

DBMS PRACTICAL 5

INLAB

KL UNIVERSITY ERP

- 1) Create the database in mysql and create the necessary tables for the given case study using appropriate keys and relationships between the tables
- 2) Insert atleast 10 records into every table that is implemented in the case study

The screenshot shows a MySQL Workbench interface with a SQL editor and a result grid. The SQL editor contains the following queries:

```

10 • create table fee(branch varchar(20),fee_type varchar(20),_year int,semester int,feeamount bigint);
11 • create table other_fee(fee_type varchar(20),fee_amount bigint);
12 • insert into student values(1000,'Hari',9988776655,'abcd@gmail.com','Vijayawada','CSE');
13 • insert into student values(2000,'Gopal',7654328998,'pqr@gmail.com','Hyderabad','ECE');
14 • insert into student values(1001,'Jaya',9876543246,'ptyui@gmail.com','Hyderabad','CSE');
15 • insert into student values(1002,'Kiran',7864569878,'kjhyu@gmail.com','Hyderabad','CSE');
16 • insert into student values(2001,'Kalyan',8765498755,'kieee@gmail.com','Hyderabad','ECE');
17 • select * from student;
18 • insert into faculty values(5001,'Krishna','Asst.Prof',35000,9988773211,'hhhh@gmail.com','Vijayawada','CSE');
19 • insert into faculty values(5002,'Hari','Assoc.Prof',75000,7876543334,'kiuyt@gmail.com','Hyderabad','CSE');

```

The result grid displays the data for the 'student' table:

regno	name	mobilenr	emailid	address	branch
1000	Hari	9988776655	abcd@gmail.com	Vijayawada	CSE
2000	Gopal	7654328998	pqr@gmail.com	Hyderabad	ECE
1001	Jaya	9876543246	ptyui@gmail.com	Hyderabad	CSE
1002	Kiran	7864569878	kjhyu@gmail.com	Hyderabad	CSE
2001	Kalyan	8765498755	kieee@gmail.com	Hyderabad	ECE

The screenshot shows a MySQL Workbench interface with a SQL editor and a result grid. The SQL editor contains the following queries:

```

16 • insert into student values(2001,'Kalyan',8765498755,'kieee@gmail.com','Hyderabad','ECE');
17 • select * from student;
18 • insert into faculty values(5001,'Krishna','Asst.Prof',35000,9988773211,'hhhh@gmail.com','Vijayawada','CSE');
19 • insert into faculty values(5002,'Hari','Assoc.Prof',75000,7876543334,'kiuyt@gmail.com','Hyderabad','CSE');
20 • insert into faculty values(5003,'Mohan','Asst.Prof',40000,8678987689,'klptre@gmail.com','Hyderabad','ECE');
21 • insert into faculty values(5004,'Giri','Asst.Prof',30000,7896578967,'dfgh@gmail.com','Hyderabad','CSE');
22 • select * from faculty;
23 • insert into course values('18CS2101','DBMS','CSE',2,1);
24 • insert into course values('18CS2102','EP','CSE',2,1);
25 • insert into course values('18CS2103','OK','CSE',2,1);

```

The result grid displays the data for the 'faculty' table:

fid	fname	designation	salary	fmobile	fmail	fadd	branch
5001	Krishna	Asst.Prof	35000	9988773211	hhhh@gmail.com	Vijayawada	CSE
5002	Hari	Assoc.Prof	75000	7876543334	kiuyt@gmail.com	Hyderabad	CSE
5003	Mohan	Asst.Prof	40000	8678987689	klptre@gmail.com	Hyderabad	ECE
5004	Giri	Asst.Prof	30000	7896578967	dfgh@gmail.com	Hyderabad	CSE

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

19 • insert into faculty values(5002,'Hari','Assoc.Prof',75000,7876543334,'kiuyt@gmail.com','Hyderabad','CSE');
20 • insert into faculty values(5003,'Mohan','Asst.Prof',40000,8678987689,'klptre@gmail.com','Hyderabad','ECE');
21 • insert into faculty values(5004,'Giri','Asst.Prof',30000,7896578967,'dfgh@gmail.com','Hyderabad','CSE');
22 • select * from faculty;
23 • insert into course values('18CS2101','DBMS','CSE',2,1);
24 • insert into course values('18CS2102','EP','CSE',2,1);
25 • insert into course values('18CS2103','OS','CSE',2,1);
26 • insert into course values('18CS3101','WE','CSE',3,1);
27 • select * from course;
28 • insert into stu_reg_courses values(1000,2,1,'18C2101','CSE',5002);

```

Result Grid

ccode	cname	branch	year	semester
18CS2101	DBMS	CSE	2	1
18CS2102	EP	CSE	2	1
18CS2103	OS	CSE	2	1
18CS3101	WE	CSE	3	1

Form Editor

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

28 • insert into stu_reg_courses values(1000,2,1,'18C2101','CSE',5002);
29 • insert into stu_reg_courses values(1001,2,1,'18C2102','CSE',5001);
30 • insert into stu_reg_courses values(1002,2,1,'18C2103','CSE',5001);
31 • select * from stu_reg_courses;
32 • insert into library_books values(101,'DBMS','RaghuramaKrishna','Pearson',5,350,10);
33 • insert into library_books values(102,'OS','Tanenbom','Willman',4,300,15);
34 • insert into library_books values(103,'Let Us C','Kanetkar','Pearson',7,600,25);
35 • insert into library_books values(104,'Java Complete Reference','Peter Naughton','Pearson',6,500,30);
36 • select * from library_books;
37 • insert into acad_performance values(1000,2,1,1,9,3);

```

Result Grid

regno	_year	semester	coursecode	branch	fid
1000	2	1	18C2101	CSE	5002
1001	2	1	18C2102	CSE	5001
1002	2	1	18C2103	CSE	5001

Form Editor

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

28 • insert into stu_reg_courses values(1000,2,1,'18C2101','CSE',5002);
29 • insert into stu_reg_courses values(1001,2,1,'18C2102','CSE',5001);
30 • insert into stu_reg_courses values(1002,2,1,'18C2103','CSE',5001);
31 • select * from stu_reg_courses;
32 • insert into library_books values(101,'DBMS','RaghuramaKrishna','Pearson',5,350,10);
33 • insert into library_books values(102,'OS','Tanenbom','Willman',4,300,15);
34 • insert into library_books values(103,'Let Us C','Kanetkar','Pearson',7,600,25);
35 • insert into library_books values(104,'Java Complete Reference','Peter Naughton','Pearson',6,500,30);
36 • select * from library_books;
37 • insert into acad_performance values(1000,2,1,1,9,3);

```

Result Grid

acono	bttitle	author	publisher	edition	price	numofcopies
101	DBMS	RaghuramaKrishna	Pearson	5	350	10
102	OS	Tanenbom	Willman	4	300	15
103	Let Us C	Kanetkar	Pearson	7	600	25
104	Java Complete Reference	Peter Naughton	Pearson	6	500	30

Form Editor

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

35 * insert into library_books values(104, 'Java Complete Reference', 'Peter Naughton', 'Pearson',6,500,30);
36 * select * from library_books;
37 * insert into acad_performance values(1000 ,1 ,1 ,9.3);
38 * insert into acad_performance values(1001 ,1 ,1 ,9.2);
39 * insert into acad_performance values(1002 ,1 ,1 ,9.1);
40 * insert into acad_performance values(2000 ,1 ,2 ,9.1);
41 * insert into acad_performance values(2001 ,1 ,2 ,9.3);
42 * insert into acad_performance values(3000 ,1 ,2 ,9.2);
43 * select * from acad_performance;
44 * insert into issue_register values(2000 ,101 , '01/05/2020');

```

Result Grid

regid	_year	semester	cgpa
1000	1	1	9.3
1001	1	1	9.2
1002	1	1	9.1
2000	1	2	9.1
2001	1	2	9.3
3000	1	2	9.2

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

41 * insert into acad_performance values(2001, 1, 2, 9.3);
42 * insert into acad_performance values(3000 ,1, 2, 9.2);
43 * select * from acad_performance;
44 * insert into issue_register values(2000 ,101 , '01/05/2020');
45 * insert into issue_register values(1001 ,102 , '05/06/2020');
46 * insert into issue_register values(1002 ,101 , '09/05/2020');
47 * select * from issue_register;
48 * insert into fee values('CSE','Tuition Fee',1,1,125000);
49 * insert into fee values('ESE','Tuition Fee',1,1,100000);
50 * insert into fee values('ME','Tuition Fee',1,1,80000);

```

Result Grid

regno	acono	issuedate
2000	101	01/05/2020
1001	102	05/06/2020
1002	101	09/05/2020

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

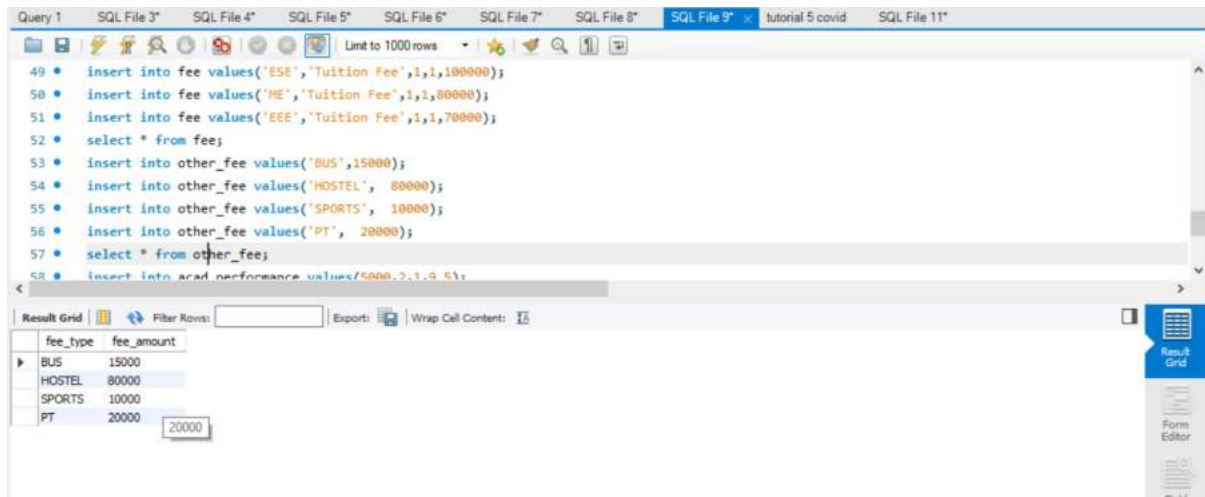
```

44 * insert into issue_register values(2000 ,101 , '01/05/2020');
45 * insert into issue_register values(1001 ,102 , '05/06/2020');
46 * insert into issue_register values(1002 ,101 , '09/05/2020');
47 * select * from issue_register;
48 * insert into fee values('CSE','Tuition Fee',1,1,125000);
49 * insert into fee values('ESE','Tuition Fee',1,1,100000);
50 * insert into fee values('ME','Tuition Fee',1,1,80000);
51 * insert into fee values('EEE','Tuition Fee',1,1,70000);
52 * select * from fee;
53 * insert into other_fee values('BMS',15000);

```

Result Grid

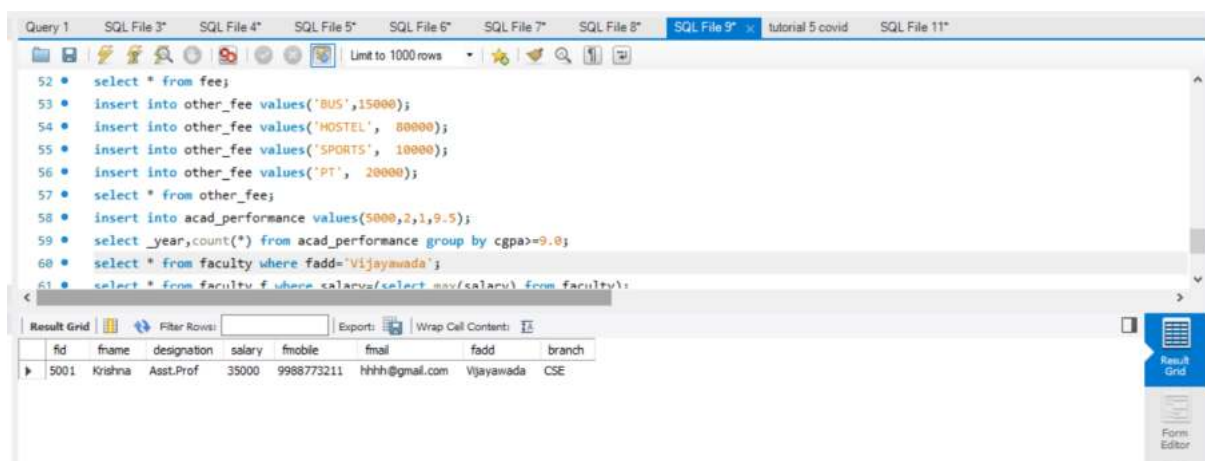
branch	fee_type	_year	semester	feeamount
CSE	Tuition Fee	1	1	125000
ESE	Tuition Fee	1	1	100000
ME	Tuition Fee	1	1	80000
EEE	Tuition Fee	1	1	70000



3. Write a query to find the number of students who got the CGPA 9 & above in year wise?



4. Display all faculties who stay in Vijayawada



5. Write a query to display faculty id , fname, salary who is/are drawing highest salary in faculty id order.

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

53 * insert into other_fee values('BUS',15000);
54 * insert into other_fee values('HOSTEL', 80000);
55 * insert into other_fee values('SPORTS', 10000);
56 * insert into other_fee values('PT', 20000);
57 * select * from other_fee;
58 * insert into acad_performance values(5000,2,1,9.5);
59 * select _year,count(*) from acad_performance group by cgpa=>9.0;
60 * select * from faculty where fadd='Vijayawada';
61 * select * from faculty f where salary=(select max(salary) from faculty);
62 * select * from faculty f where salary>=(select avg(salary) from faculty);

```

Result Grid

fid	fname	designation	salary	fmobile	fmali	fadd	branch
5002	Hari	Assoc.Prof	75000	7876543334	kuyt@gmail.com	Hyderabad	CSE

6. Write sql query to display all the faculty whose salary is greater than the average salary of all the faculty.

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

54 * insert into other_fee values('HOSTEL', 80000);
55 * insert into other_fee values('SPORTS', 10000);
56 * insert into other_fee values('PT', 20000);
57 * select * from other_fee;
58 * insert into acad_performance values(5000,2,1,9.5);
59 * select _year,count(*) from acad_performance group by cgpa=>9.0;
60 * select * from faculty where fadd='Vijayawada';
61 * select * from faculty f where salary=(select max(salary) from faculty);
62 * select * from faculty f where salary>=(select avg(salary) from faculty);
63 * select distinct f.* from faculty f inner join stu_reg_courses s on f.fid=s.fid;

```

Result Grid

fid	fname	designation	salary	fmobile	fmali	fadd	branch
5002	Hari	Assoc.Prof	75000	7876543334	kuyt@gmail.com	Hyderabad	CSE

7. Write a query to display the faculty details for all courses registered by a student;

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

55 * insert into other_fee values('SPORTS', 10000);
56 * insert into other_fee values('PT', 20000);
57 * select * from other_fee;
58 * insert into acad_performance values(5000,2,1,9.5);
59 * select _year,count(*) from acad_performance group by cgpa=>9.0;
60 * select * from faculty where fadd='Vijayawada';
61 * select * from faculty f where salary=(select max(salary) from faculty);
62 * select * from faculty f where salary>=(select avg(salary) from faculty);
63 * select distinct f.* from faculty f inner join stu_reg_courses s on f.fid=s.fid;
64 * select s._count() as Number of books issued from student s inner join issue register i on s.regno=i.regno group by regno;

```

Result Grid

fid	fname	designation	salary	fmobile	fmali	fadd	branch
5001	Krishna	Asst.Prof	35000	9988773211	hhhh@gmail.com	Vijayawada	CSE
5002	Hari	Assoc.Prof	75000	7876543334	kuyt@gmail.com	Hyderabad	CSE

8. Display the number of books issued to each student with his details

The screenshot shows a SQL IDE with a query editor and a result grid. The query is as follows:

```

44 * insert into other_fee values('BUS',15000);
45 * insert into other_fee values('HOSTEL', 80000);
46 * insert into other_fee values('SPORTS', 10000);
47 * insert into other_fee values('PT', 20000);
48 * insert into acad_performance values(5000,2,1,9.5);
49 *select _year,count(*) from (select * from acad_performance where cgpa>=9.0);
50 * select * from faculty where fadd='Vijayawada';
51 * select * from faculty f where salary>=(select avg(salary) from faculty);
52 * select distinct f.* from faculty f inner join stu_reg_courses s on f.fid=s.fid;
53 * select s.,count(*) as Number_of_books_issued from student s inner join issue_register i on s.regno=i.regno group by regno;
54

```

The result grid displays the following data:

regno	name	mobleno	email	address	branch	Number_of_books_issued
2000	Gopal	7654328998	por@gmail.com	Hyderabad	ECE	1
1001	Jaya	9876543246	ptyui@gmail.com	Hyderabad	CSE	1
1002	Kiran	7864569878	lghyu@gmail.com	Hyderabad	CSE	2

9.Display the number of students registered under each faculty

The screenshot shows a SQL IDE with a query editor and a result grid. The query is as follows:

```

57 * select * from other_fee;
58 * insert into acad_performance values(5000,2,1,9.5);
59 * select _year,count(*) from acad_performance group by cgpa>=9.0;
60 * select * from faculty where fadd='Vijayawada';
61 * select * from faculty f where salary=(select max(salary) from faculty);
62 * select * from faculty f where salary>=(select avg(salary) from faculty);
63 * select distinct f.* from faculty f inner join stu_reg_courses s on f.fid=s.fid;
64 * select s.,count(*) as Number_of_books_issued from student s inner join issue_register i on s.regno=i.regno group by regno;
65 * select fid,count(*) as Number_of_Students from stu_reg_courses group by fid;
66 * select count(*) as Number_of_students_register_in_ERP from student;

```

The result grid displays the following data:

fid	Number_of_Students
5002	1
5001	2

10.Display the number of students who registered in ERP

The screenshot shows a SQL IDE with a query editor and a result grid. The query is as follows:

```

58 * insert into acad_performance values(5000,2,1,9.5);
59 * select _year,count(*) from acad_performance group by cgpa>=9.0;
60 * select * from faculty where fadd='Vijayawada';
61 * select * from faculty f where salary=(select max(salary) from faculty);
62 * select * from faculty f where salary>=(select avg(salary) from faculty);
63 * select distinct f.* from faculty f inner join stu_reg_courses s on f.fid=s.fid;
64 * select s.,count(*) as Number_of_books_issued from student s inner join issue_register i on s.regno=i.regno group by regno;
65 * select fid,count(*) as Number_of_Students from stu_reg_courses group by fid;
66 * select count(*) as Number_of_students_register_in_ERP from student;

```

The result grid displays the following data:

Number_of_students_register_in_ERP
5

INLAB TRANSPORT DEPARTMENT

1. Create the database in mysql and create the necessary tables for the given case study using appropriate keys and relationships between the tables.
2. Insert atleast 10 records into every table that is implemented in the case study.

The screenshot displays a MySQL IDE interface with three queries and their corresponding result grids.

Query 1: A series of INSERT statements for the 'customer' table, followed by a SELECT statement to view the data.

```

16 • insert into customer values(45, 'rahul', '08-12-1995', 'Guntur', 'Raju Nagar', 'Andhra Pradesh', 523822, 9999999998, 50, 'y', 7);
17 • insert into customer values(46, 'gopi', '13-08-1979', 'Hyderabad', 'Gachibowli', 'Telangana', 567089, 7787777775, 10, 'n', 1);
18 • insert into customer values(47, 'karthik', '15-01-2004', 'Guntur', 'Chandramoulunagar', 'Andhra Pradesh', 546789, 7788776633, 20, 'n', 6);
19 • insert into customer values(48, 'gopal', '06-12-2000', 'Hyderabad', 'Ameerpet', 'Telangana', 500023, 6734556345, 30, 'y', 8);
20 • insert into customer values(49, 'Dinesh', '10-12-2001', 'Hyderabad', 'Kondapur', 'Telangana', 502033, 6794537212, 30, 'n', 10);
21 • insert into customer values(50, 'Suresh', '25-03-1999', 'Vijayawada', 'Poranki', 'Andhra Pradesh', 512022, 7896543233, 20, 'y', 9);
22 • select * from customer;
23 • insert into vehicle values(1, '2_wheeler', 'royal_enfield', 'AP1234');
24 • insert into vehicle values(2, '3_wheeler', 'auto', 'AP3421');
25 • insert into vehicle values(3, '2_wheeler', 'royal_enfield', 'TS213');

```

Result Grid 63: Shows the data inserted into the 'customer' table.

cust_id	cust_name	dob	city	street	state	pincode	ph_no	deal_no	photo_identity	v_id
41	raju	13-09-1996	Guntur	Ramgopal Street	Andhra Pradesh	500213	9123456789	10	y	3
42	hari	19-06-2016	Perambur	Mylapur	Tamilnadu	500211	1122334455	20	n	2
43	gri	20-01-1995	Hyderabad	SR Nagar	Telangana	500079	8877665544	30	y	4
44	ramu	17-07-1996	Vijayawada	Benz circle	Andhra Pradesh	512345	7654564321	40	y	5
45	rahul	08-12-1995	Guntur	Raju Nagar	Andhra Pradesh	523022	9999999998	50	y	7
46	gopi	13-08-1979	Hyderabad	Gachibowli	Telangana	567089	7787777775	10	n	1
47	karthik	15-01-2004	Guntur	Chandramoulunagar	Andhra Pradesh	546789	7788776633	20	n	6
48	gopal	06-12-2000	Hyderabad	Ameerpet	Telangana	500023	6734556345	30	y	8
49	Dinesh	10-12-2001	Hyderabad	Kondapur	Telangana	502033	6794537212	30	n	10
50	Suresh	25-03-1999	Vijayawada	Poranki	Andhra Pradesh	512022	7896543233	20	y	9

Query 2: A series of INSERT statements for the 'vehicle' table, followed by a SELECT statement to view the data.

```

25 • insert into vehicle values(3, '2_wheeler', 'royal_enfield', 'TS213');
26 • insert into vehicle values(4, '4_wheeler', 'fiat', 'AP2346');
27 • insert into vehicle values(5, '4_wheeler', 'benz', 'TS1256');
28 • insert into vehicle values(6, '3_wheeler', 'auto', 'TN5544');
29 • insert into vehicle values(7, '2_wheeler', 'splendor', 'AP3214');
30 • insert into vehicle values(8, '2_wheeler', 'bajaj', 'AP7895');
31 • insert into vehicle values(9, '2_wheeler', 'royal_enfield', 'AP2134');
32 • insert into vehicle values(10, '4_wheeler', 'ambassador', 'TS4567');
33 • select * from vehicle;
34 • insert into edu_bus values(31, 'dps', '1122334455', 'Hyderabad', 'sanathnagar', 'Telangana', 512345, 444);

```

Result Grid 64: Shows the data inserted into the 'vehicle' table.

veh_id	veh_type	veh_name	veh_number
1	2_wheeler	royal_enfield	AP1234
2	3_wheeler	auto	AP3421
3	2_wheeler	royal_enfield	TS213
4	4_wheeler	fiat	AP2346
5	4_wheeler	benz	TS1256
6	3_wheeler	auto	TN5544
7	2_wheeler	splendor	AP3214
8	2_wheeler	bajaj	AP7895
9	2_wheeler	royal_enfield	AP2134
10	4_wheeler	ambassador	TS4567

Query 3: A series of INSERT statements for the 'edu_bus' and 'dealer' tables, followed by a SELECT statement to view the data.

```

37 • insert into edu_bus values(34, 'surya', 4356789321, 'Hyderabad', 'bachupally', 'Telangana', 512098, 111);
38 • insert into edu_bus values(35, 'vit', 7788996578, 'Hyderabad', 'kukatpally', 'Telangana', 500078, 444);
39 • insert into edu_bus values(36, 'rvrrjc', 2233445566, 'Guntur', 'guntur', 'Andhra Pradesh', 523087, 222);
40 • insert into edu_bus values(37, 'vnr', 7766554322, 'Hyderabad', 'miyapur', 'Telangana', 512312, 333);
41 • insert into edu_bus values(38, 'klh', 6178765777, 'Hyderabad', 'aziznagar', 'Telangana', 502303, 222);
42 • insert into edu_bus values(39, 'bvnit', 8899776655, 'Hyderabad', 'nizampet', 'Telangana', 506078, 111);
43 • insert into edu_bus values(40, 'cbit', 6547976543, 'Hyderabad', 'gandipet', 'Telangana', 500064, 111);
44 • select * from edu_bus;
45 • insert into dealer values(51, 'raju', 'Guntur', 'Raju Nagar', 'Andhra Pradesh', 612345, 555, 9988776655);
46 • insert into dealer values(52, 'gopi', 'Hyderabad', 'Gachibowli', 'Telangana', 678900, 666, 8765432100);

```

Result Grid 65: Shows the data inserted into the 'edu_bus' table.

edu_id	edu_name	ph_no	city	street	state	pincode	deal_no
31	dps	1122334455	Hyderabad	sanathnagar	Telangana	512345	444
32	klh	4455667788	Guntur	vaddeswaram	Andhra Pradesh	567432	111
33	dav	1234567896	Hyderabad	jubilee hills	Telangana	500897	333
34	surya	4356789321	Hyderabad	bachupally	Telangana	512098	111
35	vit	7788996578	Hyderabad	kukatpally	Telangana	500078	444
36	rvrrjc	2233445566	Guntur	guntur	Andhra Pradesh	523087	222
37	vnr	7766554322	Hyderabad	miyapur	Telangana	512312	333
38	klh	6178765777	Hyderabad	aziznagar	Telangana	502303	222
39	bvnit	8899776655	Hyderabad	nizampet	Telangana	506078	111
40	cbit	6547976543	Hyderabad	gandipet	Telangana	500064	111

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

52 • insert into dealer values(58,'eswar','Guntur','Mangalagiri','Andhra Pradesh',563456,888,8765456554);
53 • insert into dealer values(59,'david','Guntur','Tullur','Andhra Pradesh',502344,999,7658897333);
54 • insert into dealer values(60,'praveen','Vijayawada','Benz Circle','Andhra Pradesh',500023,122,8897653344);
55 • select * from dealer;
56 • insert into branch values(210,'kukatpally','Telangana','Hyderabad',521010,'jntu',53,9786543211,8765432189,41,1,31);
57 • insert into branch values(211,'madhapur','Telangana','Hyderabad',521011,'kondapur',52,8877665544,8765987654,41,2,32);
58 • insert into branch values(212,'HITECH CITY','Telangana','Hyderabad',521012,'gachibowli',55,7968787877,8766543119,42,3,33);
59 • insert into branch values(213,'MIYAPUR','Telangana','Hyderabad',520011,'bachupally',51,7059910210,8767098584,43,1,34);
60 • insert into branch values(214,'RAJUNAGAR','Andhra Pradesh','Guntur',523456,'rajunagar',53,6151032543,8767654049,44,4,35);
61 • insert into branch values(215,'pnbs','Andhra Pradesh','Guntur',526901,'pnbs',55,5242154876,8768209514,44,5,36);

```

Result Grid

deal_id	deal_name	city	street	state	pincode	d_no	ph_int
51	raju	Guntur	Raju Nagar	Andhra Pradesh	612345	555	9988776655
52	raghu	Hyderabad	KJ Kukatpally	Telangana	678890	666	8765489765
53	kiran	Hyderabad	Bachupally	Telangana	546789	777	7654312389
54	ganesh	Hyderabad	Kondapur	Telangana	456789	111	8790076543
55	hari	Hyderabad	Ameerpet	Telangana	534467	222	7896543245
56	kiran	Hyderabad	Sanathnagar	Telangana	512334	333	7788996655
57	kamal	Hyderabad	Miyapur	Telangana	504406	444	9123456789
58	eswar	Guntur	Mangalagiri	Andhra Pradesh	563456	888	8765456554
59	david	Guntur	Tullur	Andhra Pradesh	502344	999	7658897333
60	praveen	Vijayawada	Benz Circle	Andhra Pradesh	500023	122	8897653344

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

61 • insert into branch values(215,'pnbs','Andhra Pradesh','Guntur',526901,'pnbs',55,5242154876,8768209514,44,5,36);
62 • insert into branch values(216,'bachupally','Telangana','Hyderabad',530346,'miyapur',52,4333277209,8768764979,42,1,37);
63 • insert into branch values(217,'ameerpet','Telangana','Hyderabad',533791,'ameerpet',52,3424399542,8769320444,46,7,38);
64 • insert into branch values(218,'sanathnagar','Telangana','Hyderabad',537236,'Erragadda',52,2515521875,8769875909,47,8,39);
65 • insert into branch values(219,'punjagutta','Telangana','Hyderabad',540681,'punjagutta',53,1606644208,8770431374,43,9,40);
66 • select * from branch;
67 • insert into registration values(41,3,55,'04-04-2014');
68 • insert into registration values(42,2,54,'02-09-2016');
69 • insert into registration values(43,4,55,'03-12-2015');
70 • insert into registration values(44,5,52,'20-09-2016');

```

Result Grid

branch_id	b_name	state	city	pincode	street	d_no	phno1	phno2	c_id	v_id	e_id
210	kukatpally	Telangana	Hyderabad	521010	jntu	53	9786543211	8765432189	41	1	31
211	madhapur	Telangana	Hyderabad	521011	kondapur	52	8877665544	8765987654	41	2	32
212	HITECH CITY	Telangana	Hyderabad	521012	gachibowli	55	7968787877	8766543119	42	3	33
213	MIYAPUR	Telangana	Hyderabad	520011	bachupally	51	7059910210	8767098584	43	1	34
214	RAJUNAGAR	Andhra Pradesh	Guntur	523456	rajunagar	53	6151032543	8767654049	44	4	35
215	pnbs	Andhra Pradesh	Guntur	526901	pnbs	55	5242154876	8768209514	44	5	36
216	bachupally	Telangana	Hyderabad	530346	miyapur	52	4333277209	8768764979	42	1	37
217	ameerpet	Telangana	Hyderabad	533791	ameerpet	52	3424399542	8769320444	46	7	38
218	sanathnagar	Telangana	Hyderabad	537236	Erragadda	52	2515521875	8769875909	47	8	39
219	punjagutta	Telangana	Hyderabad	540681	punjagutta	53	1606644208	8770431374	43	9	40

branch 67 x

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

73 • insert into registration values(47,6,52,'11-07-2011');
74 • insert into registration values(48,5,53,'12-06-2015');
75 • insert into registration values(49,10,53,'02-03-2014');
76 • insert into registration values(50,9,53,'11-10-2015');
77 • select * from registration;
78 • insert into renewal values(210,41,4);
79 • insert into renewal values(210,42,6);
80 • insert into renewal values(212,43,4);
81 • insert into renewal values(213,44,4);
82 • insert into renewal values(211,45,0);

```

Result Grid

cust_id	veh_id	deal_id	date
41	3	55	04-04-2014
42	2	54	02-09-2016
43	4	55	03-12-2015
44	5	52	20-09-2016
45	7	55	18-11-2013
46	1	51	10-06-2014
47	6	52	11-07-2011
48	8	52	12-06-2015
49	10	53	02-03-2014
50	9	53	11-10-2015

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* x SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

82 * insert into renewal values(211 ,45, 9);
83 * insert into renewal values(211 ,46, 10);
84 * insert into renewal values(215 ,47, 4);
85 * insert into renewal values(216 ,48, 6);
86 * insert into renewal values(217 ,49, 7);
87 * insert into renewal values(217 ,50, 8);
88 * select * from renewal;
89 * insert into contract_permission values(4,210,15,200);
90 * insert into contract_permission values(5 ,210, 43, 100);
91 * insert into contract_permission values(10 ,212 ,15 ,400);

```

Result Grid

branch_id	c_id	check_license_period
210	41	4
210	42	6
212	43	4
213	44	4
211	45	9
211	46	10
215	47	4
216	48	6
217	49	7
217	50	8

renewal x

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* x SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

84 * insert into renewal values(215 ,47, 4);
85 * insert into renewal values(216 ,48, 6);
86 * insert into renewal values(217 ,49, 7);
87 * insert into renewal values(217 ,50, 8);
88 * select * from renewal;
89 * insert into contract_permission values(4,210,15,200);
90 * insert into contract_permission values(5 ,210, 43, 100);
91 * insert into contract_permission values(10 ,212 ,15 ,400);
92 * select * from contract_permission;
93 * select * from vehicle where veh_number like 'AP%';#3

```

Result Grid

veh_id	branch_id	no_of_days	amount_per_seat
4	210	15	200
5	210	43	100
10	212	15	400

3.Create a query to find the vehicles that are permitted by branches located in Andhra Pradesh.

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* x SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

86 * insert into renewal values(217 ,49, 7);
87 * insert into renewal values(217 ,50, 8);
88 * select * from renewal;
89 * insert into contract_permission values(4,210,15,200);
90 * insert into contract_permission values(5 ,210, 43, 100);
91 * insert into contract_permission values(10 ,212 ,15 ,400);
92 * select * from contract_permission;
93 * select * from vehicle where veh_number like 'AP%';#3
94 * select count(*) from registration where date like 'X-07-2020%';#4
95 * select * from vehicle where veh_type like '4 wheeler';#5

```

Result Grid

veh_id	veh_type	veh_name	veh_number
1	2_wheeler	royal_enfield	AP1234
2	3_wheeler	auto	AP3421
4	4_wheeler	flat	AP2346
7	2_wheeler	splendor	AP3214
8	2_wheeler	bajaj	AP7895
9	2_wheeler	royal_enfield	AP2134

4.Create a query to find no.of.customers who had registered in month of July 2020.

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* x SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

86 * insert into renewal values(217 ,49, 7);
87 * insert into renewal values(217 ,50, 8);
88 * select * from renewal;
89 * insert into contract_permission values(4,210,15,200);
90 * insert into contract_permission values(5 ,210, 43, 100);
91 * insert into contract_permission values(10 ,212 ,15 ,400);
92 * select * from contract_permission;
93 * select * from vehicle where veh_number like 'AP%';#3
94 * select count(*) from registration where date like 'X-07-2020%';#4
95 * select * from vehicle where veh_type like '4 wheeler';#5

```

Result Grid

count(*)
0

5. Display the list of 4-wheeler vehicles.

The screenshot shows a SQL Developer window with a query editor and a result grid. The query is as follows:

```

87 * insert into renewal values(217 ,50, 8);
88 * select * from renewal;
89 * insert into contract_permission values(4,210,15,200);
90 * insert into contract_permission values(5 ,210, 43, 100);
91 * insert into contract_permission values(10 ,212 ,15 ,400);
92 * select * from contract_permission;
93 * select * from vehicle where veh_number like 'AP%';#3
94 * select count(*) from registration where date like '%-07-2020';#4
95 * select * from vehicle where veh_type like '4_wheeler';#5
96 * select * from dealer where deal_name like 'raghu';#6

```

The result grid displays the following data:

veh_id	veh_type	veh_name	veh_number
4	4_wheeler	flat	AP2346
5	4_wheeler	benz	TS1256
10	4_wheeler	ambassador	TS4567

6. Display the vehicles that were registered by the dealer name 'Raghu'.

The screenshot shows a SQL Developer window with a query editor and a result grid. The query is as follows:

```

88 * select * from renewal;
89 * insert into contract_permission values(4,210,15,200);
90 * insert into contract_permission values(5 ,210, 43, 100);
91 * insert into contract_permission values(10 ,212 ,15 ,400);
92 * select * from contract_permission;
93 * select * from vehicle where veh_number like 'AP%';#3
94 * select count(*) from registration where date like '%-07-2020';#4
95 * select * from vehicle where veh_type like '4_wheeler';#5
96 * select * from dealer where deal_name like 'raghu';#6
97 * select vehicle * from contract_permission vehicle where contract_permission no. of days=30 and contract_permission veh_id=vehicle veh_id=8

```

The result grid displays the following data:

deal_id	deal_name	city	street	state	pincode	d_no	ph_int
52	raghu	Hyderabad	Kukatpally	Telangana	678990	666	8765489765

7. Display the list of customers who have applied for new license.

The screenshot shows a SQL Developer window with a query editor and a result grid. The query is as follows:

```

19 * insert into customer values(48 , 'gopal' , '06-12-2000' , 'Hyderabad' , 'Ameerpet' , 'Telangana' , 500023 , 6734556345 , 30 , 'y' , 8);
20 * insert into customer values(49 , 'Dinesh' , '10-12-2001' , 'Hyderabad' , 'Kondapur' , 'Telangana' , 502033 , 6794537212 , 30 , 'n' , 10);
21 * insert into customer values(50 , 'Suresh' , '25-03-1999' , 'Vijayawada' , 'Poranki' , 'Andhra Pradesh' , 512022 , 7896543233 , 20 , 'y' , 9);
22 * select * from customer;
23 * insert into vehicle values(1,'2_wheeler','royal_enfield','AP1234');
24 * insert into vehicle values(2, '3_wheeler' , 'auto' , 'AP3421');
25 * insert into vehicle values(3 , '2_wheeler' , 'royal_enfield' , 'TS213');
26 * insert into vehicle values(4 , '4_wheeler' , 'fiat' , 'AP2346');
27 * insert into vehicle values(5 , '4_wheeler' , 'benz' , 'TS1256');
28 * insert into vehicle values(6 , '3_wheeler' , 'auto' , 'TS4567');

```

The result grid displays the following data:

cust_id	cust_name	dob	city	street	state	pincode	ph_no	deal_no	photo_identity	v_id
41	raju	13-09-1996	Guntur	Rampopal Street	Andhra Pradesh	500213	9123456789	10	y	3
42	hari	19-06-2016	Perambur	Mylapur	Tamil Nadu	500211	1122334455	20	n	2
43	giri	20-01-1995	Hyderabad	SR Nagar	Telangana	500079	8877665544	30	y	4
44	ramu	17-07-1996	Vijayawada	Benz circle	Andhra Pradesh	512345	7654564321	40	y	5
45	rahu	08-12-1995	Guntur	Raju Nagar	Andhra Pradesh	523022	9999999999	50	y	7
46	gopi	13-08-1979	Hyderabad	Gachibowli	Telangana	567089	7787777777	10	n	1
47	karthik	15-01-2004	Guntur	Chandramoulunagar	Andhra Pradesh	546789	7788776633	20	n	6
48	gopal	06-12-2000	Hyderabad	Ameerpet	Telangana	500023	6734556345	30	y	8
49	Dinesh	10-12-2001	Hyderabad	Kondapur	Telangana	502033	6794537212	30	n	10
50	Suresh	25-03-1999	Vijayawada	Poranki	Andhra Pradesh	512022	7896543233	20	y	9

8. Display the vehicles who have been given 30 days of contract permission.

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* x SQL File 9* tutorial 5 covid SQL File 11*

```

89 * insert into contract_permission values(4,210,15,200);
90 * insert into contract_permission values(5 ,210, 43, 100);
91 * insert into contract_permission values(10 ,212 ,15 ,400);
92 * select * from contract_permission;
93 * select * from vehicle where veh_number like 'AP%';#3
94 * select count(*) from registration where date like '%-07-2020%';#4
95 * select * from vehicle where veh_type like '4_wheeler';#5
96 * select * from dealer where deal_name like 'raghu';#6
97 * select vehicle.* from contract_permission,vehicle where contract_permission.no_of_days=30 and contract_permission.veh_id=vehicle.veh_id;#8
98 * select * from renewal;#9

```

Result Grid

veh_id	veh_type	veh_name	veh_number

9. Create a query to display all the records who applied for renewal of license.

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* x SQL File 9* tutorial 5 covid SQL File 11*

```

90 * insert into contract_permission values(5 ,210, 43, 100);
91 * insert into contract_permission values(12 ,15 ,400);
92 * select * from contract_permission;
93 * select * from vehicle where veh_number like 'AP%';#3
94 * select count(*) from registration where date like '%-07-2020%';#4
95 * select * from vehicle where veh_type like '4_wheeler';#5
96 * select * from dealer where deal_name like 'raghu';#6
97 * select vehicle.* from contract_permission,vehicle where contract_permission.no_of_days=30 and contract_permission.veh_id=vehicle.veh_id;#8
98 * select * from renewal;#9
99 * select count(distinct(veh_name)) from vehicle;#10

```

Result Grid

branch_id	c_id	check_license_period
210	41	4
210	42	6
212	43	4
213	44	4
211	45	9
211	46	10
215	47	4
216	48	6
217	49	7
217	50	8

10. Display the count of vehicles of different types.

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* x SQL File 9* tutorial 5 covid SQL File 11*

```

91 * insert into contract_permission values(10 ,212 ,15 ,400);
92 * select * from contract_permission;
93 * select * from vehicle where veh_number like 'AP%';#3
94 * select count(*) from registration where date like '%-07-2020%';#4
95 * select * from vehicle where veh_type like '4_wheeler';#5
96 * select * from dealer where deal_name like 'raghu';#6
97 * select vehicle.* from contract_permission,vehicle where contract_permission.no_of_days=30 and contract_permission.veh_id=vehicle.veh_id;#8
98 * select * from renewal;#9
99 * select count(distinct(veh_name)) from vehicle;#10
100 * select * from customer,vehicle where vehicle.veh_type like '2_wheeler%' and vehicle.veh_id=customer.v_id;#11

```

Result Grid

count(distinct(veh_name))
7

11. Create a query to display customer details who have 2-wheeler vehicle.

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* x SQL File 9* tutorial 5 covid SQL File 11*

```

92 * select * from contract_permission;
93 * select * from vehicle where veh_number like 'AP%';#3
94 * select count(*) from registration where date like '%-07-2020%';#4
95 * select * from vehicle where veh_type like '4_wheeler';#5
96 * select * from dealer where deal_name like 'raghu';#6
97 * select vehicle.* from contract_permission,vehicle where contract_permission.no_of_days=30 and contract_permission.veh_id=vehicle.veh_id;#8
98 * select * from renewal;#9
99 * select count(distinct(veh_name)) from vehicle;#10
100 * select * from customer,vehicle where vehicle.veh_type like '2_wheeler%' and vehicle.veh_id=customer.v_id;#11
101 * select customer.* from renewal,customer,branch where renewal.check_license_period like '%5%' and renewal.branch_id=branch.branch_id and branch.c

```

Result Grid

cust_id	cust_name	dob	city	street	state	pincode	ph_no	deal_no	photo_identity	v_id	veh_id	veh_type	veh_name	veh_num
41	raju	13-09-1996	Guntur	Rampopal Street	Andhra Pradesh	500213	9123456789	10	y	3	3	2_wheeler	royal_enfield	TS213
45	rahu	08-12-1995	Guntur	Raju Nagar	Andhra Pradesh	520222	9999999998	50	y	7	7	2_wheeler	splendor	AP3214
46	gopi	13-08-1979	Hyderabad	Gachibowli	Telangana	567089	7787777775	10	n	1	1	2_wheeler	royal_enfield	AP1234
48	gopal	06-12-2000	Hyderabad	Ameerpet	Telangana	500023	6734556345	30	y	8	8	2_wheeler	bajaj	AP7895
50	Suresh	25-03-1999	Vijayawada	Poranki	Andhra Pradesh	512022	7896543233	20	y	9	9	2_wheeler	royal_enfield	AP2134

12. Create a query that displays the customer details whose license expires in 5 days.

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* x SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

93 * select * from vehicle where veh_number like 'AP%';#3
94 * select count(*) from registration where date like '%-07-2020%';#4
95 * select * from vehicle where veh_type like '4_wheeler';#5
96 * select * from dealer where deal_name like 'raghu';#6
97 * select vehicle.* from contract_permission,vehicle where contract_permission.no_of_days=30 and contract_permission.veh_id=vehicle.veh_id;#8
98 * select * from renewal;#9
99 * select count(distinct(veh_name)) from vehicle;#10
100 * select * from customer,vehicle where vehicle.veh_type like '2_wheeler%' and vehicle.veh_id=customer.v_id;#11
101 * select customer.* from renewal,customer,branch where renewal.check_license_period like '5%' and renewal.branch_id=branch.branch_id and branch.c_i
102 * select edu_name from edu_bus;#13

```

Result Grid

cust_id	cust_name	dob	city	street	state	pincode	ph_no	deal_no	photo_identity	v_id
---------	-----------	-----	------	--------	-------	---------	-------	---------	----------------	------

13. Display the list of educational institutions who applied for permit.

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* x SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

94 * select count(*) from registration where date like '%-07-2020%';#4
95 * select * from vehicle where veh_type like '4_wheeler';#5
96 * select * from dealer where deal_name like 'raghu';#6
97 * select vehicle.* from contract_permission,vehicle where contract_permission.no_of_days=30 and contract_permission.veh_id=vehicle.veh_id;#8
98 * select * from renewal;#9
99 * select count(distinct(veh_name)) from vehicle;#10
100 * select * from customer,vehicle where vehicle.veh_type like '2_wheeler%' and vehicle.veh_id=customer.v_id;#11
101 * select customer.* from renewal,customer,branch where renewal.check_license_period like '5%' and renewal.branch_id=branch.branch_id and branch.c_i
102 * select edu_name from edu_bus;#13
103 * select count(*) from renewal,branch where renewal.branch_id=branch.branch_id;

```

Result Grid

edu_name
dps
kdu
dav
surya
vit
rvmjc
vnr
kdh
bvnit
cbt

14. Display the total number of vehicles license allotted by each branch.

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* x SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

95 * select * from vehicle where veh_type like '4_wheeler';#5
96 * select * from dealer where deal_name like 'raghu';#6
97 * select vehicle.* from contract_permission,vehicle where contract_permission.no_of_days=30 and contract_permission.veh_id=vehicle.veh_id;#8
98 * select * from renewal;#9
99 * select count(distinct(veh_name)) from vehicle;#10
100 * select * from customer,vehicle where vehicle.veh_type like '2_wheeler%' and vehicle.veh_id=customer.v_id;#11
101 * select customer.* from renewal,customer,branch where renewal.check_license_period like '5%' and renewal.branch_id=branch.branch_id and branch.c_i
102 * select edu_name from edu_bus;#13
103 * select count(*) from renewal,branch where renewal.branch_id=branch.branch_id;
104 * select count(*) from dealer,edu_bus where dealer.d_no=edu_bus.deal_no;#15
105 * select * from dealer;

```

Result Grid

count(*)
10

15. Display the number of customer present under each dealer

Query 1 SQL File 3* SQL File 4* SQL File 5* SQL File 6* SQL File 7* SQL File 8* x SQL File 9* tutorial 5 covid SQL File 11*

Limit to 1000 rows

```

96 * select * from dealer where deal_name like 'raghu';#6
97 * select vehicle.* from contract_permission,vehicle where contract_permission.no_of_days=30 and contract_permission.veh_id=vehicle.veh_id;#8
98 * select * from renewal;#9
99 * select count(distinct(veh_name)) from vehicle;#10
100 * select * from customer,vehicle where vehicle.veh_type like '2_wheeler%' and vehicle.veh_id=customer.v_id;#11
101 * select customer.* from renewal,customer,branch where renewal.check_license_period like '5%' and renewal.branch_id=branch.branch_id and branch.c_i
102 * select edu_name from edu_bus;#13
103 * select count(*) from renewal,branch where renewal.branch_id=branch.branch_id;
104 * select count(*) from dealer,edu_bus where dealer.d_no=edu_bus.deal_no;#15
105 * select * from dealer;

```

Result Grid

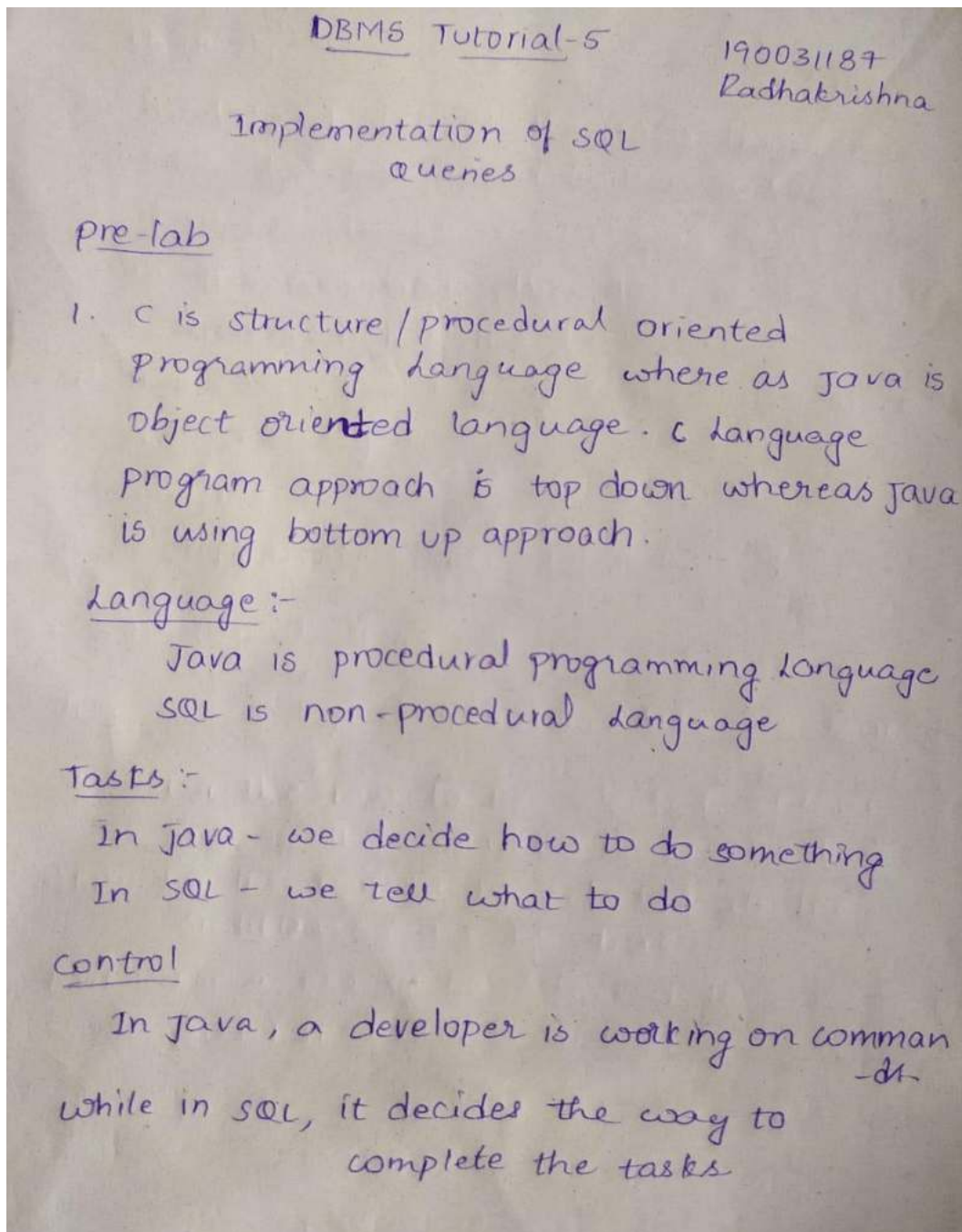
count(*)
10

EXPERIMENT- 5

Implementation of SQL queries on Case Study 1 (TRANSPORT DEPARTMENT)

PRE-LAB

1. An amateur programmer has started learning SQL, after mastering other languages like C, JAVA. He is curious to know the primary difference between them. Can you help?



2. The said programmer is confused by ALTER and UPDATE commands. Can you help him out?

190031187 Radhakrishna

2. ALTER is used to update the structure of the table (add/remove field) etc. whereas UPDATE is used to update data in a cell.

ALTER changes the table in the database, you can add or remove columns etc. while UPDATE changes the rows in the table, and leaves the table unchanged.

3. Define using some SQL Commands that can be used to obtain only the desired number of tuples without having duplicate values in the output?

3. SELECT DISTINCT returns only distinct values thus eliminates duplicate records from the results.

DISTINCT can be used with aggregates COUNT, AVG, MAX etc.

DISTINCT operates on a single column but not on multiple columns.

4. When Drop and Truncate both erase the data in a table, how are they different?

4. DROP :-

- 1) DROP is a Data Definition Language command
- 2) DROP is used to remove a table from database (definition & its content)
- 3) Drop command frees table space from memory

Syntax DROP TABLE table-name;

190031187

Radhakrishna

TRUNCATE

- 1) used to delete all the rows from the table but not the definition of table
- 2) TRUNCATE is also a DDL command
- 3) In this command, the data in the table is removed but the table exist
- 4) TRUNCATE does not free the table space from memory

SYNTAX

TRUNCATE TABLE table-name;

5. Explain some logical operators in SQL?

5. SQL Logical Operators

There are 3 logical operators AND, OR, NOT

OR: For the row to be selected at least one of the conditions must be true

AND: For the row to be selected all the conditions must be true

NOT: For a row to be selected the specified condition must be false.

6. Give the syntax for checking if a string attribute i) Begins with 'a' ii) Ends with 'a' iii) Contains 'a'

6. (i) WHERE customername LIKE 'a%'

- Finds any value that start with a

(ii) WHERE customername LIKE '%a'

- Finds any value that ends with a

(iii) WHERE customername LIKE '%a%'

- Finds any value that contains a

7. What operation should be used to combine two tables on a specific condition?

7. JOIN : different types of SQL JOINS

* (INNER) JOIN

* LEFT (OUTER) JOIN

* RIGHT (OUTER) JOIN

* FULL (OUTER) JOIN

JOIN is The operation used to combine tables on specific condition.

POST-LAB

1. Suppose that a website contains two tables, the **Customers** table and the **Orders** table. Write a SQL query to find all customers who never order anything.

Table: **Customers**

Id	Name
1	Joe
2	Henry
3	Sam
4	Max

Table: **Orders**

Id	CustomerId
1	3
2	1

The screenshot shows a SQL IDE interface. The top toolbar includes icons for file operations and a 'Limit to 1000 rows' dropdown. The SQL editor contains the following query:

```
1 * SELECT * FROM database1.customers;
2 * SELECT Name AS Customers FROM Customers WHERE Id NOT IN
3 (SELECT CustomerId FROM Orders);
```

On the right, a 'SQLAdditions' panel displays a message: "Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help."

Below the editor, the 'Result Grid' is visible, showing the results of the query. The first result is a table with the header 'Customers' and rows for 'Henry' and 'Max'. The second result is a table with the header 'customers 3' and rows for 'customers 4' and 'customers 5'.

At the bottom, the 'Output' panel shows the execution log:

#	Time	Action	Message	Duration / Fetch
304	15:13:59	SELECT * FROM database1.customers LIMIT 0, 1000	4 row(s) returned	0.000 sec / 0.000 sec
305	15:13:59	SELECT Name AS Customers FROM Customers WHERE Id NOT IN (SELECT CustomerId F...	2 row(s) returned	0.078 sec / 0.000 sec

2. Given a **Weather** table, write a SQL query to find all dates' Ids with higher temperature compared to its previous (yesterday's) dates.

Id(INT)	RecordDate(DATE)	Temperature(INT)
1	01-01-2015	10
2	02-01-2015	25
3	03-01-2015	20
4	04-01-2015	30

The screenshot shows a SQL IDE interface with multiple tabs at the top: 'contract_permission', 'SQL File 44*', 'SQL File 46*', 'SQL File 47*', 'SQL File 49*', 'SQL File 50*', 'SQL File 51*', 'customers', and 'weather'. The 'weather' tab is active, displaying the following SQL query:

```

1 SELECT * FROM database2.weather;
2 SELECT t.Id FROM Weather AS t, Weather AS y
3 WHERE DATEDIFF(t.RecordDate, y.RecordDate) = 1 AND t.Temperature > y.Temperature;
4

```

Below the query editor, the 'Result Grid' is visible, showing the results of the query. The grid has two columns: 'Id' and 'RecordDate'. The results are as follows:

Id	RecordDate
2	02-01-2015
4	04-01-2015

At the bottom of the IDE, the 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
299	15:11:40	SELECT * FROM database2.weather LIMIT 0, 1000	4 row(s) returned	0.000 sec / 0.000 sec
300	15:11:40	SELECT t.Id FROM Weather AS t, Weather AS y WHERE DATEDIFF(t.RecordDate, y.RecordDate) = 1 AND t.Temperature > y.Temperature	2 row(s) returned	0.031 sec / 0.000 sec

3. There is a table `World`

name	continent	area	population	gdp
Afghanistan	Asia	652230	25500100	20343000
Albania	Europe	28748	2831741	12960000
Algeria	Africa	2381741	37100000	188681000
Andorra	Europe	468	78115	3712000
Angola	Africa	1246700	20609294	100990000

A

country is big if it has an area of bigger than 3 million square km or a population of more than 25 million. Write a SQL solution to output big countries' name, population and area.

The screenshot shows a SQL IDE interface with a query editor at the top and a results pane at the bottom. The query editor contains the following SQL query:

```
SELECT name, population, area FROM World WHERE area > 3000000 OR population > 25000000;
```

The results pane displays the output of the query in a table format:

name	population	area
Afghanistan	25500100	652230
Algeria	37100000	2381741

Below the table, the 'Action Output' pane shows the execution details of the query:

#	Time	Action	Message	Duration / Fetch
296	15:06:22	SELECT * FROM database1.customers LIMIT 0, 1000	4 row(s) returned	0.093 sec / 0.000 sec
297	15:10:24	SELECT name, population, area FROM World WHERE area > 3000000 OR population > 25...	2 row(s) returned	0.110 sec / 0.000 sec

4.A city built a new stadium, each day many people visit it and the stats are saved as these columns: id, visit_date, people. Write a query to display the records which have 3 or more consecutive rows and the amount of people more than 100. Each day only have one row record, and the dates are increasing with id increasing. table stadium:

id	visit_date	people
1	01-01-2017	10
2	02-01-2017	109
3	03-01-2017	150
4	04-01-2017	99
5	05-01-2017	145
6	06-01-2017	1455
7	07-01-2017	199
8	08-01-2017	188

The screenshot shows a SQL IDE interface with a query editor and a results pane. The query editor contains the following SQL code:

```

1 * SELECT * FROM database4.stadium;
2 * select s1.* from stadium as s1, stadium as s2, stadium as s3
3 where
4 ((s1.id = s2.id - 1 and s1.id = s3.id - 2) or
5 (s1.id = s2.id + 1 and s1.id = s3.id - 1) or
6 (s1.id = s2.id + 2 and s1.id = s3.id + 1)) and
7 (s1.people >= 100 and s2.people >= 100 and s3.people >= 100)
8 group by s1.id;

```

The results pane displays the following data:

id	visit_date	people
7	2017-01-07	199
5	2017-01-05	145
6	2017-01-06	1455
8	2017-01-08	188

The output pane shows the execution of the query, indicating that 8 row(s) were returned.

5.The **Employee** table holds all employees. Every employee has an Id, a salary, and there is also a column for the department Id. Write a SQL query to find employees who have the highest salary in each of the departments

Id	Name	Salary	DepartmentId
1	Joe	70000	1
2	Jim	90000	1
3	Henry	80000	2
4	Sam	60000	2
5	Max	90000	1

Department

Id	Name
1	IT
2	Sales

The screenshot shows the SQL Developer interface with a query window and a results grid.

Query Window:

```

1 * SELECT * FROM database5.department;
2 * SELECT d.Name AS Department, e.Name AS Employee, e.Salary
3 FROM Employee AS e, Department AS d
4 WHERE e.DepartmentId = d.Id AND
5 e.Salary = (SELECT MAX(Salary) FROM Employee AS t WHERE t.DepartmentId = e.DepartmentId);

```

Results Grid:

Department	Employee	Salary
IT	Jim	90000
Sales	Henry	80000
IT	Max	90000

Output Window:

#	Time	Action	Message	Duration / Fetch
312	15:19:05	SELECT * FROM database5.department LIMIT 0, 1000	2 row(s) returned	0.000 sec / 0.000 sec
313	15:19:05	SELECT d.Name AS Department, e.Name AS Employee, e.Salary FROM Employee AS e, D...	3 row(s) returned	0.047 sec / 0.000 sec