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**BATCH-T4**

Customer(CustNo, CustName, State, PhoneNo)

Item(ItemNo, ItemName, Price,[QtyOnHand])

Invoice(InvNo, InvDate, CustNo)

Invitem(InvNo, ItemNo, Qty)

1. Create tables for above schemas. Define integrity and value constraints wherever appropriate.

mysql> create table customer(custno int primary key,custname varchar(30),state varchar(30), phoneno varchar(30));

Query OK, 0 rows affected (0.05 sec)

mysql> create table item(itemno int primary key, itemname varchar(30), price int);

Query OK, 0 rows affected (0.03 sec)

mysql> create table invoice(invno int primary key, invdate date, custno int, foreign key(custno) references customer(custno));

Query OK, 0 rows affected (0.05 sec)

mysql> create table invitem(invno int , itemno int, qty int);

Query OK, 0 rows affected (0.03 sec)

1. Alter table *Item* to add *QtyOnHand* column to it.

mysql> alter table item add column (qtyonhand int);

Query OK, 0 rows affected (0.02 sec)

1. Create sequences that can be used as primary key in each table.

mysql> alter table invoice change invno invno int auto\_increment first;

Query OK, 0 rows affected (0.05 sec)

mysql> alter table invitem change invno invno int auto\_increment;

Query OK, 0 rows affected (0.06 sec)

mysql> alter table item change itemno itemno int auto\_increment first;

Query OK, 0 rows affected (0.05 sec)

1. Create a index on customer’s name.

mysql> create index ind1 on customer (custno);

Query OK, 0 rows affected (0.03 sec)

1. Create a simple view with item names and item prices only.

mysql> create view asd as select invno,custname from customer natural join invoice where state = 'mh';

Query OK, 0 rows affected (0.03 sec)

1. Drop table Invoice.

mysql> drop table invoice;

1. Insert values into all tables created in Q.1.

mysql> insert into customer values (1,"edson","mh","23145","pune");

mysql> insert into customer values (2,"amit","mh","86565","mumbai");

mysql> insert into customer values (3,"naren","kl","27659","kochi");

mysql> insert into customer values (4,"lauren","kl","23908","trivandrum");

mysql> insert into customer values (5,"amatya","bh","96145","patna");

mysql> insert into customer values (6,"prince","bh","10349","vaishali");

mysql> insert into customer values (7,"rushit","gj","65347","rajkot");

mysql> insert into customer values (8,"mridul","gj","34685","surat");

mysql> insert into item values (null,'hammer',40,100),(null,'screw',2,1500),(null,'nut',1,1900),(null,'knife',10,800);

mysql> insert into invoice values (null,'2022-08-12',8),(null,'2022-08-17',5),(null,'2022-08-26',1),(null,'2022-08-30',2);

mysql> insert into invitem values (null,3,55);

mysql> insert into invitem values (null,1,534);

mysql> insert into invitem values (null,2,48);

mysql> insert into invitem values (null,25,4);

1. Display a) all customer information b) item names and their respective unit price

Unique invoice nos d) item information with appropriate column aliases.

mysql> select \* from customer;

+--------+----------+-------+---------+------------+

| custno | custname | state | phoneno | city |

+--------+----------+-------+---------+------------+

| 1 | edson | mh | 23145 | pune |

| 2 | amit | mh | 86565 | mumbai |

| 3 | naren | kl | 27659 | kochi |

| 4 | lauren | kl | 23908 | trivandrum |

| 5 | amatya | bh | 96145 | patna |

| 6 | prince | bh | 10349 | vaishali |

| 7 | rushit | gj | 65347 | rajkot |

| 8 | mridul | gj | 34685 | surat |

+--------+----------+-------+---------+------------+

8 rows in set (0.00 sec)

mysql> select \* from item;

+--------+----------+-------+-----------+

| itemno | itemname | price | qtyonhand |

+--------+----------+-------+-----------+

| 1 | nail | 3 | 2300 |

| 2 | hammer | 40 | 100 |

| 3 | screw | 2 | 1500 |

| 4 | nut | 1 | 1900 |

| 5 | knife | 10 | 800 |

+--------+----------+-------+-----------+

5 rows in set (0.00 sec)

mysql> select \* from invoice;

+-------+------------+--------+

| invno | invdate | custno |

+-------+------------+--------+

| 1 | 2022-08-12 | 8 |

| 2 | 2022-08-17 | 5 |

| 3 | 2022-08-26 | 1 |

| 4 | 2022-08-30 | 2 |

+-------+------------+--------+

4 rows in set (0.00 sec)

mysql> select \* from invitem;

+-------+--------+------+

| invno | itemno | qty |

+-------+--------+------+

| 1 | 3 | 55 |

| 2 | 1 | 534 |

| 3 | 2 | 48 |

| 4 | 5 | 4 |

+-------+--------+------+

4 rows in set (0.00 sec)

1. Display items with unit price of at least $5.

mysql> select \* from vw where price >= 5;

+----------+-------+

| itemname | price |

+----------+-------+

| hammer | 40 |

| knife | 10 |

+----------+-------+

2 rows in set (0.00 sec)

1. Find the total price amount for each invoice.

mysql> select invitem.invno , item.price\*invitem.qty as total\_price from invitem,itemwhere item.itemno=invitem.itemno;

+-------+-------------+

| invno | total\_price |

+-------+-------------+

| 1 | 110 |

| 2 | 1602 |

| 3 | 1920 |

| 4 | 40 |

+-------+-------------+

4 rows in set (0.00 sec)

1. Display all the customers from Pune alphabetically.

mysql> select custname from customer where city='pune' order by custname;

+----------+

| custname |

+----------+

| edson |

+----------+

1 row in set (0.00 sec)

1. Find all customers whose names start with the letter E.

mysql> select custname from customer where custname like 'e%';

+----------+

| custname |

+----------+

| edson |

+----------+

1 row in set (0.00 sec)

1. Find the total, average, highest, and lowest unit price.

mysql> select sum(price) from item ;

+------------+

| sum(price) |

+------------+

| 56 |

+------------+

1 row in set (0.00 sec)

mysql> select avg(price) from item ;

+------------+

| avg(price) |

+------------+

| 11.2000 |

+------------+

1 row in set (0.00 sec)

mysql> select max(price) from item ;

+------------+

| max(price) |

+------------+

| 40 |

+------------+

1 row in set (0.00 sec)

mysql> select min(price) from item ;

+------------+

| min(price) |

+------------+

| 1 |

+------------+

1 row in set (0.00 sec)

1. Find invoices with Hammer as an item. (use join)

mysql> select \* from item natural join invitem natural join invoice where itemname = 'hammer';

+-------+--------+----------+-------+-----------+------+------------+--------+

| invno | itemno | itemname | price | qtyonhand | qty | invdate | custno |

+-------+--------+----------+-------+-----------+------+------------+--------+

| 3 | 2 | hammer | 40 | 100 | 48 | 2022-08-26 | 1 |

+-------+--------+----------+-------+-----------+------+------------+--------+

1 row in set (0.00 sec)

1. Find the items with the top three prices.

mysql> select \* from item order by price desc limit 3;

+--------+----------+-------+-----------+

| itemno | itemname | price | qtyonhand |

+--------+----------+-------+-----------+

| 2 | hammer | 40 | 100 |

| 5 | knife | 10 | 800 |

| 1 | nail | 3 | 2300 |

+--------+----------+-------+-----------+

3 rows in set (0.00 sec)

1. Create a view that will display invoice number & customer names for MH customers.

mysql> create view asd as select invno,custname from customer natural join invoice where state = 'mh';

Query OK, 0 rows affected (0.03 sec)

mysql> select \* from asd;

+-------+----------+

| invno | custname |

+-------+----------+

| 3 | edson |

| 4 | amit |

+-------+----------+

2 rows in set (0.01 sec)

1. Display items ordered as well as not ordered so far. (use outer join)

mysql> select \* from item;

+--------+----------+-------+-----------+

| itemno | itemname | price | qtyonhand |

+--------+----------+-------+-----------+

| 1 | nail | 3 | 2300 |

| 2 | hammer | 40 | 100 |

| 3 | screw | 2 | 1500 |

| 4 | nut | 1 | 1900 |

| 5 | knife | 10 | 800 |

+--------+----------+-------+-----------+