LAB ASSIGNMENT

DATABASE LAB

DUE DATE: 04/04/2022

TKM COLLEGE OF ENGINEERING

GROUP 2

1.Consider the following schema for OrderDatabase:

SALESMAN (Salesman_id, Name, City, Commission)

CUSTOMER (Customer_id, Cust_Name, City, Grade,Salesman_id)

ORDERS (Ord_No, Purchase_Amt, Ord_Date, Customer_id, Salesman_id)

Write SQL queries to

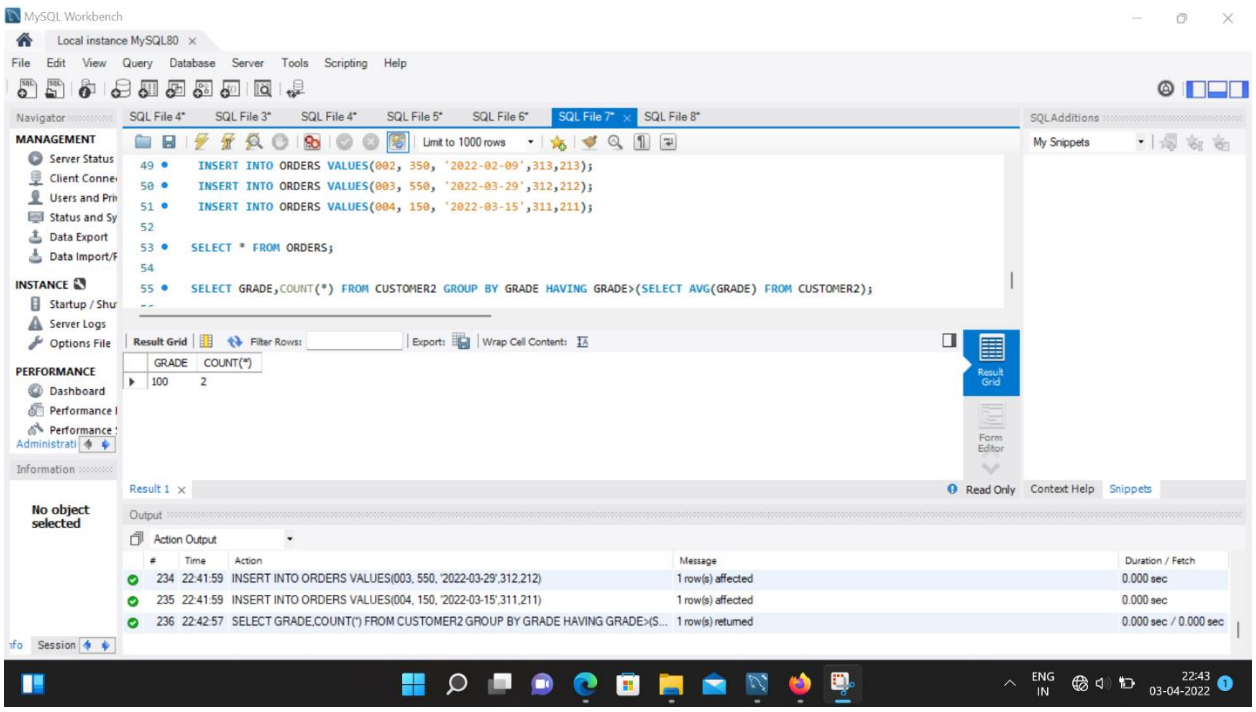
A. Count the customers with grades above Bangalore's average.
B. Find the name and numbers of all salesmen who had more than one customer.
C. List all salesmen and indicate those who have and don't have customers in their cities (Use UNION operation.)
D. Create a view that finds the salesman who has the customer with the highest order of a day.
E. Demonstrate the DELETE operation by removing salesman with id 1000. All his orders must also be deleted.

Script:

```
CREATE DATABASE CUSTOMERSALES3;

USE CUSTOMERSALES3;

CREATE TABLE SALESMAN(

Sid VARCHAR(10),

Sname VARCHAR(20) NOT NULL,

City VARCHAR(20) NOT NULL,

Commission VARCHAR(20) NOT NULL,
PRIMARY KEY(Sid)

);


INSERT INTO SALESMAN  VALUES(211, 'ANJITHA', 'KOLLAM','5');

INSERT INTO SALESMAN  VALUES(212, 'AMRITHA', 'MALAPPURAM','12');

INSERT INTO SALESMAN  VALUES(213, 'ANASWARA', 'KOLLAM','15');

INSERT INTO SALESMAN  VALUES(214, 'ARCHANA', 'KOTTAYAM','8');


SELECT * FROM SALESMAN;


CREATE TABLE CUSTOMER2(

Cid VARCHAR(10) ,

Cname VARCHAR(20),

City VARCHAR(20),

Grade VARCHAR(20),

Sid VARCHAR(10),

PRIMARY KEY(Cid),

FOREIGN KEY(Sid)REFERENCES SALESMAN(Sid) ON DELETE CASCADE);


INSERT INTO CUSTOMER2  VALUES(311, 'ANJU', 'Changanasseri',100,211);

INSERT INTO CUSTOMER2  VALUES(312, 'Dwany', 'Banglore',90,212);

INSERT INTO CUSTOMER2  VALUES(313, 'Manjari', 'Kasargodu',80,213);

INSERT INTO CUSTOMER2  VALUES(314, 'Manju', 'Mangalapuram',100,214);
```

```
SELECT * FROM CUSTOMER2;


CREATE TABLE ORDERS (

Ord_No VARCHAR(10) ,

Purchase_Amt INT NOT NULL,

Ord_Date DATE NOT NULL,

Cid VARCHAR(10),

PRIMARY KEY(Ord_No),

FOREIGN KEY(Cid)REFERENCES CUSTOMER2(Cid) ON DELETE CASCADE,

Sid VARCHAR(10),

FOREIGN KEY(Sid)REFERENCES SALESMAN(Sid) ON DELETE CASCADE) ;


INSERT INTO ORDERS VALUES(001, 250, '2022-03-19',314,214);

INSERT INTO ORDERS VALUES(002, 350, '2022-02-09',313,213);

INSERT INTO ORDERS VALUES(003, 550, '2022-03-29',312,212);

INSERT INTO ORDERS VALUES(004, 150, '2022-03-15',311,211);


SELECT * FROM ORDERS;
```

A.SELECT GRADE,COUNT(*) FROM CUSTOMER2 GROUP BY GRADE HAVING GRADE>(SELECT AVG(GRADE) FROM CUSTOMER2);



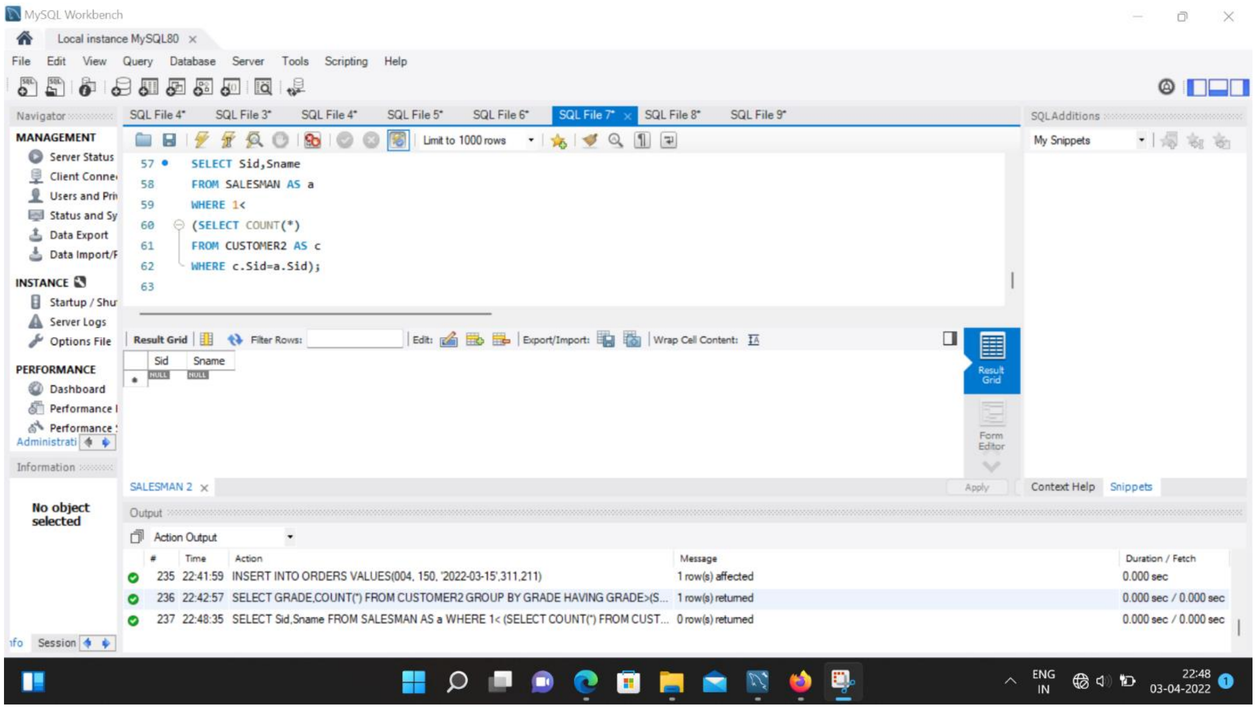
```
INSERT INTO ORDERS VALUES(002, 350, '2022-02-09',313,213);
INSERT INTO ORDERS VALUES(003, 550, '2022-03-29',312,212);
INSERT INTO ORDERS VALUES(004, 150, '2022-03-15',311,211);

SELECT * FROM ORDERS;

SELECT GRADE,COUNT(*) FROM CUSTOMER2 GROUP BY GRADE HAVING GRADE>(SELECT AVG(GRADE) FROM CUSTOMER2);
```

```
GRADE   COUNT(*)
100     2
```

```
#    Time      Action                                                              Message              Duration / Fetch
234  22:41:59  INSERT INTO ORDERS VALUES(003, 550, '2022-03-29',312,212)          1 row(s) affected    0.000 sec
235  22:41:59  INSERT INTO ORDERS VALUES(004, 150, '2022-03-15',311,211)          1 row(s) affected    0.000 sec
236  22:42:57  SELECT GRADE,COUNT(*) FROM CUSTOMER2 GROUP BY GRADE HAVING GRADE>(S...  1 row(s) returned    0.000 sec / 0.000 sec
```

B. SELECT Sid,Sname

```
FROM SALESMAN AS a

WHERE 1<

(SELECT COUNT(*)

FROM CUSTOMER2 AS c

WHERE c.Sid=a.Sid);
```



```
SELECT Sid,Sname
FROM SALESMAN AS a
WHERE 1<
(SELECT COUNT(*)
FROM CUSTOMER2 AS c
WHERE c.Sid=a.Sid);
```

Sid	Sname
NULL	NULL

```
#    Time      Action                                                                  Message            Duration / Fetch
235  22:41:59  INSERT INTO ORDERS VALUES(004, 150, '2022-03-15',311,211)               1 row(s) affected  0.000 sec
236  22:42:57  SELECT GRADE,COUNT(*) FROM CUSTOMER2 GROUP BY GRADE HAVING GRADE>(S...  1 row(s) returned  0.000 sec / 0.000 sec
237  22:48:35  SELECT Sid,Sname FROM SALESMAN AS a WHERE 1< (SELECT COUNT(*) FROM CUST... 0 row(s) returned  0.000 sec / 0.000 sec
```

C.SELECT SALESMAN.Sid,Sname,Cname,Commission

FROM SALESMAN,CUSTOMER2

WHERE SALESMAN.City=CUSTOMER2.City

UNION

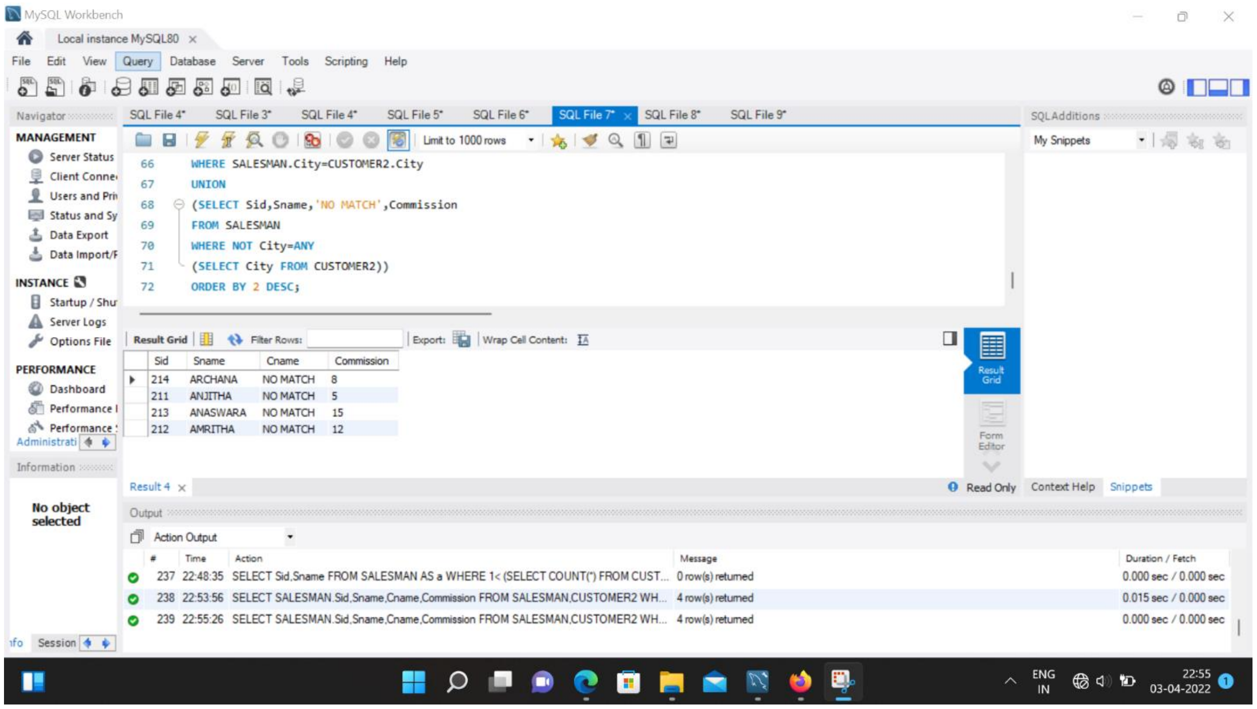
(SELECT Sid,Sname,'NO MATCH',Commission

FROM SALESMAN

WHERE NOT City=ANY

(SELECT City FROM CUSTOMER2))

ORDER BY 2 DESC;



```
WHERE SALESMAN.City=CUSTOMER2.City
UNION
(SELECT Sid,Sname,'NO MATCH',Commission
FROM SALESMAN
WHERE NOT City=ANY
(SELECT City FROM CUSTOMER2))
ORDER BY 2 DESC;
```

Sid	Sname	Cname	Commission
214	ARCHANA	NO MATCH	8
211	ANJITHA	NO MATCH	5
213	ANASWARA	NO MATCH	15
212	AMRITHA	NO MATCH	12

```
#    Time      Action                                                                     Message             Duration / Fetch
237  22:48:35  SELECT Sid,Sname FROM SALESMAN AS a WHERE 1< (SELECT COUNT(*) FROM CUST...  0 row(s) returned   0.000 sec / 0.000 sec
238  22:53:56  SELECT SALESMAN.Sid,Sname,Cname,Commission FROM SALESMAN,CUSTOMER2 WH...   4 row(s) returned   0.015 sec / 0.000 sec
239  22:55:26  SELECT SALESMAN.Sid,Sname,Cname,Commission FROM SALESMAN,CUSTOMER2 WH...   4 row(s) returned   0.000 sec / 0.000 sec
```

D.CREATE VIEW SALES

AS SELECT b.Ord_Date,a.Sid

FROM SALESMAN a,ORDERS b

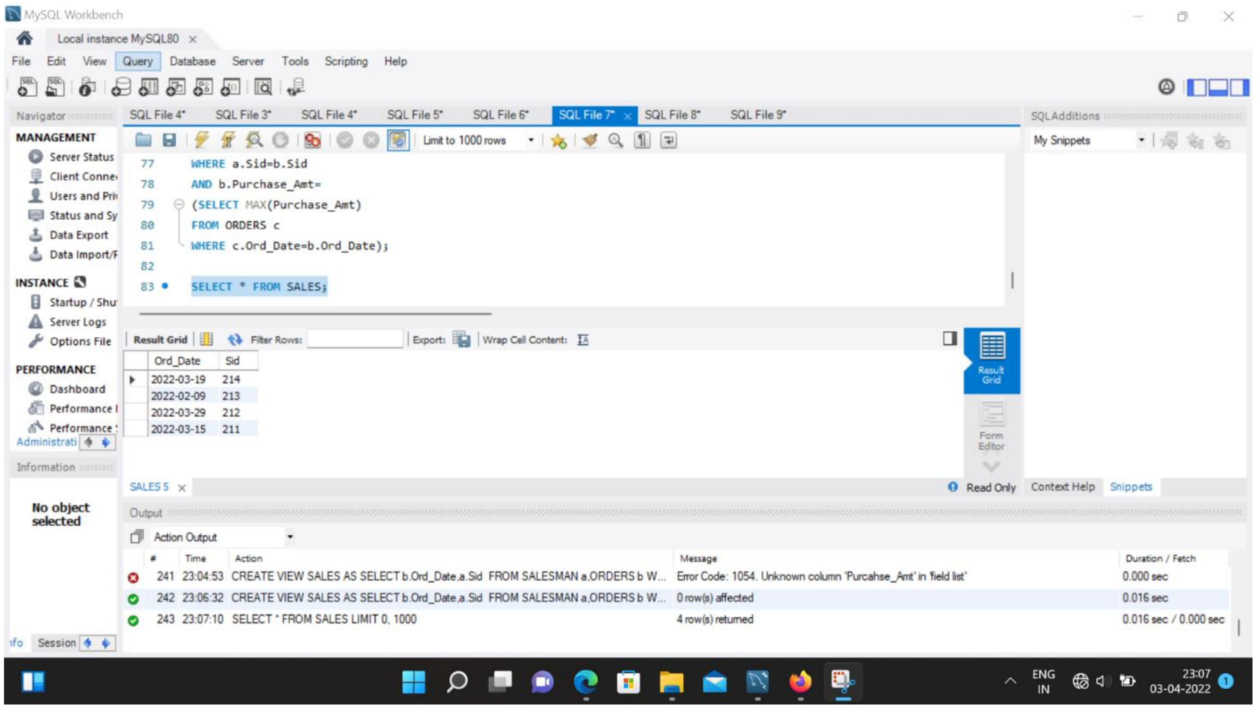
WHERE a.Sid=b.Sid

AND b.Purchase_Amt=

(SELECT MAX(Purchase_Amt)

FROM ORDERS c

WHERE c.Ord_Date=b.Ord_Date);

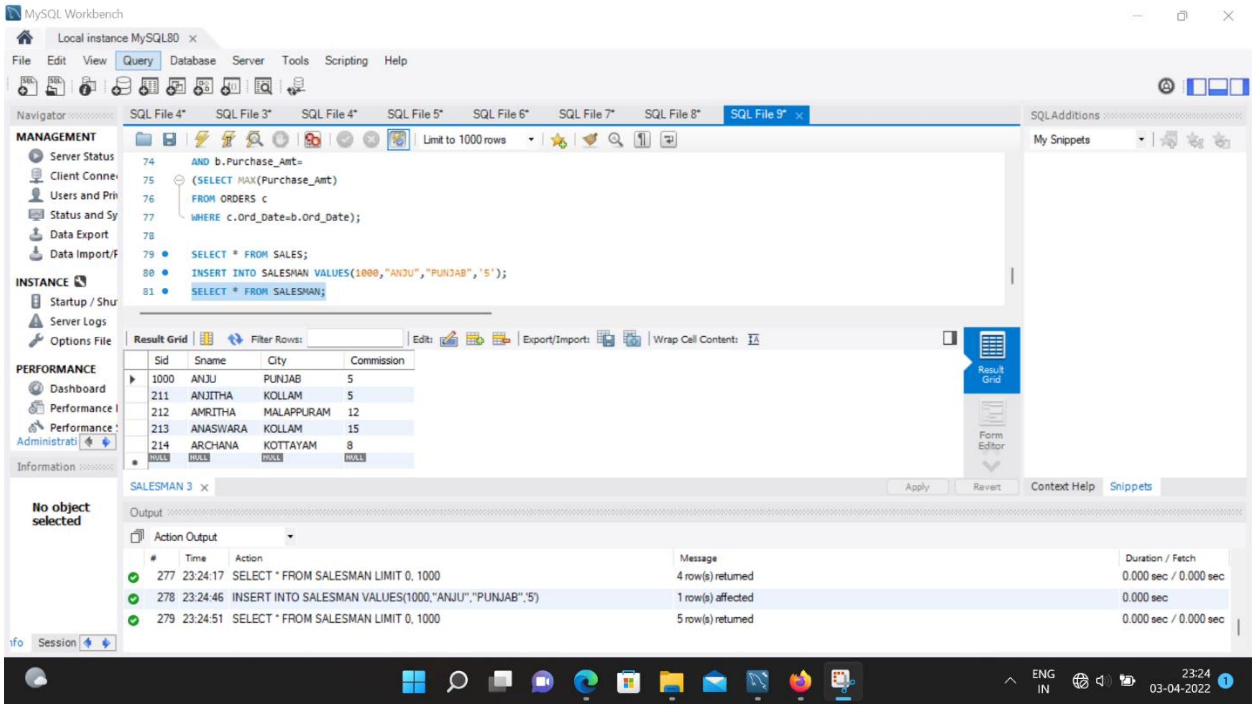


```sql
WHERE a.Sid=b.Sid
AND b.Purchase_Amt=
(SELECT MAX(Purchase_Amt)
FROM ORDERS c
WHERE c.Ord_Date=b.Ord_Date);

SELECT * FROM SALES;
```

Ord_Date	Sid
2022-03-19	214
2022-02-09	213
2022-03-29	212
2022-03-15	211

```
#    Time      Action                                                                      Message                                                            Duration / Fetch
241  23:04:53  CREATE VIEW SALES AS SELECT b.Ord_Date,a.Sid  FROM SALESMAN a,ORDERS b W...  Error Code: 1054. Unknown column 'Purcahse_Amt' in 'field list'  0.000 sec
242  23:06:32  CREATE VIEW SALES AS SELECT b.Ord_Date,a.Sid  FROM SALESMAN a,ORDERS b W...  0 row(s) affected                                                  0.016 sec
243  23:07:10  SELECT * FROM SALES LIMIT 0, 1000                                            4 row(s) returned                                                  0.016 sec / 0.000 sec
```

E.



```sql
AND b.Purchase_Amt=
(SELECT MAX(Purchase_Amt)
FROM ORDERS c
WHERE c.Ord_Date=b.Ord_Date);

SELECT * FROM SALES;
INSERT INTO SALESMAN VALUES(1000,"ANJU","PUNJAB",'5');
SELECT * FROM SALESMAN;
```

Sid	Sname	City	Commission
1000	ANJU	PUNJAB	5
211	ANJITHA	KOLLAM	5
212	AMRITHA	MALAPPURAM	12
213	ANASWARA	KOLLAM	15
214	ARCHANA	KOTTAYAM	8
NULL	NULL	NULL	NULL

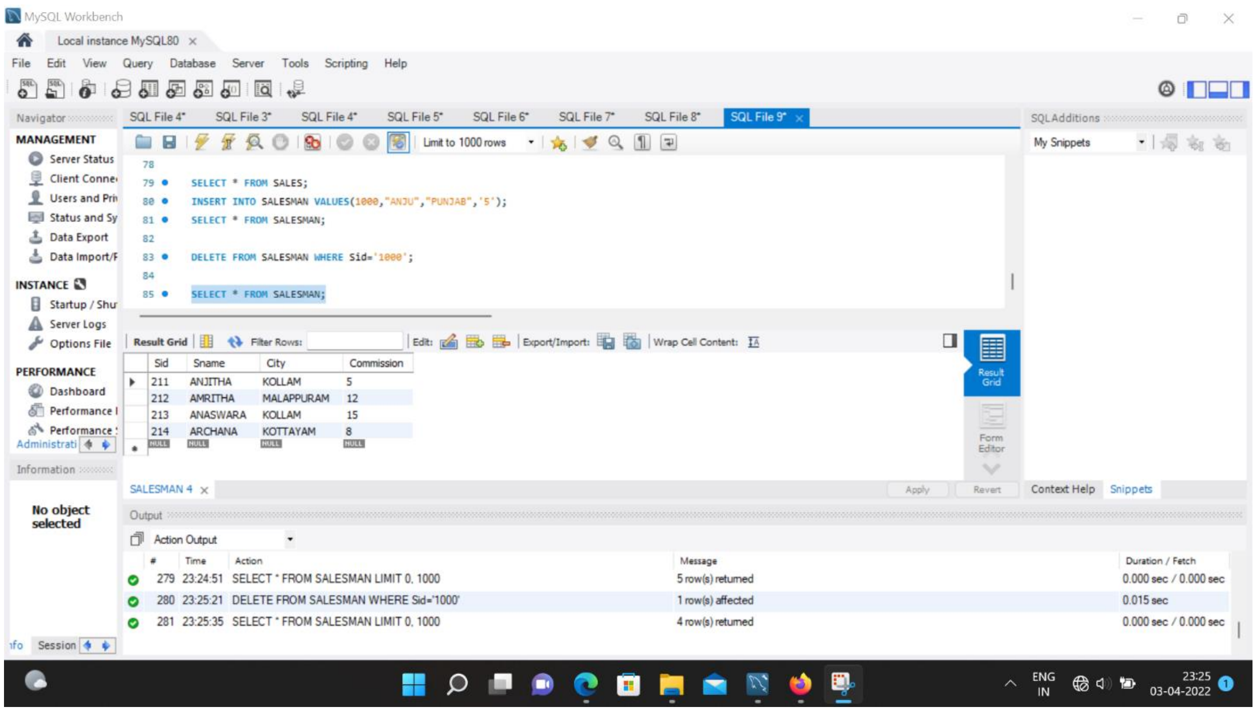
```
#    Time      Action                                                 Message            Duration / Fetch
277  23:24:17  SELECT * FROM SALESMAN LIMIT 0, 1000                   4 row(s) returned  0.000 sec / 0.000 sec
278  23:24:46  INSERT INTO SALESMAN VALUES(1000,"ANJU","PUNJAB",'5')  1 row(s) affected  0.000 sec
279  23:24:51  SELECT * FROM SALESMAN LIMIT 0, 1000                   5 row(s) returned  0.000 sec / 0.000 sec
```

INSERT INTO SALESMAN VALUES(1000,"ANJU","PUNJAB",'5');

SELECT * FROM SALESMAN;

DELETE FROM SALESMAN WHERE Sid='1000';

SELECT * FROM SALESMAN;



```
SELECT * FROM SALES;
INSERT INTO SALESMAN VALUES(1000,"ANJU","PUNJAB",'5');
SELECT * FROM SALESMAN;

DELETE FROM SALESMAN WHERE Sid='1000';

SELECT * FROM SALESMAN;
```

```
Sid   Sname      City        Commission
211   ANJITHA    KOLLAM      5
212   AMRITHA    MALAPPURAM  12
213   ANASWARA   KOLLAM      15
214   ARCHANA    KOTTAYAM    8
NULL  NULL       NULL        NULL
```

```
#    Time      Action                                    Message            Duration / Fetch
279  23:24:51  SELECT * FROM SALESMAN LIMIT 0, 1000      5 row(s) returned  0.000 sec / 0.000 sec
280  23:25:21  DELETE FROM SALESMAN WHERE Sid='1000'     1 row(s) affected  0.015 sec
281  23:25:35  SELECT * FROM SALESMAN LIMIT 0, 1000      4 row(s) returned  0.000 sec / 0.000 sec
```

MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
SQL File 4* SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* SQL File 9*
Limit to 1000 rows
Result Grid
Form Editor
SALESMAN 4
Apply Revert
Context Help Snippets
Action Output
23:25
03-04-2022

Result: Output is obtained successfully.

MANDATORY ASSIGNMENT FOR ALL GROUPS:

Queries using aggregate functions(COUNT,AVG,MIN,MAX,SUM),Group by,Order by,Having.

E_ID	E_NAME	AGE	SALARY
101	ANU	22	9000
102	Shane	29	8000
103	Rohan	34	6000
104	Scott	44	10000
105	Tiger	35	8000
106	Alex	27	7000
107	Abhi	29	8000

(i) Create Employee table containing all Records.

(ii) Count number of employee names from employee table.

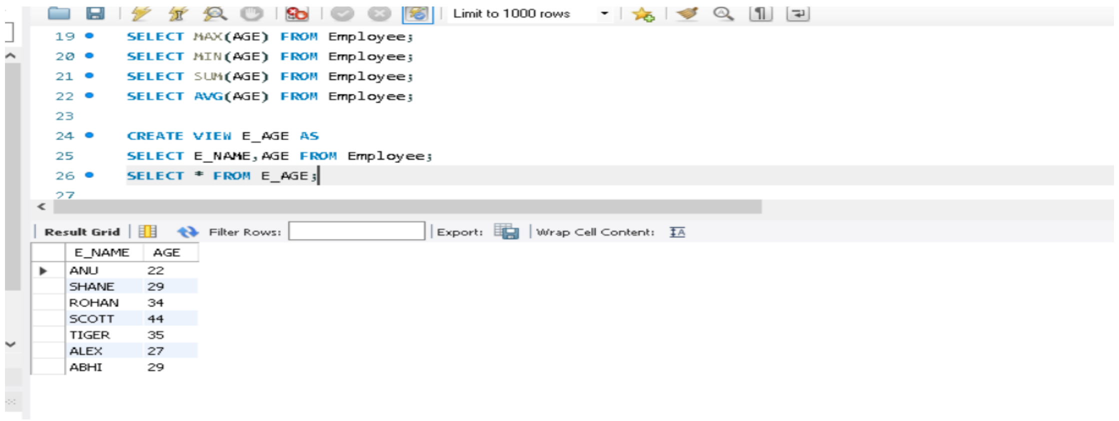
(iii) Find the Maximum age from employee table

(iv) Find the Minimum age from employee table.
(v) Display the Sum of age employee table.
(vi) Display the Average of age from Employee table
(vii) Create a View for age in employee table
(viii) Display views
(ix) Find grouped salaries of employees.
(x) Find salaries of employee in Ascending Order
(xi) Find salaries of employee in Descending Order

Script:

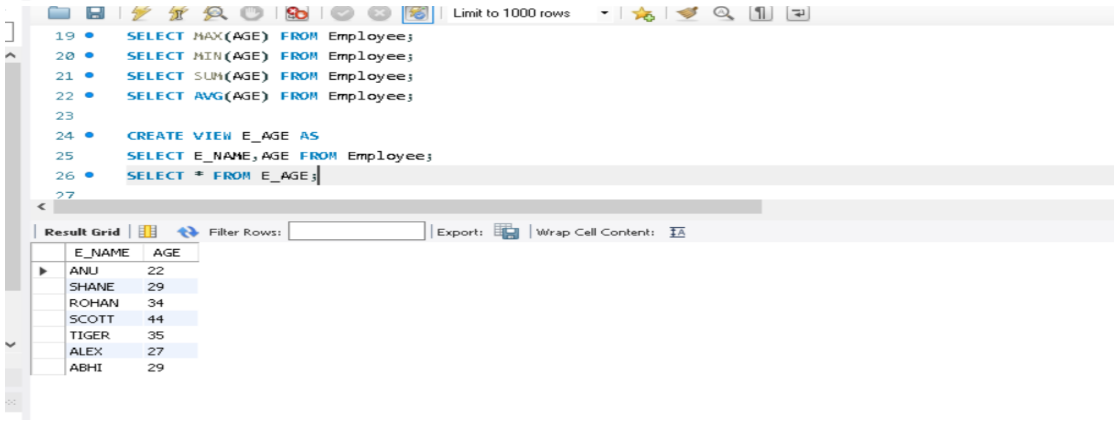
```
CREATE DATABASE EMPLOYEE;

USE EMPLOYEE;

CREATE TABLE Employee(

E_ID INT(25),

E_NAME VARCHAR(25),

AGE INT(10),

SALARY FLOAT(10),

PRIMARY KEY(E_ID)

);

INSERT INTO Employee VALUES (101,"ANU",22,9000);

INSERT INTO Employee VALUES (102,"SHANE",29,8000);

INSERT INTO Employee VALUES (103,"ROHAN",34,6000);

INSERT INTO Employee VALUES (104,"SCOTT",44,10000);

INSERT INTO Employee VALUES (105,"TIGER",35,8000);

INSERT INTO Employee VALUES (106,"ALEX",27,7000);

INSERT INTO Employee VALUES (107,"ABHI",29,8000);

SELECT * FROM Employee ;
```

SELECT COUNT(*) FROM Employee;



```
SELECT MAX(AGE) FROM Employee;
SELECT MIN(AGE) FROM Employee;
SELECT SUM(AGE) FROM Employee;
SELECT AVG(AGE) FROM Employee;

CREATE VIEW E_AGE AS
SELECT E_NAME,AGE FROM Employee;
SELECT * FROM E_AGE;
```

```
E_NAME   AGE
ANU      22
SHANE    29
ROHAN    34
SCOTT    44
TIGER    35
ALEX     27
ABHI     29
```



```
SELECT MAX(AGE) FROM Employee;
SELECT MIN(AGE) FROM Employee;
SELECT SUM(AGE) FROM Employee;
SELECT AVG(AGE) FROM Employee;

CREATE VIEW E_AGE AS
SELECT E_NAME,AGE FROM Employee;
SELECT * FROM E_AGE;
```

```
E_NAME   AGE
ANU      22
SHANE    29
ROHAN    34
SCOTT    44
TIGER    35
ALEX     27
ABHI     29
```

SELECT MAX(AGE) FROM Employee;

SELECT MIN(AGE) FROM Employee;

SELECT SUM(AGE) FROM Employee;

SELECT AVG(AGE) FROM Employee;

CREATE VIEW E_AGE AS

SELECT E_NAME,AGE FROM Employee;

SELECT * FROM E_AGE;

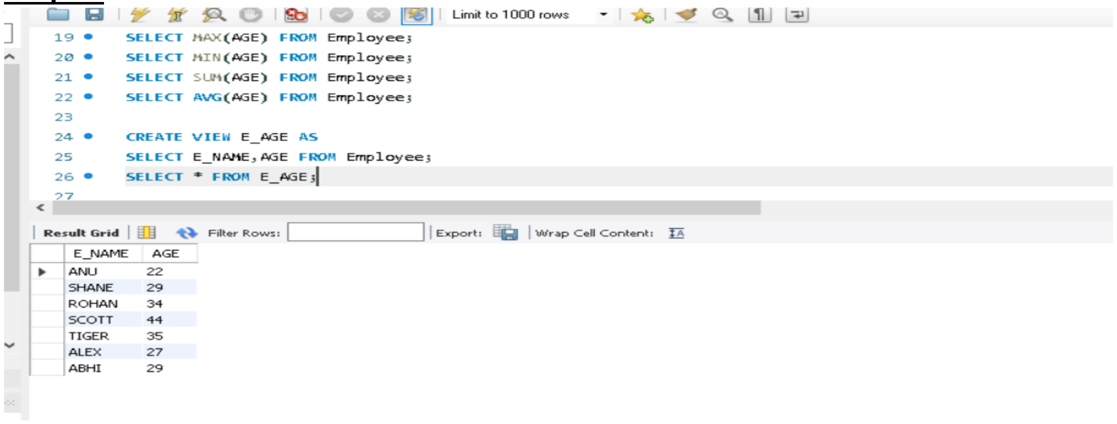
SELECT E_NAME,SALARY FROM Employee GROUP BY E_NAME;

SELECT SALARY FROM Employee ORDER BY SALARY ASC;

SELECT SALARY FROM Employee ORDER BY SALARY DESC;

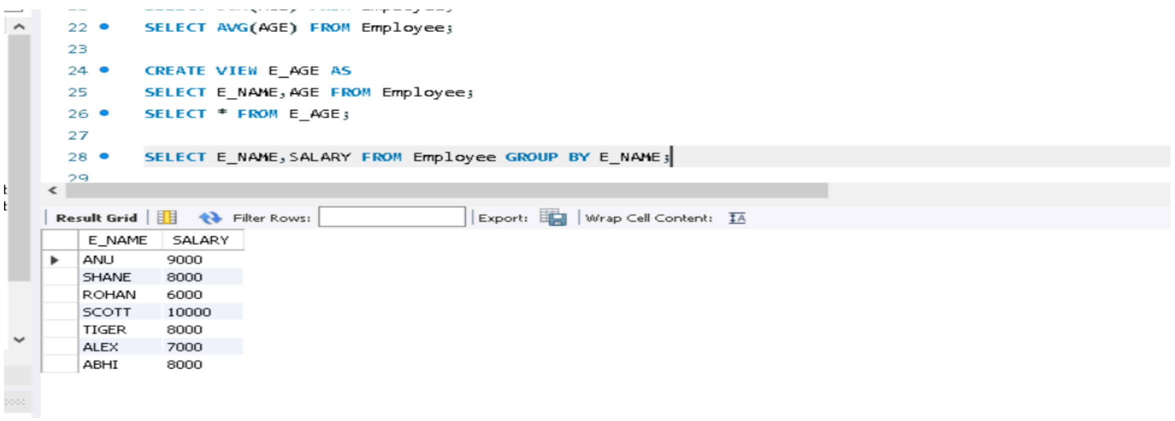
<u>Result:</u> output is obtained successfully.

<u>output:</u>



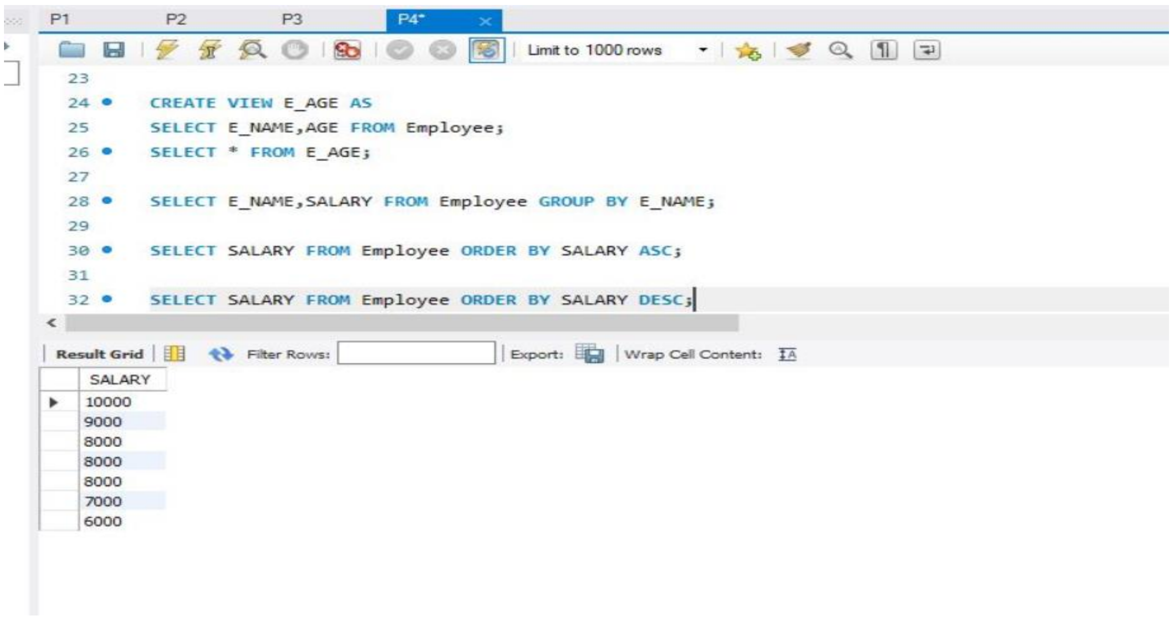
```
SELECT MAX(AGE) FROM Employee;
SELECT MIN(AGE) FROM Employee;
SELECT SUM(AGE) FROM Employee;
SELECT AVG(AGE) FROM Employee;

CREATE VIEW E_AGE AS
SELECT E_NAME,AGE FROM Employee;
SELECT * FROM E_AGE;
```

E_NAME	AGE
ANU	22
SHANE	29
ROHAN	34
SCOTT	44
TIGER	35
ALEX	27
ABHI	29



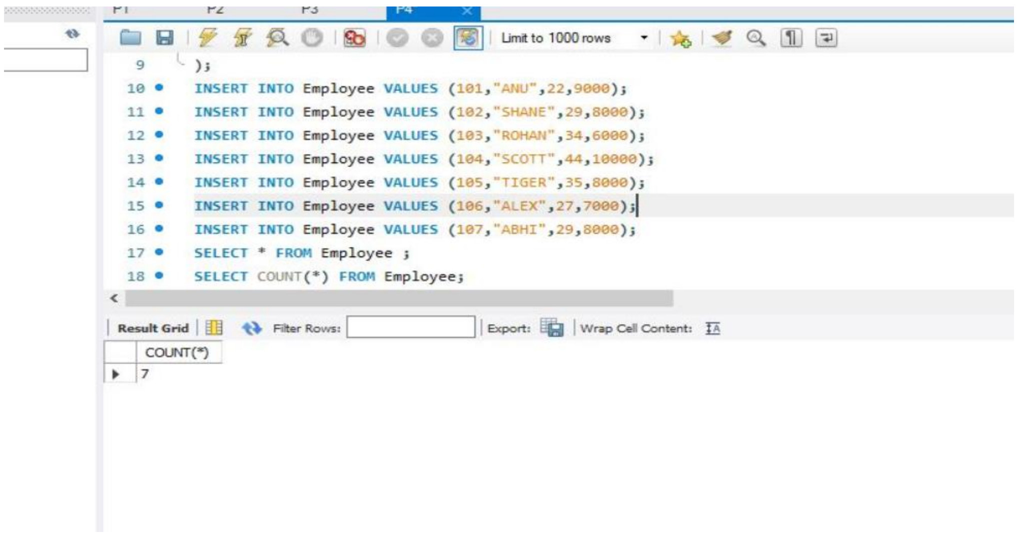
```
SELECT AVG(AGE) FROM Employee;

CREATE VIEW E_AGE AS
SELECT E_NAME,AGE FROM Employee;
SELECT * FROM E_AGE;

SELECT E_NAME,SALARY FROM Employee GROUP BY E_NAME;
```

E_NAME	SALARY
ANU	9000
SHANE	8000
ROHAN	6000
SCOTT	10000
TIGER	8000
ALEX	7000
ABHI	8000



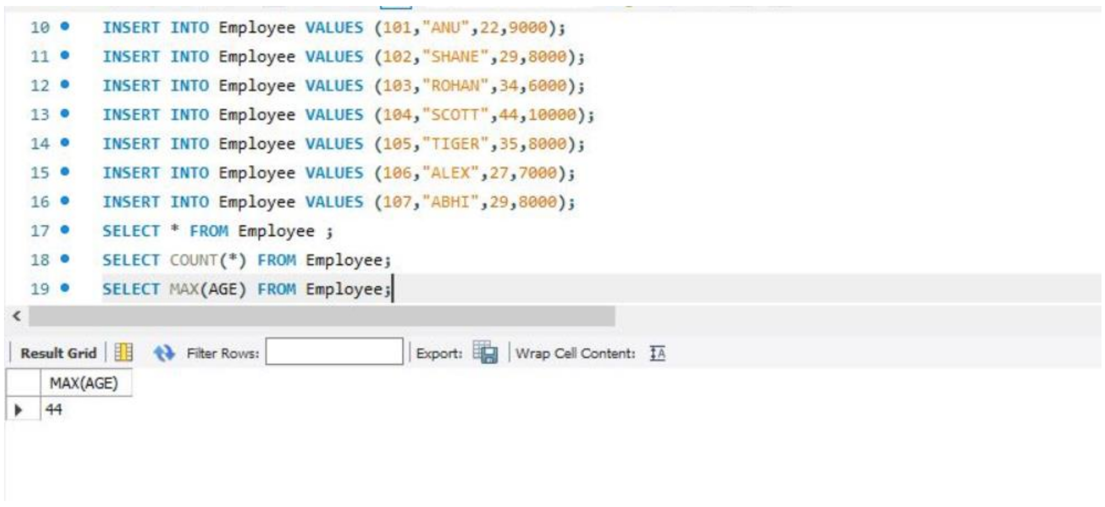
```
CREATE VIEW E_AGE AS
SELECT E_NAME,AGE FROM Employee;
SELECT * FROM E_AGE;

SELECT E_NAME,SALARY FROM Employee GROUP BY E_NAME;

SELECT SALARY FROM Employee ORDER BY SALARY ASC;

SELECT SALARY FROM Employee ORDER BY SALARY DESC;
```

```
SALARY
10000
9000
8000
8000
8000
7000
6000
```



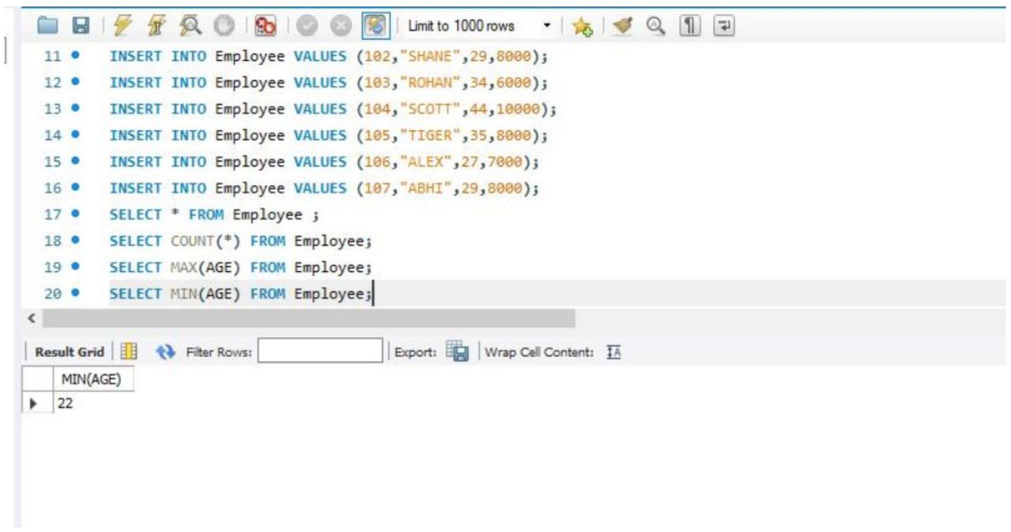
```
);
INSERT INTO Employee VALUES (101,"ANU",22,9000);
INSERT INTO Employee VALUES (102,"SHANE",29,8000);
INSERT INTO Employee VALUES (103,"ROHAN",34,6000);
INSERT INTO Employee VALUES (104,"SCOTT",44,10000);
INSERT INTO Employee VALUES (105,"TIGER",35,8000);
INSERT INTO Employee VALUES (106,"ALEX",27,7000);
INSERT INTO Employee VALUES (107,"ABHI",29,8000);
SELECT * FROM Employee ;
SELECT COUNT(*) FROM Employee;
```

```
COUNT(*)
7
```



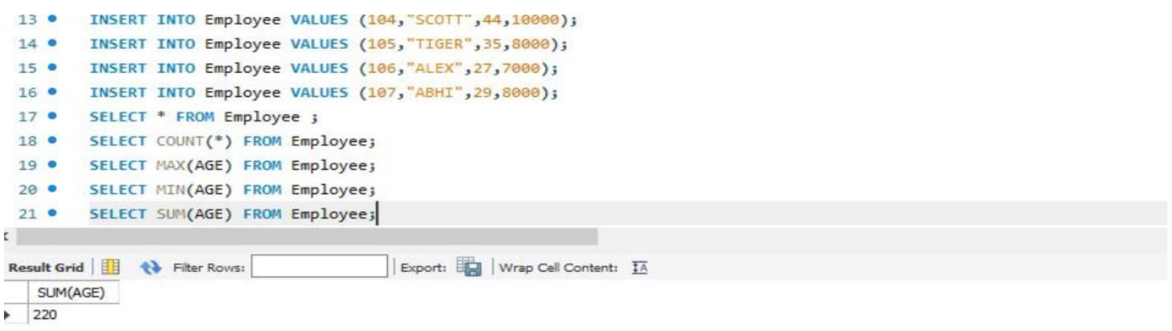
```
INSERT INTO Employee VALUES (101,"ANU",22,9000);
INSERT INTO Employee VALUES (102,"SHANE",29,8000);
INSERT INTO Employee VALUES (103,"ROHAN",34,6000);
INSERT INTO Employee VALUES (104,"SCOTT",44,10000);
INSERT INTO Employee VALUES (105,"TIGER",35,8000);
INSERT INTO Employee VALUES (106,"ALEX",27,7000);
INSERT INTO Employee VALUES (107,"ABHI",29,8000);
SELECT * FROM Employee ;
SELECT COUNT(*) FROM Employee;
SELECT MAX(AGE) FROM Employee;
```

MAX(AGE)
44



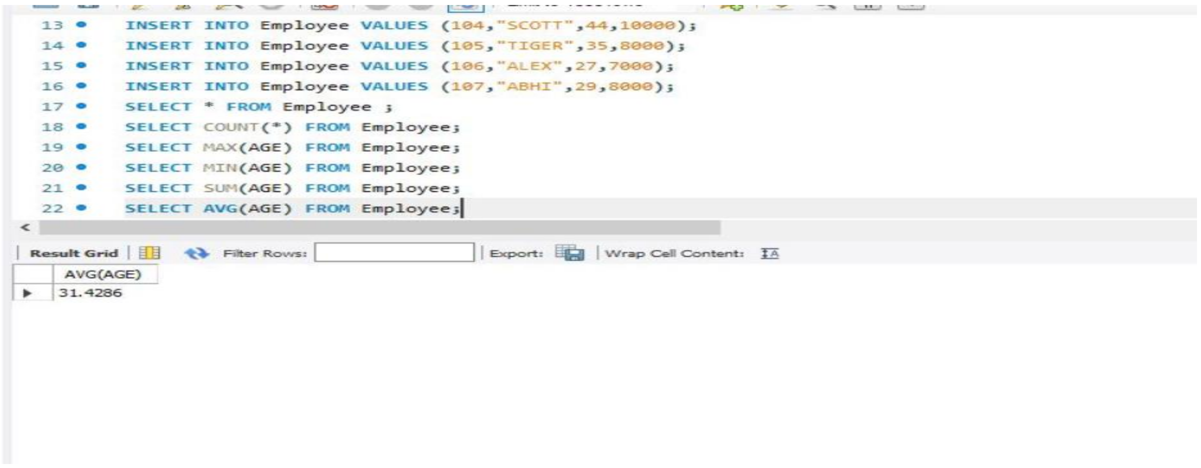
```
INSERT INTO Employee VALUES (102,"SHANE",29,8000);
INSERT INTO Employee VALUES (103,"ROHAN",34,6000);
INSERT INTO Employee VALUES (104,"SCOTT",44,10000);
INSERT INTO Employee VALUES (105,"TIGER",35,8000);
INSERT INTO Employee VALUES (106,"ALEX",27,7000);
INSERT INTO Employee VALUES (107,"ABHI",29,8000);
SELECT * FROM Employee ;
SELECT COUNT(*) FROM Employee;
SELECT MAX(AGE) FROM Employee;
SELECT MIN(AGE) FROM Employee;
```

MIN(AGE)
22



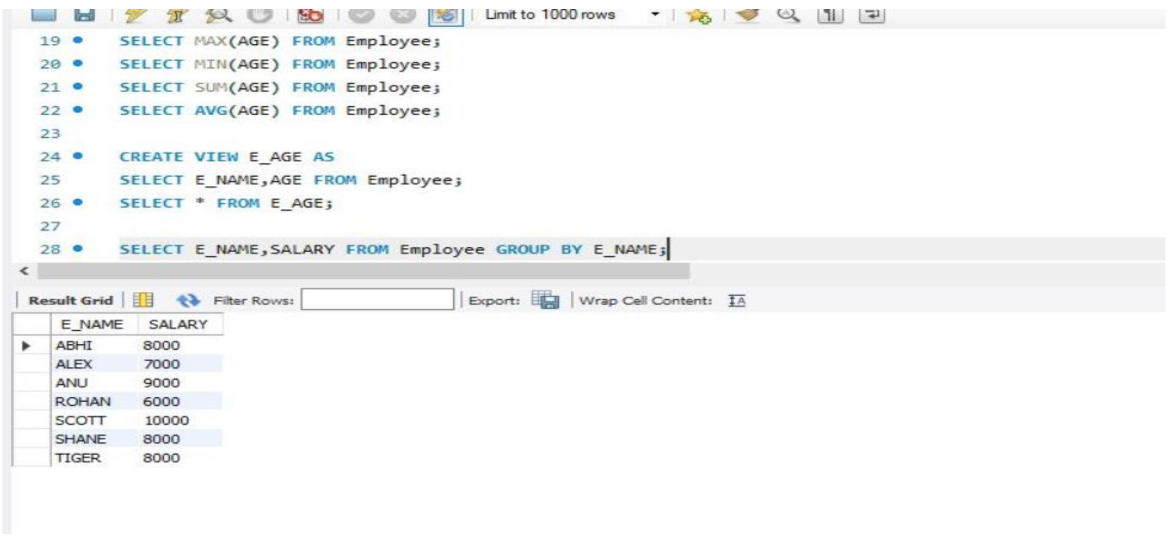
```
INSERT INTO Employee VALUES (104,"SCOTT",44,10000);
INSERT INTO Employee VALUES (105,"TIGER",35,8000);
INSERT INTO Employee VALUES (106,"ALEX",27,7000);
INSERT INTO Employee VALUES (107,"ABHI",29,8000);
SELECT * FROM Employee ;
SELECT COUNT(*) FROM Employee;
SELECT MAX(AGE) FROM Employee;
SELECT MIN(AGE) FROM Employee;
SELECT SUM(AGE) FROM Employee;
```

SUM(AGE)
220



```
INSERT INTO Employee VALUES (104,"SCOTT",44,10000);
INSERT INTO Employee VALUES (105,"TIGER",35,8000);
INSERT INTO Employee VALUES (106,"ALEX",27,7000);
INSERT INTO Employee VALUES (107,"ABHI",29,8000);
SELECT * FROM Employee ;
SELECT COUNT(*) FROM Employee;
SELECT MAX(AGE) FROM Employee;
SELECT MIN(AGE) FROM Employee;
SELECT SUM(AGE) FROM Employee;
SELECT AVG(AGE) FROM Employee;
```

AVG(AGE)
31.4286



```
SELECT MAX(AGE) FROM Employee;
SELECT MIN(AGE) FROM Employee;
SELECT SUM(AGE) FROM Employee;
SELECT AVG(AGE) FROM Employee;

CREATE VIEW E_AGE AS
SELECT E_NAME,AGE FROM Employee;
SELECT * FROM E_AGE;

SELECT E_NAME,SALARY FROM Employee GROUP BY E_NAME;
```

E_NAME	SALARY
ABHI	8000
ALEX	7000
ANU	9000
ROHAN	6000
SCOTT	10000
SHANE	8000
TIGER	8000