

# **DBMS EXPERIMENTS**

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## **EXPERIMENT-3**

### **QUESTION-1**

1. UNION: SELECT cust\_fname FROM customer UNION SELECT cust\_num FROM invoice;
2. GROUP BY: SELECT prod\_num, sum(inv\_amount) FROM invoice GROUP BY prod\_num;
3. ORDER BY: SELECT \* FROM customer ORDER BY Cust\_balance;
4. HAVING: SELECT \* FROM customer HAVING Cust\_balance > 10000;
5. LIMIT: SELECT \* FROM customer ORDER BY Cust\_balance DESC LIMIT 3;
6. LIKE: SELECT \* FROM customer HAVING Cust\_fname like "A%";

```
MariaDB [question_2]> SELECT cust_fname FROM customer UNION SELECT cust_num FROM invoice;
```

```
+-----+
| cust_fname |
+-----+
| Amogh      |
| Mukesh     |
| Narender   |
| Bill       |
| 1          |
| 2          |
| 3          |
| 4          |
+-----+
```

```
8 rows in set (0.009 sec)
```

```
MariaDB [question_2]> SELECT prod_num, sum(inv_amount) FROM invoice GROUP BY prod_num;
```

```
+-----+-----+
| prod_num | sum(inv_amount) |
+-----+-----+
| 1        | 2500            |
| 2        | 750000         |
| 3        | 800            |
| 4        | 500            |
+-----+-----+
```

```
4 rows in set (0.005 sec)
```

```
MariaDB [question_2]> SELECT * FROM customer ORDER BY Cust_balance;
```

```
+-----+-----+-----+-----+-----+
| cust_num | cust_lname | cust_fname | cust_balance | cust_dob |
+-----+-----+-----+-----+-----+
| 1        | Garg       | Amogh      | 0            | NULL     |
| 2        | Ambani     | Mukesh     | 250          | NULL     |
| 4        | Gates      | Bill       | 1000         | NULL     |
| 3        | Modi       | Narender   | 1800         | NULL     |
+-----+-----+-----+-----+-----+
```

```
4 rows in set (0.003 sec)
```

```
MariaDB [question_2]> SELECT * FROM customer HAVING Cust_balance > 10000;
```

```
Empty set (0.001 sec)
```

```
MariaDB [question_2]> SELECT * FROM customer ORDER BY Cust_balance DESC LIMIT 3;
```

cust_num	cust_lname	cust_fname	cust_balance	cust_dob
3	Modi	Narender	1800	NULL
4	Gates	Bill	1000	NULL
2	Ambani	Mukesh	250	NULL

```
3 rows in set (0.001 sec)
```

```
MariaDB [question_2]> SELECT * FROM customer HAVING Cust_fname like "A%";
```

cust_num	cust_lname	cust_fname	cust_balance	cust_dob
1	Garg	Amogh	0	NULL

```
1 row in set (0.002 sec)
```

```
MariaDB [question_2]>
```

## QUESTION-2

1. Cust\_ID is the primary key in Customer table. Bicycle\_ID is the primary key in Bicycle table and foreign key in Service table. In BicycleModel ModelNo is the primary key.
2. SELECT Name FROM Customer C, Bicycle B, BicycleModel BM WHERE C.Cust\_ID=B.Cust\_ID AND B.ModelNo=BM.ModelNo AND Manufacturer= "Honda";
3. SELECT Cust\_ID, Name FROM Customer WHERE ReferID= "1"
4. SELECT Manufacturer FROM Bicycle B, BicycleModel BM WHERE B.ModelNo=BM.ModelNo AND Color= "Red";
5. SELECT ModelNo FROM Bicycle B, Service S WHERE B.Bicycle\_ID=S.Bicycle\_ID;