GOVT. GRADUATE COLLEGE CIVIL LINE SHEIKHUPURA

DATABASE MANAGEMENT SYSTEM

Submitted by:

Faheem Ali and Muhsan Ali

Roll No.:

110824 and 110848

Submitted to:
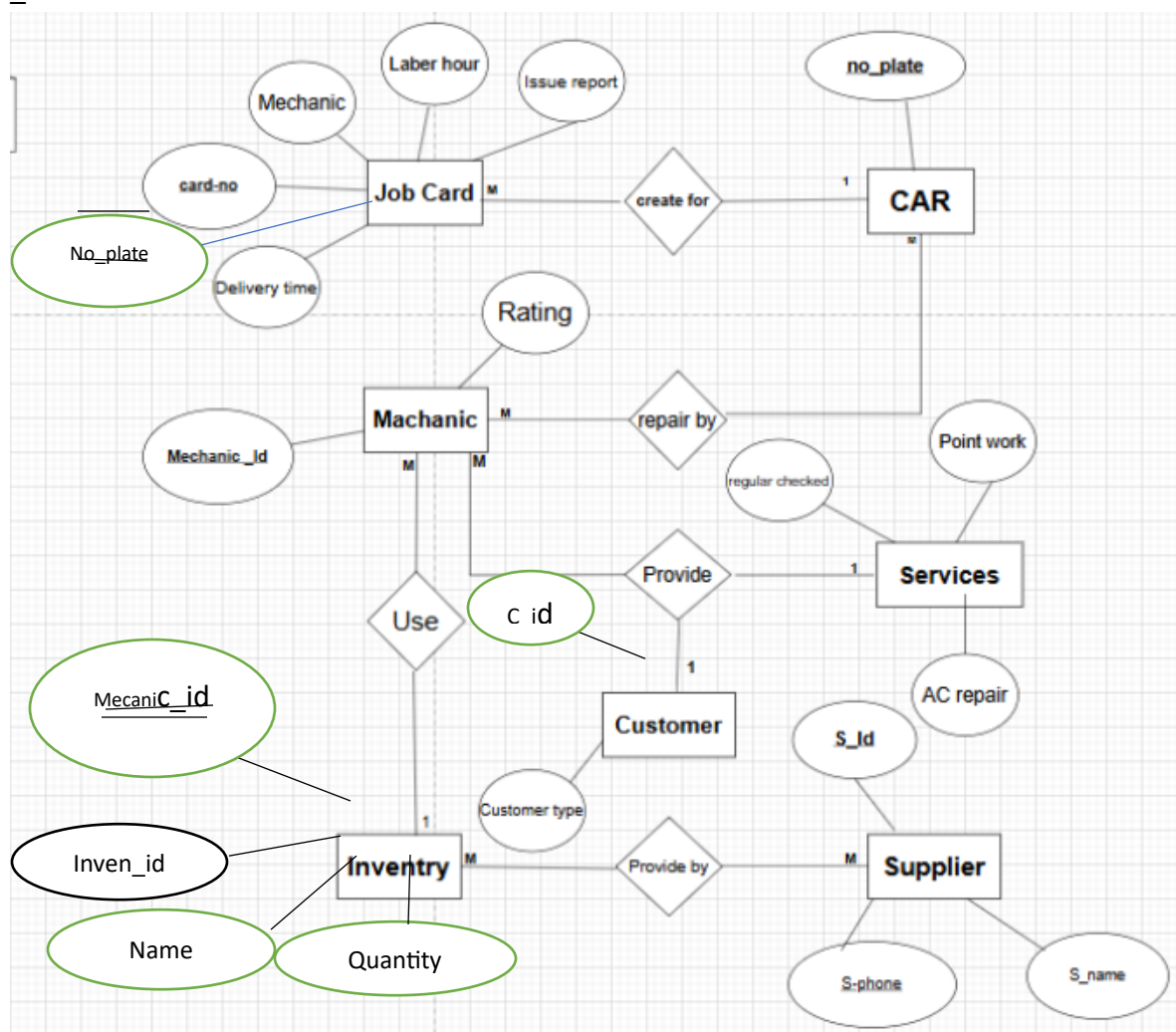
Miss Sehrish Khan

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Project statement

Car Service Center with Job Cards and Parts Inventory

When a car is dropped off, a job card is created with assigned mechanic, issue reported, and expected delivery time. Each job logs labor hours and spare parts used. Service types include regular checkup, AC repair, or paintwork. Mechanics are rated, and frequent customers get discounts. Inventory tracks part usage and supplier info.

ENITITIES

1. CAR
2. JOB CARD
3. Mechanic
4. Service Type
5. Inventory
6. Supplier
7. Costumer

ER_D

Laber hour
Issue report
Mechanic
no_plate
card-no
Job Card M
create for
1
CAR
No_plate
Delivery time
M

Rating
Machanic M
repair by
Point work
Mechanic_Id
M M
regular checked
Provide
1
Services
Use
c id
1
AC repair
Mecani**c_id**
Customer
S_Id
Inven_id
Customer type
1
Inventry M
Provide by
M
Supplier
Name
Quantity
S-phone
S_name

TABLES

1) **JOB_CARD** (card_no, Delivery time, Labour hour, Issue report, Mechanic,No_plate)
2) **CAR** (No_plate)
3) **Mechanic** (Rating ,Mechanic_id)
4) **Repair(No**_plate, Mechanic_id)
5) **Services (** Service _id ,Service _type (Reguler checked, Point work, AC repair))
6) **Customer** (C_id, C type)
7) **Service_provide (**service_id ,Mecanic id
8) **Supplier**   (S_id, S_phone , S _name)
9) **Inventory (**inventory_id , Name, Quantity ,Mechanic _id)
10) **Provide (**inventory_id,S_id)

NORMLIZATIN

1.First normal form .

For first normal form of table there should be no repeating group exist.

As we know there is no repeating group in this situation .so we can say that our tables in <u>first normalized form</u> .

2. Second normal form.

In case of second normal form no partial dependency should exist .All attributes must depend on composite keys .

No partial dependency exist in our case .so table in second normal form.

3. Third normal form.

No transitive dependency should exist in third normal form it means non key attributes can not depend on non key attributes .

So lso in third normal form.

TABLES

```
mysql> use car_service_system;
Database changed
mysql> show tables;
+-----------------------------+
| Tables_in_car_service_system |
+-----------------------------+
| car                         |
| custumer                    |
| inventory                   |
| job_card                    |
| mechanic                    |
| provide                     |
| repair                      |
| service_provide             |
| services                    |
| supplier                    |
+-----------------------------+
10 rows in set (0.00 sec)

mysql> desc job_card;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| card_id      | int         | NO   | PRI | NULL    |       |
| Mechanic     | varchar(20) | YES  |     | NULL    |       |
| Issue_report | varchar(20) | YES  |     | NULL    |       |
| delivery_time| varchar(8)  | YES  |     | NULL    |       |
| Labour_hour  | int         | YES  |     | NULL    |       |
| No_plate     | int         | NO   | MUL | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
6 rows in set (0.00 sec)

mysql> desc car;
+----------+------+------+-----+---------+-------+
| Field    | Type | Null | Key | Default | Extra |
+----------+------+------+-----+---------+-------+
| No_plate | int  | NO   | PRI | NULL    |       |
+----------+------+------+-----+---------+-------+
1 row in set (0.00 sec)
```

```
mysql> desc Mechanic;
+-------------+------------+------+-----+---------+-------+
| Field       | Type       | Null | Key | Default | Extra |
+-------------+------------+------+-----+---------+-------+
| Mechanic_id | int        | NO   | PRI | NULL    |       |
| Rating      | varchar(8) | YES  |     | NULL    |       |
+-------------+------------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> desc repair;
+-------------+------+------+-----+---------+-------+
| Field       | Type | Null | Key | Default | Extra |
+-------------+------+------+-----+---------+-------+
| No_plate    | int  | NO   | MUL | NULL    |       |
| Mechanic_id | int  | NO   | MUL | NULL    |       |
+-------------+------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> desc inventory;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| inven_id    | int         | NO   | PRI | NULL    |       |
| Name        | varchar(20) | YES  |     | NULL    |       |
| Quantity    | int         | YES  |     | NULL    |       |
| Mechanic_id | int         | YES  | MUL | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> desc supplier;
+---------+-------------+------+-----+---------+-------+
| Field   | Type        | Null | Key | Default | Extra |
+---------+-------------+------+-----+---------+-------+
| S_id    | int         | NO   | PRI | NULL    |       |
| S_Name  | varchar(20) | YES  |     | NULL    |       |
| S_phone | int         | YES  |     | NULL    |       |
+---------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

```
ysql> desc provide;
+----------+------+------+-----+---------+-------+
| Field    | Type | Null | Key | Default | Extra |
+----------+------+------+-----+---------+-------+
| inven_id | int  | NO   | MUL | NULL    |       |
| S_id     | int  | NO   | MUL | NULL    |       |
+----------+------+------+-----+---------+-------+
 rows in set (0.00 sec)

ysql> desc custumer;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| custumer_id   | int         | NO   | PRI | NULL    |       |
| customer_type | varchar(10) | YES  |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
 rows in set (0.00 sec)

ysql> desc services;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| service_id   | int         | NO   | PRI | NULL    |       |
| service_type | varchar(10) | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
 rows in set (0.00 sec)

ysql> desc service_provide;
+-------------+------+------+-----+---------+-------+
| Field       | Type | Null | Key | Default | Extra |
+-------------+------+------+-----+---------+-------+
| Mechanic_id | int  | NO   | MUL | NULL    |       |
| custumer_id | int  | NO   | MUL | NULL    |       |
| service_id  | int  | NO   | MUL | NULL    |       |
+-------------+------+------+-----+---------+-------+
 rows in set (0.00 sec)
```

DATA SHOW FROM TABLES USING SELECT QUERy

```
mysql> select *from services;
+------------+--------------+
| service_id | service_type |
+------------+--------------+
|          5 | AC repair    |
|          7 | Paint work   |
|          9 | Paint work   |
|         11 | Tyrechange   |
+------------+--------------+
4 rows in set (0.00 sec)

mysql> select *from provide;
+----------+------+
| inven_id | S_id |
+----------+------+
|       10 |    4 |
|       14 |    6 |
|       14 |    8 |
|       11 |    8 |
+----------+------+
4 rows in set (0.00 sec)

mysql> select *from service_provide;
+-------------+-------------+------------+
| Mechanic_id | custumer_id | service_id |
+-------------+-------------+------------+
|           1 |           2 |          5 |
|           6 |           3 |         11 |
|          12 |          10 |          9 |
+-------------+-------------+------------+
3 rows in set (0.00 sec)

mysql> select *from repair;
+----------+-------------+
| No_plate | Mechanic_id |
+----------+-------------+
|      736 |           1 |
|     1371 |           6 |
|     1371 |          12 |
|     8111 |           3 |
+----------+-------------+
4 rows in set (0.00 sec)
```

```
mysql> select *from inventory;
+----------+-------------+----------+-------------+
| inven_id | Name        | Quantity | Mechanic_id |
+----------+-------------+----------+-------------+
|       10 | oil filter  |       15 |           1 |
|       11 | oil filter  |       15 |           3 |
|       12 | Brake pads  |       10 |           3 |
|       14 | Spark plug  |       15 |           3 |
+----------+-------------+----------+-------------+
4 rows in set (0.00 sec)

mysql> select *from job_card;
+---------+----------+----------------+---------------+-------------+----------+
| card_id | Mechanic | Issue_report   | delivery_time | Labour_hour | No_plate |
+---------+----------+----------------+---------------+-------------+----------+
|       1 | Asghar   | Breake failure | 03.15-PM      |           8 |      736 |
|       2 | Aslam    | Oil change     | 04.15-PM      |           4 |      736 |
|       3 | Aslam    | AC repair      | 04.15-PM      |           4 |     1371 |
|       4 | Arslan   | Engine Noise   | 02.15-PM      |           8 |     8111 |
+---------+----------+----------------+---------------+-------------+----------+
4 rows in set (0.00 sec)

mysql> select *from mechanic;
+-------------+--------+
| Mechanic_id | Rating |
+-------------+--------+
|           1 | Good   |
|           3 | Poor   |
|           6 | Good   |
|          12 | Middle |
+-------------+--------+
4 rows in set (0.00 sec)

mysql> select *from supplier;
+------+----------+---------+
| S_id | S_Name   | S_phone |
+------+----------+---------+
|    2 | Basharat |   -2044 |
|    4 | Dilber   | -234277 |
|    6 | Zeshan   |    -213 |
|    8 | Asad     |   -5354 |
+------+----------+---------+
4 rows in set (0.00 sec)
```

```
MySQL 8.0 Command Line Client - Unicode                                                    —  □  ×

Database changed
mysql> show tables;
+----------------------------+
| Tables_in_car_service_system |
+----------------------------+
| car                        |
| custumer                   |
| inventory                  |
| job_card                   |
| mechanic                   |
| provide                    |
| repair                     |
| service_provide            |
| services                   |
| supplier                   |
+----------------------------+
10 rows in set (0.01 sec)

mysql> update job_card set labour_hour=10 where card_id=4;
Query OK, 1 row affected (0.02 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> select mechanic,issue_report,delivery_time from job_card;
+----------+---------------+---------------+
| mechanic | issue_report  | delivery_time |
+----------+---------------+---------------+
| Asghar   | Breake failure | 03.15-PM     |
| Aslam    | Oil change    | 04.15-PM      |
| Aslam    | AC repair     | 04.15-PM      |
| Arslan   | Engine Noise  | 02.15-PM      |
+----------+---------------+---------------+
4 rows in set (0.00 sec)

mysql> select mechanic,issue_report,delivery_time from job_card where car_id=1371;
ERROR 1054 (42S22): Unknown column 'car_id' in 'where clause'
mysql> select mechanic,issue_report,delivery_time from job_card where No_plate=1371;
+----------+--------------+---------------+
| mechanic | issue_report | delivery_time |
+----------+--------------+---------------+
| Aslam    | AC repair    | 04.15-PM      |
+----------+--------------+---------------+
1 row in set (0.00 sec)

mysql> select quantity,name as spare_parts from inventory;
```

SHOW DATA USING ORDER BY COMMAND

```
ERROR 1054 (42S22): Unknown column 'mechanic' in 'field list'
mysql> select mechanic,card_id,issue_report from job_card order by mechanic desc;
+----------+---------+---------------+
| mechanic | card_id | issue_report  |
+----------+---------+---------------+
| Zheer    |       3 | AC repair     |
| Aslam    |       2 | Oil change    |
| Asghar   |       1 | Breake failure|
| Arslan   |       4 | Engine Noise  |
+----------+---------+---------------+
4 rows in set (0.03 sec)

mysql> select inven_id,name from inventory order by quantity asc;
+----------+-------------+
| inven_id | name        |
+----------+-------------+
|       12 | Brake pads  |
|       10 | oil filter  |
|       11 | oil filter  |
|       14 | Spark plug  |
+----------+-------------+
4 rows in set (0.02 sec)

mysql> select rating,mechanic_id from mechanic order by rating desc;
+--------+-------------+
| rating | mechanic_id |
+--------+-------------+
| Poor   |           3 |
| Middle |          12 |
| Good   |           1 |
| Good   |           6 |
+--------+-------------+
4 rows in set (0.02 sec)
```

AGREGATION FUNCTIONS COMMAND

COUNT(*) ,COUNT(COLUMN) AND AVG(COLUMN):

```
mysql> select count(*) from inventory;
+----------+
| count(*) |
+----------+
|        4 |
+----------+
 row in set (0.00 sec)

mysql> select count(name) from inventory;
+-------------+
| count(name) |
+-------------+
|           4 |
+-------------+
 row in set (0.00 sec)

mysql> select count( distinct name) from inventory;
+-----------------------+
| count( distinct name) |
+-----------------------+
|                     3 |
+-----------------------+
 row in set (0.00 sec)

mysql> select avg(quantity) from inventory;
+---------------+
| avg(quantity) |
+---------------+
|       14.2500 |
+---------------+
 row in set (0.00 sec)
```

SUM(COLUMN) , MIN(COLUMN) AND MAX (COLUMN) :

```
mysql> select sum(labour_hour) from job_card;
+------------------+
| sum(labour_hour) |
+------------------+
|               26 |
+------------------+
1 row in set (0.00 sec)

mysql> select max(labour_hour) from job_card;
+------------------+
| max(labour_hour) |
+------------------+
|               10 |
+------------------+
1 row in set (0.00 sec)

mysql> select min(quantity) from inventory;
+---------------+
| min(quantity) |
+---------------+
|            10 |
+---------------+
1 row in set (0.00 sec)
```

JOINS

FULL JOIN :

```
MySQL 8.0 Command Line Client - Unicode                                                              —  □  ×

mysql> select *from inventory full join mechanic;
+----------+------------+----------+-------------+-------------+--------+
| inven_id | Name       | Quantity | Mechanic_id | Mechanic_id | Rating |
+----------+------------+----------+-------------+-------------+--------+
|       14 | Spark plug |       20 |           3 |           1 | Good   |
|       12 | Brake pads |       10 |           3 |           1 | Good   |
|       11 | oil filter |       15 |           3 |           1 | Good   |
|       10 | oil filter |       12 |           1 |           1 | Good   |
|       14 | Spark plug |       20 |           3 |           3 | Poor   |
|       12 | Brake pads |       10 |           3 |           3 | Poor   |
|       11 | oil filter |       15 |           3 |           3 | Poor   |
|       10 | oil filter |       12 |           1 |           3 | Poor   |
|       14 | Spark plug |       20 |           3 |           6 | Good   |
|       12 | Brake pads |       10 |           3 |           6 | Good   |
|       11 | oil filter |       15 |           3 |           6 | Good   |
|       10 | oil filter |       12 |           1 |           6 | Good   |
|       14 | Spark plug |       20 |           3 |          12 | Middle |
|       12 | Brake pads |       10 |           3 |          12 | Middle |
|       11 | oil filter |       15 |           3 |          12 | Middle |
|       10 | oil filter |       12 |           1 |          12 | Middle |
+----------+------------+----------+-------------+-------------+--------+
16 rows in set, 1 warning (0.00 sec)

mysql> select *from inventory full join job_card;
+----------+------------+----------+-------------+---------+----------+----------------+---------------+-------------+----------+
| inven_id | Name       | Quantity | Mechanic_id | card_id | Mechanic | Issue_report   | delivery_time | Labour_hour | No_plate |
+----------+------------+----------+-------------+---------+----------+----------------+---------------+-------------+----------+
|       14 | Spark plug |       20 |           3 |       1 | Asghar   | Breake failure | 03.15-PM      |           8 |      736 |
|       12 | Brake pads |       10 |           3 |       1 | Asghar   | Breake failure | 03.15-PM      |           8 |      736 |
|       11 | oil filter |       15 |           3 |       1 | Asghar   | Breake failure | 03.15-PM      |           8 |      736 |
|       10 | oil filter |       12 |           1 |       1 | Asghar   | Breake failure | 03.15-PM      |           8 |      736 |
|       14 | Spark plug |       20 |           3 |       2 | Aslam    | Oil change     | 04.15-PM      |           4 |      736 |
|       12 | Brake pads |       10 |           3 |       2 | Aslam    | Oil change     | 04.15-PM      |           4 |      736 |
|       11 | oil filter |       15 |           3 |       2 | Aslam    | Oil change     | 04.15-PM      |           4 |      736 |
|       10 | oil filter |       12 |           1 |       2 | Aslam    | Oil change     | 04.15-PM      |           4 |      736 |
|       14 | Spark plug |       20 |           3 |       3 | Zheer    | AC repair      | 04.15-PM      |           4 |     1371 |
|       12 | Brake pads |       10 |           3 |       3 | Zheer    | AC repair      | 04.15-PM      |           4 |     1371 |
|       11 | oil filter |       15 |           3 |       3 | Zheer    | AC repair      | 04.15-PM      |           4 |     1371 |
|       10 | oil filter |       12 |           1 |       3 | Zheer    | AC repair      | 04.15-PM      |           4 |     1371 |
|       14 | Spark plug |       20 |           3 |       4 | Arslan   | Engine Noise   | 02.15-PM      |          10 |     8111 |
|       12 | Brake pads |       10 |           3 |       4 | Arslan   | Engine Noise   | 02.15-PM      |          10 |     8111 |
|       11 | oil filter |       15 |           3 |       4 | Arslan   | Engine Noise   | 02.15-PM      |          10 |     8111 |
|       10 | oil filter |       12 |           1 |       4 | Arslan   | Engine Noise   | 02.15-PM      |          10 |     8111 |
```

NATURAL JOIN:

SELF JOIN:

```
ysql> select c1.card_id from job_card as c1, job_card as c2 where c1.card_id=c2.card_id;
--------+
 card_id |
--------+
       1 |
       2 |
       3 |
       4 |
--------+
 rows in set (0.00 sec)

ysql> select c1.card_id from job_card as c1, job_card as c2 where c1.card_id=c2.card_id and c1.mechanic<>c2.mechanic;
mpty set (0.01 sec)

ysql> select c1.card_id from job_card as c1, job_card as c2 where c1.card_id=c2.card_id and c1.mechanic=c2.mechanic;
--------+
 card_id |
--------+
       1 |
       2 |
       3 |
       4 |
--------+
 rows in set (0.11 sec)

ysql> select c1.card_id from job_card as c1, job_card as c2 where c1.card_id=c2.card_id and c1.no_plate=c2.no_plate;
--------+
 card_id |
--------+
       1 |
       2 |
       3 |
       4 |
--------+
 rows in set (0.00 sec)
```

LEFT AND RIGHT OUTER JOINS:

```
 syntax to use near 'outer join mechanic on inventory.mechanic_id=mechanic.mechanic_id' at line 1
mysql> select inven_id,quantity,name from inventory right outer join mechanic on inventory.mechanic_id=mechanic.mechanic_id;
+----------+----------+-------------+
| inven_id | quantity | name        |
+----------+----------+-------------+
|       10 |       12 | oil filter  |
|       14 |       20 | Spark plug  |
|       12 |       10 | Brake pads  |
|       11 |       15 | oil filter  |
|     NULL |     NULL | NULL        |
|     NULL |     NULL | NULL        |
+----------+----------+-------------+
6 rows in set (0.01 sec)

mysql> select inven_id,quantity,name,mechanic.rating from inventory left outer join mechanic on inventory.mechanic_id=mechanic.mechanic_id;
+----------+----------+-------------+--------+
| inven_id | quantity | name        | rating |
+----------+----------+-------------+--------+
|       10 |       12 | oil filter  | Good   |
|       11 |       15 | oil filter  | Poor   |
|       12 |       10 | Brake pads  | Poor   |
|       14 |       20 | Spark plug  | Poor   |
+----------+----------+-------------+--------+
4 rows in set (0.00 sec)

mysql> select inven_id,quantity,name,mechanic.rating from inventory right outer join mechanic on inventory.mechanic_id=mechanic.mechanic_id;
+----------+----------+-------------+--------+
| inven_id | quantity | name        | rating |
+----------+----------+-------------+--------+
|       10 |       12 | oil filter  | Good   |
|       14 |       20 | Spark plug  | Poor   |
|       12 |       10 | Brake pads  | Poor   |
|       11 |       15 | oil filter  | Poor   |
|     NULL |     NULL | NULL        | Good   |
|     NULL |     NULL | NULL        | Middle |
+----------+----------+-------------+--------+
6 rows in set (0.00 sec)

mysql> use car_service_system;
```

SHOW DATA USING RETIONAL OPERATORS

```
ysql> select * from job_card where mechanic like'A%';
+---------+----------+----------------+---------------+-------------+----------+
| card_id | Mechanic | Issue_report   | delivery_time | Labour_hour | No_plate |
+---------+----------+----------------+---------------+-------------+----------+
|       1 | Asghar   | Breake failure | 03.15-PM      |           8 |      736 |
|       2 | Aslam    | Oil change     | 04.15-PM      |           4 |      736 |
|       4 | Arslan   | Engine Noise   | 02.15-PM      |          10 |     8111 |
+---------+----------+----------------+---------------+-------------+----------+
 rows in set (0.04 sec)

ysql> select inven_id,name from study where name like '%r';
RROR 1146 (42S02): Table 'car_service_system.study' doesn't exist
ysql> select inven_id,name from inventory where name like '%r';
mpty set (0.02 sec)

ysql> select name from inventory where name like '%r';
mpty set (0.00 sec)

ysql> select mechanic from job_card where mechanic like '%r';
+----------+
| mechanic |
+----------+
| Asghar   |
| Zheer    |
+----------+
 rows in set (0.00 sec)

ysql> select mechanic from job_card where mechanic like '%r%';
+----------+
| mechanic |
+----------+
| Asghar   |
| Zheer    |
| Arslan   |
+----------+
 rows in set (0.00 sec)
```

USING WHILE CARDS COMMAND (LIKE)

```
ysql> select mechanic from job_card where mechanic like '_s%';
----------+
 mechanic |
----------+
 Asghar   |
 Aslam    |
----------+
 rows in set (0.00 sec)

ysql> select mechanic from job_card where mechanic like '%a_';
----------+
 mechanic |
----------+
 Asghar   |
 Aslam    |
 Arslan   |
----------+
 rows in set (0.00 sec)

ysql> select mechanic from job_card where mechanic like '%a___';
mpty set (0.00 sec)

ysql> select mechanic from job_card where mechanic like '%a____';
----------+
 mechanic |
----------+
 Aslam    |
----------+
 row in set (0.00 sec)
```

SHOW DATA USING ARITHMATIC OPERATORS

MySQL 8.0 Command Line Client - Unicode

```
+------------------+
| increased_quantity |
+------------------+
|              120 |
|              150 |
|              100 |
|              200 |
+------------------+
4 rows in set (0.01 sec)

mysql> select labour_hour/2 from job_card;
+---------------+
| labour_hour/2 |
+---------------+
|        4.0000 |
|        2.0000 |
|        2.0000 |
|        5.0000 |
+---------------+
4 rows in set (0.00 sec)

mysql> select inven_id ,quantity+10 from inventory;
+----------+-------------+
| inven_id | quantity+10 |
+----------+-------------+
|       10 |          22 |
|       11 |          25 |
|       12 |          20 |
|       14 |          30 |
+----------+-------------+
4 rows in set (0.00 sec)

mysql> select name ,quantity-5 from inventory;
+-------------+------------+
| name        | quantity-5 |
+-------------+------------+
| oil filter  |          7 |
| oil filter  |         10 |
| Brake pads  |          5 |
| Spark plug  |         15 |
+-------------+------------+
4 rows in set (0.00 sec)

mysql>
```

Type here to search

32°C Haze

10:11 PM
5/19/2025

USE SUB QURIES ON TABLES


```
MySQL 8.0 Command Line Client - Unicode

mysql> select name from inventory where quantity=(select max(quantity) from inventory);
+------------+
| name       |
+------------+
| Spark plug |
+------------+
1 row in set (0.15 sec)

mysql> select inven_id ,name from inventory where quantity=(select max(quantity) from inventory);
+----------+------------+
| inven_id | name       |
+----------+------------+
|       14 | Spark plug |
+----------+------------+
1 row in set (0.00 sec)

mysql> select s_name ,S_phone from supplier where s_id in(11,14,12);
Empty set (0.03 sec)

mysql> select s_name ,S_phone from supplier where s_id in(2,4,12);
+----------+---------+
| s_name   | S_phone |
+----------+---------+
| Basharat |   -2044 |
| Dilber   | -234277 |
+----------+---------+
2 rows in set (0.00 sec)

mysql> select no_plate,issue_report from job_card where card_id=(select card_id from job_card where labour_hour=8 or delivery_time='3.15-pm');
+----------+----------------+
| no_plate | issue_report   |
+----------+----------------+
|      736 | Breake failure |
+----------+----------------+
1 row in set (0.14 sec)

mysql> select no_plate,issue_report from job_card where card_id=(select card_id from job_card where labour_hour=8 or delivery_time='2.15-pm');
+----------+----------------+
| no_plate | issue_report   |
+----------+----------------+
|      736 | Breake failure |
+----------+----------------+
```

```
MySQL 8.0 Command Line Client - Unicode

mysql> select no_plate,issue_report from job_card where card_id=(select card_id from job_card where labour_hour=8 and delivery_time='2
.15-pm');
Empty set (0.00 sec)

mysql> select avg(quantity)from inventory group by inven_id;
+---------------+
| avg(quantity) |
+---------------+
|       12.0000 |
|       15.0000 |
|       10.0000 |
|       20.0000 |
+---------------+
4 rows in set (0.00 sec)

mysql> select *from inventory ;
+----------+------------+----------+-------------+
| inven_id | Name       | Quantity | Mechanic_id |
+----------+------------+----------+-------------+
|       10 | oil filter |       12 |           1 |
|       11 | oil filter |       15 |           3 |
|       12 | Brake pads |       10 |           3 |
|       14 | Spark plug |       20 |           3 |
+----------+------------+----------+-------------+
4 rows in set (0.00 sec)

mysql> select max(quantity)from inventory where quantity!=(select max(quantity) from inventory);
+---------------+
| max(quantity) |
+---------------+
|            15 |
+---------------+
1 row in set (0.00 sec)

mysql> select min(quantity) as second_min from inventory where quantity!=(select min(quantity) from inventory);
+------------+
| second_min |
+------------+
|         12 |
+------------+
1 row in set (0.00 sec)

mysql> _
```