

**Assignment No.- 4**  
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**Enrollment No. - 2020CSB107**

**Part - A : Creation of Tables :-**

create table ZIPCODES (  
ZIP int(4) primary key on delete cascade,  
CITY varchar (20));

```
mysql> select * from ZIPCODES ;
+-----+-----+
| ZIP | CITY      |
+-----+-----+
| 302 | kansas city |
| 606 | fort dodge  |
| 706 | patna       |
| 1111 | fort hays   |
| 1818 | delhi       |
| 3111 | kolkata     |
| 4444 | columbia    |
| 5222 | diamond     |
| 6006 | libaral     |
| 7226 | wichita     |
+-----+-----+
10 rows in set (0.00 sec)
```

create table EMPLOYEES (  
ENO int(4),  
ENAME varchar (30),  
ZIP int (4),  
HDATE date,  
primary key (ENO),  
foreign key (ZIP) references ZIPCODES(ZIP) on delete cascade);

```
mysql> select * from EMPLOYEES;
+-----+-----+-----+-----+
| ENO | ENAME   | ZIP | HDATE   |
+-----+-----+-----+-----+
| 1000 | jones   | 7226 | 1995-12-12 |
| 1001 | smith   | 606  | 1994-09-01 |
| 1002 | brown   | 302  | 1994-09-01 |
| 1003 | bapi    | 4444 | 1997-11-21 |
| 1004 | sanjit  | 4444 | 1985-02-10 |
| 1005 | komal   | 1111 | 1999-01-05 |
| 1006 | ramanath | 6006 | 1985-05-07 |
| 1007 | pasupati | 1111 | 1985-03-03 |
| 1008 | uttam   | 5222 | 1984-09-06 |
| 1009 | arup    | 3111 | 1984-01-31 |
| 1010 | biplab  | 706  | 1984-03-22 |
| 1011 | umpa    | 1818 | 1991-03-21 |
| 1012 | mamoni  | 7226 | 1988-03-13 |
| 1013 | anjali  | 706  | 1992-03-23 |
| 1014 | marium  | 1818 | 1993-03-22 |
| 1015 | falguni | 1818 | 1988-03-11 |
+-----+-----+-----+-----+
16 rows in set (0.00 sec)
```

```
create table PARTS (
PNO int ,
PNAME varchar (20),
QOH int,
PRICE float(7,2),
OLEVEL int,
primary key (PNO));
```

```
mysql> select * from 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

```
8 rows in set (0.00 sec)
```

```
create table CUSTOMERS (
CNO int,
CNAME varchar (10),
STREET varchar (20),
ZIP int,
PHONE int,
primary key (CNO),
foreign key (ZIP) references ZIPCODES (ZIP) on delete cascade);
```

```
mysql> select * from CUSTOMERS;
```

CNO	CNAME	STREET	ZIP	PHONE
1000	dlpu	543 main st.	706	9876543
1111	charles	123 main st.	7226	316636
2222	amina	124 lane 11	606	24203227
3333	soma	224 main st.	4444	24203270
4444	rita	321 lane 13	6006	24219706
5555	bhaswati	543 main st.	302	32157654
6666	santu	432 main st	1111	5432167
7777	manas	432 lane 17	1111	5432167
8888	monirul	765 main st.	5222	4321566
9988	barun	657 lane 12	1818	9876543
9999	tapan	654 lane 19	3111	5432156

```
11 rows in set (0.00 sec)
```

```

create table ORDERS (
ONO int,
CNO int,
ENO int,
RECEIVED date,
SHIPPED date,
primary key (ONO),
foreign key (CNO) references CUSTOMERS (CNO) on delete cascade,
foreign key (ENO) references EMPLOYEES (ENO) on delete cascade);

```

```

mysql> select * from ORDERS;
+-----+-----+-----+-----+-----+
| ONO | CNO | ENO | RECEIVED | SHIPPED |
+-----+-----+-----+-----+-----+
| 1020 | 1111 | 1000 | 1994-12-10 | 1994-12-12 |
| 1021 | 1111 | 1000 | 1995-01-12 | 1995-01-15 |
| 1022 | 2222 | 1001 | 1997-01-20 | NULL |
| 1023 | 3333 | 1002 | 1998-04-13 | 1998-04-29 |
| 1024 | 4444 | 1003 | 1996-03-11 | 1996-03-13 |
| 1025 | 5555 | 1004 | 1996-03-11 | 1996-03-12 |
| 1026 | 5555 | 1004 | 1998-05-31 | 1998-06-08 |
| 1027 | 8888 | 1006 | 1995-05-23 | 1993-03-23 |
| 1028 | 7777 | 1007 | 1984-05-17 | 1983-12-18 |
| 1029 | 3333 | 1008 | 1992-12-13 | 1993-09-18 |
| 1030 | 2222 | 1010 | 1983-04-30 | 1985-09-17 |
| 1031 | 1000 | 1011 | 1993-05-26 | 1985-04-16 |
| 1032 | 1111 | 1012 | 1986-04-15 | 2005-01-31 |
| 1033 | 9988 | 1013 | 2000-04-18 | 2005-04-18 |
| 1034 | 9988 | 1014 | 2005-02-08 | 2005-02-18 |
| 1035 | 1111 | 1015 | 2005-04-18 | NULL |
+-----+-----+-----+-----+-----+
16 rows in set (0.00 sec)

```

```

create table ODETAILS (
ONO int,
PNO int,
QTY int,
primary key (ONO,PNO),
foreign key (ONO) references ORDERS (ONO) on delete cascade,
foreign key (PNO) references PARTS (PNO) on delete cascade);

```

```

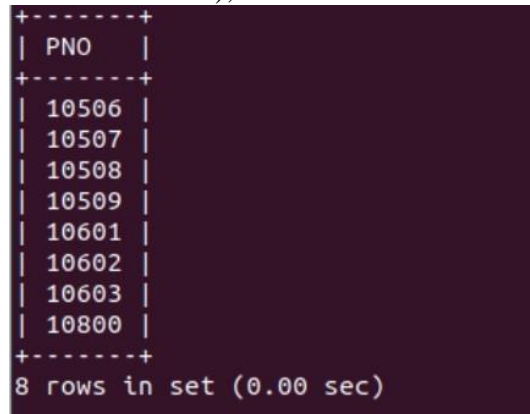
mysql> select * from ODETAILS;
+-----+-----+-----+
| ONO | PNO | QTY |
+-----+-----+-----+
| 1020 | 10507 | 5 |
| 1021 | 10800 | 2 |
| 1022 | 10507 | 6 |
| 1026 | 10509 | 9 |
| 1029 | 10507 | 3 |
| 1029 | 10508 | 5 |
| 1031 | 10603 | 1 |
| 1032 | 10509 | 7 |
| 1033 | 10602 | 8 |
| 1034 | 10506 | 7 |
| 1035 | 10601 | 5 |
+-----+-----+-----+
11 rows in set (0.00 sec)

```

## **Part – B : Queries :-**

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

```
select PNO
from PARTS
where PARTS.PNO in ( select distinct PNO
                     from ORDERS a,ODETAILS b
                     where a.ONO=b.ONO );
```



```
mysql> select PNO
from PARTS
where PARTS.PNO in ( select distinct PNO
                     from ORDERS a,ODETAILS b
                     where a.ONO=b.ONO );
```

PNO
10506
10507
10508
10509
10601
10602
10603
10800

8 rows in set (0.00 sec)

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

```
select *
from CUSTOMERS
where CNAME like "s%";
```



```
mysql> select * from CUSTOMERS where CNAME like "s%";
```

CNO	CNAME	STREET	ZIP	PHONE
3333	soma	224 main st.	4444	24203270
6666	santu	432 main st	1111	5432167

2 rows in set (0.00 sec)

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

```
select PNO,PNAME
from PARTS
where PRICE < 19.99;
```



```
mysql> select PNO,PNAME from PARTS where PRICE < 19.99;
```

PNO	PNAME
10506	land before time 1
10507	land before time 2
10508	land before time 3
10509	land before time 4
10602	Bolt
10603	Screw

6 rows in set (0.00 sec)

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

```
select ONO,CNAME,SHIPPED
from CUSTOMERS a,ORDERS b
where a.CNO=b.CNO and SHIPPED is NULL;
```

```
mysql> select ONO,CNAME,SHIPPED from CUSTOMERS a,ORDERS b where a.CNO=b.CNO and
SHIPPED is NULL;
+-----+-----+
| ONO | CNAME | SHIPPED |
+-----+-----+
| 1022 | amina | NULL    |
| 1035 | charles | NULL    |
+-----+-----+
2 rows in set (0.01 sec)
```

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

```
select PNAME , PRICE
from PARTS
where PRICE = ( select min(PRICE)
                from PARTS);
```

```
mysql> select PNAME , PRICE from PARTS where PRICE = ( select min(PRICE) from PA
RTS);
+-----+-----+
| PNAME | PRICE |
+-----+-----+
| Screw | 13.49 |
+-----+-----+
1 row in set (0.00 sec)
```

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

```
select PNAME,PRICE
from PARTS
where PRICE < ( select min(PRICE)
                from PARTS
                where PNAME like "land before time%");
```

```
mysql> select PNAME,PRICE from PARTS where PRICE<(select min(PRICE) from PARTS w
here PNAME like "land before time%");
] +-----+-----+
| PNAME | PRICE |
+-----+-----+
| Screw | 13.49 |
+-----+-----+
1 row in set (0.00 sec)
```

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

```
select ENO
from EMPLOYEES a, ZIPCODES b
where a.ZIP=b.ZIP and CITY="fort dodge";
```

```
mysql> select ENO from EMPLOYEES a, ZIPCODES b where a.ZIP=b.ZIP and CITY="fort d
odge";
+-----+
| ENO  |
+-----+
| 1001 |
+-----+
1 row in set (0.01 sec)
```

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

```
select ENAME, HDATE
from EMPLOYEES
where HDATE = (select min(HDATE)
               from EMPLOYEES);
```

```
mysql> select ENAME, HDATE from EMPLOYEES where HDATE = (select min(HDATE) from
EMPLOYEES);
+-----+-----+
| ENAME | HDATE   |
+-----+-----+
| arup  | 1984-01-31 |
+-----+-----+
1 row in set (0.00 sec)
```

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

```
select PNO, PNAME, PRICE
from PARTS
where PRICE > 20.00
order by PNO asc;
```

```
mysql> select PNO, PNAME, PRICE from PARTS where PRICE > 20.00 order by PNO asc;
+-----+-----+-----+
| PNO  | PNAME  | PRICE |
+-----+-----+-----+
| 10601 | Nut    | 24.99 |
| 10800 | Driller | 24.99 |
+-----+-----+-----+
2 rows in set (0.00 sec)
```



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

```
select a.PNO,PNAME,sum(QTY)*PRICE TotalSales
from PARTS a,ORDERS b, ODETAILS c
where a.PNO=c.PNO and b.ONO=c.ONO
group by a.PNO,PNAME;
```

```
mysql> select a.PNO,PNAME,sum(QTY)*PRICE TotalSales from PARTS a,ORDERS b, ODETAILS c where a.PNO=c.PNO and b.ONO=c.ONO group by a.PNO,PNAME;
+-----+-----+-----+
| PNO   | PNAME                | TotalSales |
+-----+-----+-----+
| 10506 | land before time 1   | 125.93     |
| 10507 | land before time 2   | 251.86     |
| 10508 | land before time 3   | 89.95      |
| 10509 | land before time 4   | 287.84     |
| 10601 | Nut                  | 124.95     |
| 10602 | Bolt                 | 143.92     |
| 10603 | Screw                | 13.49      |
| 10800 | Driller              | 49.98      |
+-----+-----+-----+
8 rows in set (0.00 sec)
```

**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.**

```
select a.PNO,PNAME,sum(QTY)*PRICE TotalSales
from PARTS a,ORDERS b, ODETAILS c
where a.PNO=c.PNO and b.ONO=c.ONO
group by a.PNO,PNAME
having TotalSales>100.53;
```

```
mysql> select a.PNO,PNAME,sum(QTY)*PRICE TotalSales from PARTS a,ORDERS b, ODETAILS c where a.PNO=c.PNO and b.ONO=c.ONO group by a.PNO,PNAME having TotalSales>100.53;
+-----+-----+-----+
| PNO   | PNAME                | TotalSales |
+-----+-----+-----+
| 10506 | land before time 1   | 125.93     |
| 10507 | land before time 2   | 251.86     |
| 10509 | land before time 4   | 287.84     |
| 10601 | Nut                  | 124.95     |
| 10602 | Bolt                 | 143.92     |
+-----+-----+-----+
5 rows in set (0.00 sec)
```

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

```
update ZIPCODES
set CITY = "parth"
where ZIP = 4444;
```

```
mysql> update ZIPCODES set CITY = "parth" where ZIP = 4444;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from ZIPCODES;
+-----+-----+
| ZIP | CITY |
+-----+-----+
| 302 | kansas city |
| 606 | fort dodge |
| 706 | patna |
| 1111 | fort hays |
| 1818 | delhi |
| 3111 | kolkata |
| 4444 | parth |
| 5222 | diamond |
| 6006 | libaral |
| 7226 | wichita |
+-----+-----+
10 rows in set (0.00 sec)
```

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

```
update ORDERS
set SHIPPED = sysdate()
where SHIPPED is NULL;
```

```
mysql> update ORDERS set SHIPPED = sysdate() where SHIPPED is NULL;
Query OK, 2 rows affected, 2 warnings (0.00 sec)
Rows matched: 2  Changed: 2  Warnings: 2

mysql> select * from ORDERS;
+-----+-----+-----+-----+-----+
| ONO | CNO | ENO | RECEIVED | SHIPPED |
+-----+-----+-----+-----+-----+
| 1020 | 1111 | 1000 | 1994-12-10 | 1994-12-12 |
| 1021 | 1111 | 1000 | 1995-01-12 | 1995-01-15 |
| 1022 | 2222 | 1001 | 1997-01-20 | 2022-09-08 |
| 1023 | 3333 | 1002 | 1998-04-13 | 1998-04-29 |
| 1024 | 4444 | 1003 | 1996-03-11 | 1996-03-13 |
| 1025 | 5555 | 1004 | 1996-03-11 | 1996-03-12 |
| 1026 | 5555 | 1004 | 1998-05-31 | 1998-06-08 |
| 1027 | 8888 | 1006 | 1995-05-23 | 1993-03-23 |
| 1028 | 7777 | 1007 | 1984-05-17 | 1983-12-18 |
| 1029 | 3333 | 1008 | 1992-12-13 | 1993-09-18 |
| 1030 | 2222 | 1010 | 1983-04-30 | 1985-09-17 |
| 1031 | 1000 | 1011 | 1993-05-26 | 1985-04-16 |
| 1032 | 1111 | 1012 | 1986-04-15 | 2005-01-31 |
| 1033 | 9988 | 1013 | 2000-04-18 | 2005-04-18 |
| 1034 | 9988 | 1014 | 2005-02-08 | 2005-02-18 |
| 1035 | 1111 | 1015 | 2005-04-18 | 2022-09-08 |
+-----+-----+-----+-----+-----+
16 rows in set (0.00 sec)
```



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

```
update PARTS
set PRICE = PRICE - (0.1*PRICE)
where PRICE < 24.00;
```

```
mysql> update PARTS set PRICE = PRICE - (0.1*PRICE) where PRICE < 24.00;
Query OK, 6 rows affected (0.00 sec)
Rows matched: 6  Changed: 6  Warnings: 0

mysql> select * from PARTS;
+-----+-----+-----+-----+-----+
| PNO   | PNAME                | QOH  | PRICE | OLEVEL |
+-----+-----+-----+-----+-----+
| 10506 | land before time 1   | 200  | 16.19 | 20     |
| 10507 | land before time 2   | 156  | 16.19 | 20     |
| 10508 | land before time 3   | 190  | 16.19 | 20     |
| 10509 | land before time 4   | 60   | 16.19 | 20     |
| 10601 | Nut                  | 300  | 24.99 | 30     |
| 10602 | Bolt                 | 120  | 16.19 | 30     |
| 10603 | Screw                | 140  | 12.14 | 30     |
| 10800 | Driller              | 100  | 24.99 | 30     |
+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

**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.**

```
update PARTS
set QOH = (select *
           from (select max(QOH)
                 from PARTS) a)
where QOH < 100;
```

```
mysql> update PARTS set QOH = (select * from (select max(QOH) from PARTS) a) where QOH < 100;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select * from PARTS;
+-----+-----+-----+-----+-----+
| PNO   | PNAME                | QOH  | PRICE | OLEVEL |
+-----+-----+-----+-----+-----+
| 10506 | land before time 1   | 200  | 16.19 | 20     |
| 10507 | land before time 2   | 156  | 16.19 | 20     |
| 10508 | land before time 3   | 190  | 16.19 | 20     |
| 10509 | land before time 4   | 300  | 16.19 | 20     |
| 10601 | Nut                  | 300  | 24.99 | 30     |
| 10602 | Bolt                 | 120  | 16.19 | 30     |
| 10603 | Screw                | 140  | 12.14 | 30     |
| 10800 | Driller              | 100  | 24.99 | 30     |
+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```