

Problem Statement

You are part of a team which is involved in developing an E-Commerce Website.

The E-commerce website manages its data in the Database..

- 1) You are required to create tables for **supplier, customer, category, product, supplier_pricing, order, rating** to store the data for the E-commerce with the schema definition given below.
- 2) You are required to develop SQL based programs (Queries) to facilitate the Admin team of the E-Commerce company to retrieve the data in summarized format - The Data Retrieval needs are described below.

Table: **supplier**

Columns:

SUPP_ID	INT PK
SUPP_NAME	varchar(50) NOT NULL
SUPP_CITY	varchar(50) NOT NULL
SUPP_PHONE	varchar(50) NOT NULL

Table: **customer**

Columns:

CUS_ID	INT PK
CUS_NAME	VARCHAR(20) NOT NULL
CUS_PHONE	VARCHAR(10) NOT NULL

CUS_CITY	VARCHAR(30) NOT NULL
CUS_GENDER	CHAR

Table: **category**

Columns:

CAT_ID	INT PK
CAT_NAME	VARCHAR(20) NOT NULL

Table: **product**

Columns:

PRO_ID	INT PK
PRO_NAME	VARCHAR(20) NOT NULL DEFAULT "Dummy"
PRO_DESC	VARCHAR(60)
CAT_ID	INT FK

Table: **supplier_pricing**

Columns:

PRICING_ID	INT PK
------------	--------

PRO_ID	INT FK
SUPP_ID	INT FK
SUPP_PRICE	INT DEFAULT 0

Table: **order**

Columns:

ORD_ID	INT PK
ORD_AMOUNT	INT NOT NULL
ORD_DATE	DATE NOT NULL
CUS_ID	INT FK
PRICING_ID	INT FK

Table: **rating**

Columns: (Rating provided in this table is common for product and supplier)

RAT_ID	INT PK
ORD_ID	INT FK
RAT_RATSTARS	INT NOT NULL

3) Insert the following data in the table created above

Supplier Table-

SUPP_ID	SUPP_NAME	SUPP_CITY	SUPP_PHONE
1	Rajesh Retails	Delhi	1234567890
2	Appario Ltd.	Mumbai	2589631470
3	Knome products	Banglore	9785462315
4	Bansal Retails	Kochi	8975463285
5	Mittal Ltd.	Lucknow	7898456532

Customer Table-

CUS_ID	CUS_NAME	CUS_PHONE	CUS_CITY	CUS_GENDER
1	AAKASH	9999999999	DELHI	M
2	AMAN	9785463215	NOIDA	M
3	NEHA	9999999999	MUMBAI	F
4	MEGHA	9994562399	KOLKATA	F
5	PULKIT	7895999999	LUCKNOW	M

Category Table-

CAT_ID	CAT_NAME
1	BOOKS
2	GAMES
3	GROCERIES
4	ELECTRONICS
5	CLOTHES

Product Table-

PRO_ID	PRO_NAME	PRO_DESC	CAT_ID
1	GTA V	Windows 7 and above with i5 processor and 8GB RAM	2
2	TSHIRT	SIZE-L with Black, Blue and White variations	5
3	ROG LAPTOP	Windows 10 with 15inch screen, i7 processor, 1TB SSD	4
4	OATS	Highly Nutritious from Nestle	3
5	HARRY POTTER	Best Collection of all time by J.K Rowling	1
6	MILK	1L Toned Milk	3
7	Boat Earphones	1.5Meter long Dolby Atmos	4
8	Jeans	Stretchable Denim Jeans with various sizes and color	5
9	Project IGI	compatible with windows 7 and above	2
10	Hoodie	Black GUCCI for 13 yrs and above	5
11	Rich Dad Poor Dad	Written by RObert Kiyosaki	1
12	Train Your Brain	By Shireen Stephen	1

Supplier_pricing Table-

PRICING_ID	PRO_ID	SUPP_ID	SUPP_PRICE
1	1	2	1500
2	3	5	30000
3	5	1	3000
4	2	3	2500
5	4	1	1000
6	12	2	780
7	12	4	789
8	3	1	31000
9	1	5	1450
10	4	2	999
11	7	3	549
12	7	4	529
13	6	2	105

14	6	1	99
15	2	5	2999
16	5	2	2999

Order Table-

ORD_ID	ORD_AMOUNT	ORD_DATE	CUS_ID	PRICING_ID
101	1500	2021-10-06	2	1
102	1000	2021-10-12	3	5
103	30000	2021-09-16	5	2
104	1500	2021-10-05	1	1
105	3000	2021-08-16	4	3
106	1450	2021-08-18	1	9
107	789	2021-09-01	3	7
108	780	2021-09-07	5	6
109	3000	2021-09-10	5	3
110	2500	2021-09-10	2	4
111	1000	2021-09-15	4	5
112	789	2021-09-16	4	7
113	31000	2021-09-16	1	8
114	1000	2021-09-16	3	5
115	3000	2021-09-16	5	3
116	99	2021-09-17	2	14

Rating table-

RAT_ID	ORD_ID	RAT_RATSTARS
1	101	4
2	102	3
3	103	1
4	104	2
5	105	4
6	106	3

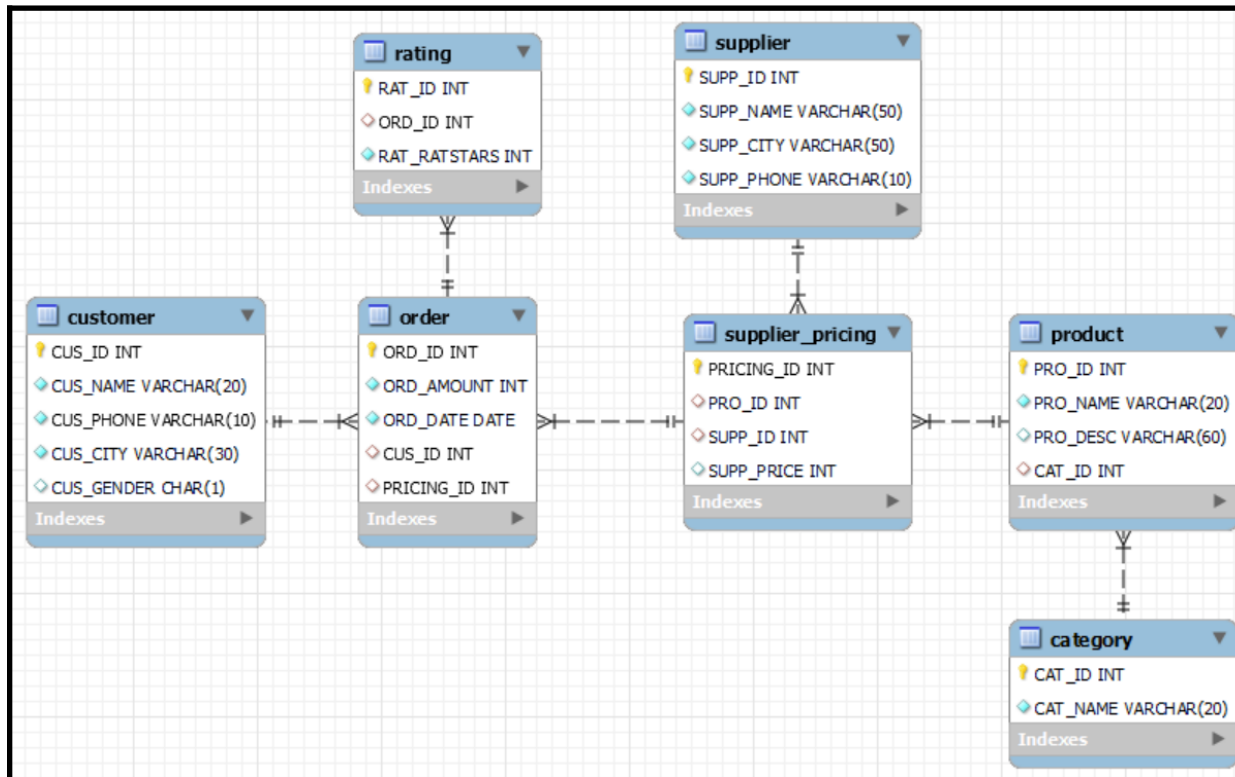
7	107	4
8	108	4
9	109	3
10	110	5
11	111	3
12	112	4
13	113	2
14	114	1
15	115	1
16	116	0

Queries →

Write queries for the following:

- 4) Display the total number of customers based on gender who have placed individual orders of worth at least Rs.3000.
- 5) Display all the orders along with product name ordered by a customer having Customer_Id=2
- 6) Display the Supplier details who can supply more than one product.
- 7) Find the least expensive product from each category and print the table with category id, name, product name and price of the product
- 8) Display the Id and Name of the Product ordered after "2021-10-05".
- 9) Display customer name and gender whose names start or end with character 'A'.
- 10) Create a stored procedure to display supplier id, name, Rating(Average rating of all the products sold by every customer) and Type_of_Service. For Type_of_Service, If rating =5, print "Excellent Service", If rating >4 print "Good Service", If rating >2 print "Average Service" else print "Poor Service". Note that there should be one rating per supplier.

Schema:



Learning Objectives:

After completing this project,

Learner will be able to Understand the Database Schemas for a Business Org and will be able to design the database and corresponding tables that are needed for an e-Commerce WebSite.

Also Learner will be able to design SQL queries to retrieve data involving the following features of MySQL:

- 1) Select Queries (with logical & comparison operators)

- 2) Group By / Order By / Having Clauses
- 3) Joins
- 4) Sub Queries
- 5) Procedures (Creating & Executing)
- 6) Use case construct in a procedure.