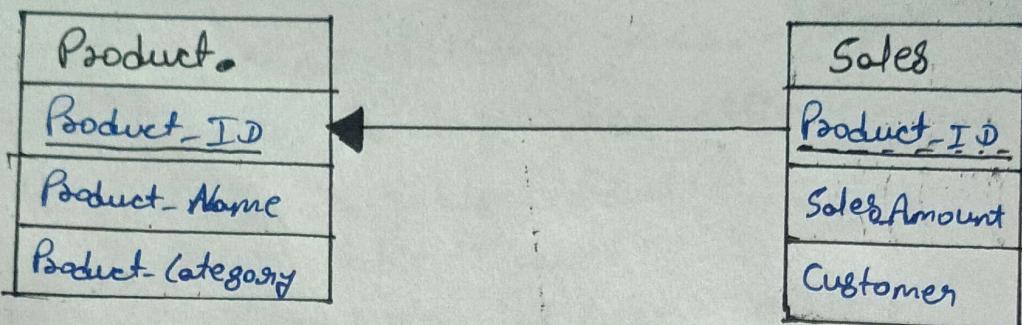
Table 1st \Rightarrow Product Details

Product-ID	Product-Name	Product-Category
12	Bike ABC	Road Bike
13	Bike DEF	mountain Bike
14	Bike GHI	Road Bike
15	Bike JKL	Touring Bike

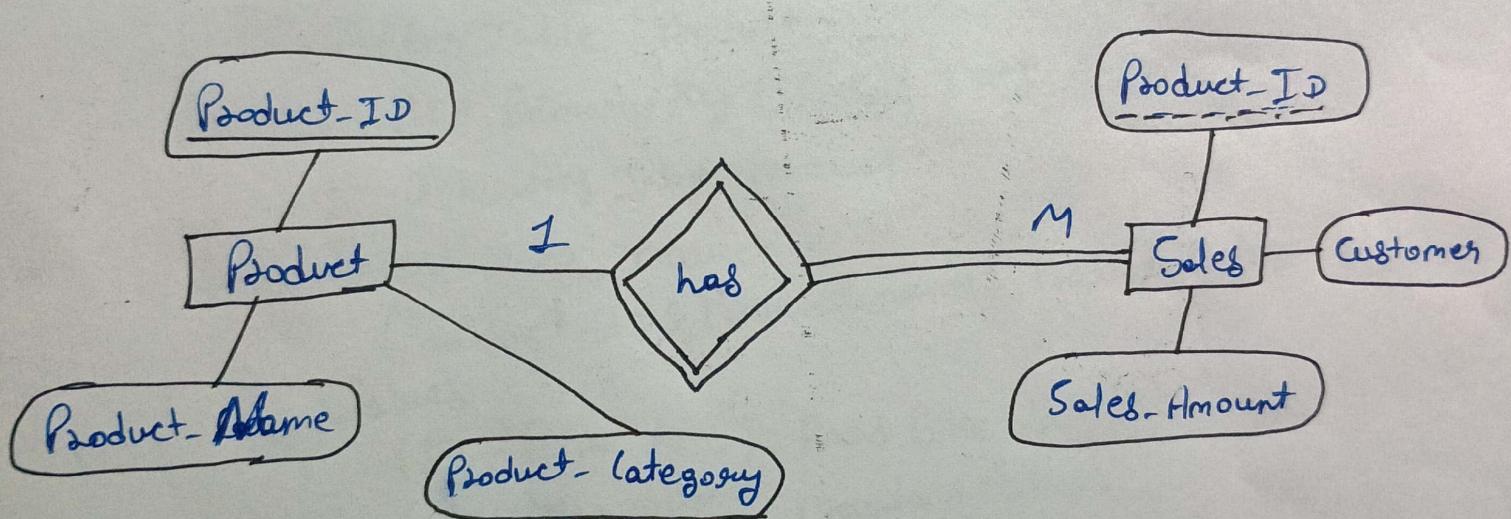
Table 2nd \Rightarrow Sales Details

Product-ID	Customer	Sales-amount
12	Joe	1000
13	Tom	2000
14	Joe	1500
15	Bill	1000

Q.4 → Relational Diagram



ER-DIAGRAM



Answers - 4 -> DB - Table Structure

Table 2st, -> Product Details Structure

Code:- -- Create database 'mca-assign4'

Create Database 'mca-assign4';

-- Create table 'Product'

Create Table 'Product' (

Product-ID int (11) NOT NULL,

Product-Name varchar(100) Default Null,

Product-Category varchar(50) Default Null

);

-- Adding key to 'Product'

After Table 'Product'

ADD Primary Key ('Product-ID');

-- Inserting Into 'Product'

Insert Into 'Product'

('Product-ID', 'Product-name', 'Product-category')

Values

(12, 'Bike ABC', 'Road Bike'),

(13, 'Bike DEF', 'Mountain Bike'),

(14, 'Bike GHI', 'Road Bike'),

(15, 'Bike JKL', 'Touring Bike');

Table 2nd :- Sales Details Structure

Code :- -- Create table 'Sales'
Create Table 'Sales' (
Product-ID int(11) NOT NULL,
Customer Varchar(100) Default Null,
Sales-amount int(11) Default Null
);
-- Adding key to 'Sales'
Alter Table 'Sales'
ADD Primary Key ('Product-ID', 'Customer');
-- Inserting Into 'Sales'
Insert Into 'Sales'
('Product-ID', 'Customer', 'Sales-Amount')

Values

(12, 'JOE', 1000),
(13, 'Tom', 2000),
(14, 'JOE', 1500),
(12, 'Bill', 1000);

-- Constraints for table 'Sales'

Alter table 'Sales'
Add Constraint 'Sales_ibfk_1'
Foreign key ('Product-ID')
References 'product' ('Product-ID');

Data Structure in Tables in DB After Creation

Product-ID	Product-Name	Product-Category
12	Bike ABC	Road Bike
13	Bike DEF	Mountain Bike
14	Bike GHI	Road Bike
15	Bike JKLM	Touring Bike

Table 4.1 :-> Product

Product-ID	Customer	Sales-Amount
12	Joe	10000
13	Tom	20000
14	Joe	15000
12	Bill	10000

Table 4.2 :-> Sales

Q. 4.1 :- Write a SQL Statement that returns the distinct list of Product Categories from the Product table?

Sol. :-

Query :- Select Distinct Product Category
From Product;

Output :-

Product Category
Road Bike
Mountain Bike
Touring Bike

Q. 4.2 :- Write a SQL Statement that returns the total record count from the Sales table?

Sol. :-

Query :- Select Count (Product-ID) AS 'Total Records'
From Sales;

Output :-

Total Records
4

Q. 4.3 :- Write a SQL Statement that returning the Sum of Sales Amount grouped by Product Category having Sales greater than 1500 ?

Sol. :-

Query :-

```
Select Product-Category, Sum (Sales-amount) AS  
From Product  
Left Join Sales  
Using (Product-ID)  
Group By Product-Category  
Having Sum (Sales-amount) > 1500;
```

Output :-

Product-Category	Sales-amount
Mountain Bike	2000
Road Bike	3500

Q. 4.4 :- Write a SQL Statement that returns a list of Products that do not appear the Sales table?

Sol:->

Query:->

```
Select Product.Product.ID  
From Product  
Left Join Sales  
Using (Product-ID)  
Where Sales.Product-ID IS NULL;
```

Output:->

Product - ID
15