

# **DBMS LABORATORY**

## **Assignment No. – 4**

### **Mail-Order Database**

The mail-order database consists of the relations defined in the six schemas shown below.

ZIPCODES (ZIP, CITY)

EMPLOYEES (ENO, ENAME, ZIP, HDATE)

PARTS (PNO, PNAME, QOH, PRICE, OLEVEL)

CUSTOMERS (CNO, CNAME, STREET, ZIP, PHONE)

ORDERS (ONO, CNO, ENO, RECEIVED, SHIPPED)

ODETAILS (ONO, PNO, QTY)

Where

- ❖ The EMPLOYEES relations contain information about the employees of the company. The ENO attribute is the primary key. The ZIP attribute is a foreign key referring to the ZIPCODES table.
- ❖ The PARTS relation keeps a record of the inventory of the company. The record for each part includes its number and name as well as the quantity on hand, unit price and record level. PNO is the primary key for this relation.
- ❖ The CUSTOMERS relation contains information about the customer of the mail order company. Each customer is assigned a customer number, CNO, which serves as a primary key. The ZIP attribute is a foreign key referring to the ZIPCODES relation.
- ❖ The ORDERS relation contains information about the orders placed by the customers, the employee who took the order, and the dates the order was received and shipped. ONO is the primary key. The CNO attribute is a foreign key referring to the CUSTOMERS relation, and the ENO attribute is a foreign key referring to the EMPLOYEES table.
- ❖ The ODETAILS relation contains information about the various part-orders by the customer within a particular order. The combination of the ONO and PNO attributes forms the primary key. The ONO attribute is a foreign key referring to the PARTS relation.
- ❖ The ZIPCODES relation maintains information about the ZIPCODES for various cities. ZIP is the primary key.

ZIPCODES

ZIP	CITY
-----	-----
7226	wichita
0606	fort dodge
0302	kansas city
4444	columbia
6006	libaral
1111	fort hays
5222	diamond
3111	kolkata
0706	patna
1818	delhi

EMPLOYEES

ENO	ENAME	ZIP	HDATE
-----	-----	-----	-----
1000	jones	67226	12-DEC-95
1001	smith	60606	01-SEP-94
1002	brown	50302	01-SEP-94
1003	bapi	54444	21-NOV-97
1005	komal	61111	05-JAN-99
1004	sanjit	54444	10-FEB-85
1006	ramanath	66006	07-MAY-85
1007	pasupati	61111	03-MAR-85
1008	uttam	65222	06-SEP-84
1009	arup	63111	31-JAN-84
1010	biplab	60706	22-MAR-84
1011	umpa	61818	21-MAR-91
1012	mamoni	67226	13-MAR-88
1013	anjali	60706	23-MAR-92
1014	marium	61818	22-MAR-93
1015	falguni	61818	11-MAR-88

PARTS

PNO	PNAME	QOH	PRICE	OLEVEL
-----	-----	-----	-----	-----
10506	land before time 1	200	17.99	20
10507	land before time 2	156	17.99	20
10508	land before time 3	190	17.99	20
10509	land before time 4	60	17.99	20
10601	Nut	300	24.99	30
10602	Bolt	120	17.99	30
10603	Screw	140	13.49	30
10800	Driller	100	24.99	30

CUSTOMERS

CNO	CNAME	STREET	ZIP	PHONE
-----	-----	-----	-----	-----
1111	charles	123 main st.	67226	316636
2222	amina	124 lane 11	60606	24203227
3333	soma	224 main st.	54444	24203270
4444	rita	321 lane 13	66006	24219706
5555	bhaswati	543 main st.	50302	32157654
6666	santu	432 main st	61111	5432167
7777	manas	432 lane 17	61111	5432167
8888	monirul	765 main st.	65222	4321566
9999	tapan	654 lane 19	63111	5432156
1000	dipu	543 main st.	60706	9876543
9988	barun	657 lane 12	61818	9876543

ORDERS

ONO	CNO	ENO	RECIVED	SHIPPED
-----	-----	-----	-----	-----
1020	1111	1000	10-DEC-94	12-DEC-94
1021	1111	1000	12-JAN-95	15-JAN-95
1022	2222	1001	20-JAN-97	Null
1023	3333	1002	13-APR-98	29-APR-98
1024	4444	1003	11-MAR-96	13-MAR-96
1025	5555	1004	11-MAR-96	12-MAR-96
1026	5555	1004	31-MAY-98	08-JUN-98
1027	8888	1006	23-MAY-95	23-MAR-93
1028	7777	1007	17-MAY-84	18-DEC-83
1029	3333	1008	13-DEC-92	18-SEP-93
1030	2222	1010	30-APR-83	17-SEP-85
1031	1000	1011	26-MAY-93	16-APR-85
1032	1111	1012	15-APR-86	31-JAN-05
1033	9988	1013	18-APR-00	18-APR-05
1034	9988	1014	08-FEB-05	18-FEB-05
1035	1111	1015	18-APR-05	Null

ODETAILS

ONO	PNO	QTY
-----	-----	-----
1034	10506	7
1020	10507	5
1022	10507	6
1029	10508	5
1026	10509	9
1029	10507	3
1028	10701	7
1026	10801	4
1021	10800	2
1035	10601	5
1033	10602	8
1032	10509	7
1031	10603	1

**QUERIES :****Perform the following queries using SQL.**

*(Maximum three independent sub-queries are allowed in this assignment)*

**QUERY-1:** Get PNO values for PARTS for which ORDERES have been placed.

**QUERY-2:** Get all the details of CUSTOMERS whose name has being letter 's'.

**QUERY-3:** Get PNO and PNAME values of PARTS that are priced less than 19.99.

**QUERY-4:** Get the ONO, CNAME and SHIPPED values for CUSTOMERS whose orders have not yet been shipped.

**QUERY-5:** Get PNAME and PRICE value from PARTS with the lowest PRICE.

**QUERY-6:** Get the PNAME and PRICE values of PARTS that cost less than the least expensive 'land before time' part.

**QUERY-7:** Get the ENO values of EMPLOYEES from 'Fort Dodge'.

**QUERY-8:** Get the ENAME and HDATE of the EMPLOYEES who was hired on the earliest date.

**QUERY-9:** Retrieve the PNO, PNAME and PRICE of PARTS with price greater than 20.00 in an ascending order of PNO.

**QUERY-10:** For each PARTS get PNO and PNAME values along with total sales in details.

**QUERY-11:** For each PARTS get PNO and PNAME values along with total sales in rupees but only when the total sales exceeds 100.53.

**QUERY-12:** Change the name of the CITY 'columbia' to 'parth'.

**QUERY-13:** Update all the null valued SHIPPED dates to the current date.

**QUERY-14:** Decrease the PRICE of all PARTS that cost less than 24.00 by 10%.

**QUERY-15:** Set the 'QOH' value of those PARTS whose current 'QOH' value is less than 100 to the maximum 'QOH' value present in the table.