Practical-1

(i) Create tables according to the following definition:

Table-1: Salespeople

Snum	Sname	City	Comm
1001	Peel	London	0.12
1002	Serres	San Jose	0.13
1003	Axelord	New York	0.10
1004	Motika	London	0.11
1007	Rifkin	Barcelona	0.15

Table-2: Customer

Cnum	Cname	City	Rating	Snum
2001	Hoffman	London	100	1001
2002	Giovamne	Rome	200	1003
2003	Liu	San jose	300	1002
2004	Grass	Berlin	100	1002
2006	Clemens	London	300	1007
2007	Pereria		100	1004

Table-3: Orders

Onum	Amount	Odate	Cnum	Snum
3001	18.96	03-OCT-94	2002	1002
3003	767.19	03-OCT-94	2001	1001
3002	1900.1	03-OCT-94	2007	1003
3005	5160.45	03-OCT-94	2003	1002
3006	1098.16	03-OCT-94	2008	1002
3009	1713.23	04-OCT-94	2002	1003
3007	75.75	04-OCT-94	2004	1002
3008	4723.95	05-OCT-94	2006	1001
3010	1309.95	06-OCT-94	2004	1002
3011	9891	06-OCT-94	2006	1001
3009	0	07-OCT-94	2005	1003
3012		07-OCT-94	2005	1003

A SQL> select * from salespeople; SNUM SNAME SCITY COMM					
1001 Peel London .12 1002 Serres San jose .13 1003 Axelord New York .1 1004 Motika London .11 1007 Rifkin Barcelona .15 1005 Darshita Vadodara .15 6 rows selected. Q-2 Display all snum without duplicates from all orders. A SQL> select distinct snum from orders; SNUM 1002 1001 1003 Q-3 Display names and commissions of all salespeople from London. A SQL> select sname, comm from salespeople where scity = 'London' SNAME COMM	SQL> select * from salespeople;				
1002 Serres San jose .13 1003 Axelord New York .1 1004 Motika London .11 1007 Rifkin Barcelona .15 1005 Darshita Vadodara .15 6 rows selected. Q-2 Display all snum without duplicates from all orders. A SQL> select distinct snum from orders; SNUM 1002 1001 1003 Q-3 Display names and commissions of all salespeople from London. A SQL> select sname, comm from salespeople where scity = 'London' SNAME COMM					
1003 Axelord New York .11 1004 Motika London .11 1007 Rifkin Barcelona .15 1005 Darshita Vadodara .15 6 rows selected. Q-2 Display all snum without duplicates from all orders. A SQL> select distinct snum from orders; SNUM 1002 1001 1003 Q-3 Display names and commissions of all salespeople from London. A SQL> select sname, comm from salespeople where scity = 'London's SNAME COMM Peel .12					
1004 Motika London .11 1007 Rifkin Barcelona .15 1005 Darshita Vadodara .19 6 rows selected. Q-2 Display all snum without duplicates from all orders. A SQL> select distinct snum from orders; SNUM 1002 1001 1003 Q-3 Display names and commissions of all salespeople from London. A SQL> select sname, comm from salespeople where scity = 'London' SNAME COMM Peel .12					
1007 Rifkin Barcelona 1.15 1005 Darshita Vadodara 1.19 6 rows selected. Q-2 Display all snum without duplicates from all orders. A SQL> select distinct snum from orders; SNUM 1002 1001 1003 Q-3 Display names and commissions of all salespeople from London. A SQL> select sname, comm from salespeople where scity = 'London' SNAME COMM Peel .12					
1005 Darshita Vadodara .19 6 rows selected. Q-2 Display all snum without duplicates from all orders. A SQL> select distinct snum from orders; SNUM 1002 1001 1003 Q-3 Display names and commissions of all salespeople from London. A SQL> select sname, comm from salespeople where scity = 'London's SNAME COMM					
Q-2 Display all snum without duplicates from all orders. A SQL> select distinct snum from orders; SNUM 1002 1001 1003 Q-3 Display names and commissions of all salespeople from London. A SQL> select sname, comm from salespeople where scity = 'London' SNAME COMM Peel .12					
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Q-3 Display names and commissions of all salespeople from London. A SQL> select sname, comm from salespeople where scity = 'London' SNAME COMM					
Q-3 Display names and commissions of all salespeople from London. A SQL> select sname, comm from salespeople where scity = 'London's SNAME COMM					
SQL> select sname, comm from salespeople where scity = 'London' SNAME					
SQL> select sname, comm from salespeople where scity = 'London' SNAME					
Peel .12					
Motika .11					
All costomers with a rating of 100.					
Q-4 All costomers with a rating of 100.					
SQL> select * from customer where rating=100;					
CNUM CNAME CITY RATING SNUL					
2001 Hoffman London 100 100:					
2004 Grass Berlin 100 100					
2007 Pereria 100 100					

Q-5	Produce order no., amount ar	d date for all rows in the order t	able.		
A	SQL> select onum,amount,odate from orders;				
	ONUM AMOUN	T ODATE			
	ONON AMOUN				
	3001 18.9	6 03-0CT-94			
	3003 767.1				
	3002 1900.	1 03-0CT-94			
	3005 5160.4	5 03-0CT-94			
	3006 1098.1	6 03-0CT-94			
	3009 1713.2	3 04-0CT-94			
	3007 75.7	5 04-0CT-94			
		5 05-0CT-94			
		5 06-0CT-94			
		1 06-0CT-94			
	3009	0 07-0CT-94			
	ONUM AMOUN	T ODATE			
	3012	07-0CT-94			
	12 rows selected.				
Q-6	All customers who were either located in San Jose or had a rating above \$200.				
A	SQL> select * from customer where city='San jose' or rating>200;				
	CNUM CNAME	CITY	RATING	SNUM	
	2003 Liu	San jose	300	1002	
	2006 Clemens	London	300	1007	
Q-7	All customers in San Jose, who have a rating > 200.				
		3			
A	SQL> select * from cu	stomer where city='San	jose' and rat	ing>200;	
	CNUM CNAME	CITY	RATING	SNUM	
	2003 Liu	San jose	300	1002	
L					

Q-8	All orders for more than \$1000.					
A	SQL> select * from orders where amount>1000;					
	ONUM AMOUNT ODATE CHUM					
	ONUM AMOUNT ODATE CNUM SNUM					
	3002 190	0.1 03-OCT-94	2007	1003		
	3005 5160	.45 03-OCT-94	2003	1002		
	3006 1098	3.16 03-OCT-94	2008	1002		
	3009 1713	.23 04-0CT-94	2002	1003		
	3008 4723	.95 05-0CT-94	2006	1001		
		.95 06-0CT-94		1002		
	3011 9	891 06-0CT-94	2006	1001		
	7 rows selected.					
Q-9	Name and cities of all salespeople in London with a commision above 0.10.					
A	SQL> select sname, scity from salespeople where scity='London' and comm>0.10;					
	SNAME	SCITY				
	Peel London Motika London					
Q-10	All customers excluding those with rating <= 100 unless they are located in Rome.					
A	SQL> select * from customer where rating>100 or city='Rome';					
	CNUM CNAME CITY RATING SNUM					
	2002 Giovamne	Rome	200	1003		
	2003 Liu	San jose	300	1002		
	2006 Clemens	London	300	1007		
Q-11	All salespeople either in Barcelona or in London.					
A	SQL> select * from salespeople where scity in('London','Barcelona');					
	SNUM SNAME	SCITY	′	COMM		
	1001 Peel	Londo	on	.12		
	1004 Motika	Londo	on	.11		
	1007 Rifkin	Barce	lona	.15		

```
Q-12
        All customers without a city.
 A
        SQL> select * from customer where city is null;
               CNUM CNAME
                                                                 RATING
                                                                                  SNUM
               2007 Pereria
                                                                     100
                                                                                 1004
        All orders taken on oct. 3<sup>rd</sup> or 4<sup>th</sup> 1994.
Q-13
 Α
        SQL> select * from orders where odate in('03-oct-1994','04-oct-1994');
                       AMOUNT ODATE
                                               CNUM
              ONUM
                                                          SNUM
              3001
                        18.96 03-0CT-94
                                               2002
                                                          1002
                       767.19 03-0CT-94
              3003
                                               2001
                                                          1001
              3002
                       1900.1 03-0CT-94
                                               2007
                                                          1003
              3005
                      5160.45 03-0CT-94
                                               2003
                                                          1002
              3006
                      1098.16 03-0CT-94
                                               2008
                                                          1002
              3009
                      1713.23 04-OCT-94
                                                          1003
                                               2002
              3007
                        75.75 04-0CT-94
                                               2004
                                                          1002
          rows selected.
 (ii)
        Write the following simple SQL Queries on the University Dataset.
       Find the names of all the students whose total credits are greater than 100.
Q-1
 A
        SQL> select name from student where tot_cred>100;
        NAME
        Zhang
        Chavez
         「anaka
Q-2
        Find the course id and grades of all courses taken by any student named 'Tanaka'.
 A
        SQL> select course id,grade from takes where id=(select id from student where name = 'Tanaka');
        COURSE_ID
                       GRADE
        BIO-101
                       Α
        BIO-301
```

```
Q-3
       Find the ID and name of instructors who have taught a course in the Comp. Sci. department,
       even if they are themselves not from the Comp. Sci. department. To test this query, make sure
       you add appropriate data and include the corresponding insert statements along with your query.
 A
       SQL> select id, name from instructor where id = Any(select id from teaches where course id like 'CS-%');
              ID NAME
           76543 Singh
           98345 Kim
           10101 Srinivasan
           45565 Katz
           83821 Brandt
       Find the courses which are offered in both 'Fall' and 'Spring' semester (not necessarily in the
Q-4
       same year).
 A
       SQL> select course_id from takes where semester = 'Spring' and
         2 course_id in(select course_id from takes where semester = 'Fall');
       no rows selected
```

Appendix A:

Table-1: Salespoeple

Create table salespeople(snum int, sname varchar2(25), scity varchar2(25), comm float);

9	SQL> desc salespeople; Name	Null?	Туре
	SNUM SNAME SCITY COMM		NUMBER(38) VARCHAR2(25) VARCHAR2(25) FLOAT(126)

Insert into salespeople values(&snum, '&sname', '&scity', &comm);

SQL> select * from salespeople;		
SNUM SNAME	SCITY	COMM
1001 Peel	London	.12
1002 Serres	San jose	.13
1003 Axelord	New York	.1
1004 Motika	London	.11
1007 Rifkin	Barcelona	.15
1005 Darshita	Vadodara	.19
6 rows selected.		

Table-2: Customer

Create table customer(cnum int, cname varchar2(15), city varchar2(15), rating int, snum int);

SQL> desc customer;		
Name	Null?	Type
CNUM		NUMBER(38)
CNAME		VARCHAR2(15)
CITY		VARCHAR2(15)
RATING		NUMBER(38)
SNUM		NUMBER(38)

Insert into customer values(&cnum, '&cname', '&city', &rating, &snum);

SQL> select 2 ;	t * from custome			
CNUM	CNAME	CITY	RATING	SNUM
2001	Hoffman	London	100	1001
2002	Giovamne	Rome	200	1003
2003	Liu	San jose	300	1002
2004	Grass	Berlin	100	1002
2006	Clemens	London	300	1007
2007	Pereria		100	1004
6 rows sele	ected.			

Table-3: Orders

Create table orders(onum int, amount float, odate date, cnum int, snum int);

SQL> desc orders;	N-113	T
Name	Null?	Type
ONUM AMOUNT		NUMBER(38) FLOAT(126)
ODATE		DATE
CNUM		NUMBER(38)
SNUM		NUMBER(38)

Insert into orders values(&onum, &amount, '&odate', &cnum, &snum);

SQL> selec	t * from ord	ders;		
ONUM	I AMOUNT	ODATE	CNUM	SNUM
3001	18.96	03-0CT-94	2002	1002
3003	767.19	03-0CT-94	2001	1001
3002	1900.1	03-0CT-94	2007	1003
3005	5160.45	03-0CT-94	2003	1002
3006	1098.16	03-0CT-94	2008	1002
3009	1713.23	04-0CT-94	2002	1003
3007	75.75	04-0CT-94	2004	1002
3008	4723.95	05-0CT-94	2006	1001
3010	1309.95	06-0CT-94	2004	1002
3011	. 9891	06-0CT-94	2006	1001
3009	0	07-0CT-94	2005	1003
ONUM	I AMOUNT	ODATE	CNUM	SNUM
3012	!	07-0CT-94	2005	1003
12 rows se	elected.			

Appendix B: (University Schema)

Table-1: Instructor

Create table Instructor(id number(10), name varchar2(15), dept_name varchar2(15), salary number(10));

```
      SQL> desc Instructor;

      Name
      Null?
      Type

      ID
      NUMBER(10)

      NAME
      VARCHAR2(15)

      DEPT_NAME
      VARCHAR2(15)

      SALARY
      NUMBER(10)
```

Insert into Instructor values(&id,'&name','&dept_name',&salary);

SQL> select	t * from instruc	tor;	
ID	NAME	DEPT_NAME	SALARY
10101	Srinivasan	Comp. Sci.	65000
12121	Wu	Finance	90000
15151	Mozart	Music	40000
22222	Einstein	Physics	95000
32343	El Said	History	60000
33456	Gold	Physics	87000
45565	Katz	Comp. Sci.	75000
58583	Califieri	History	62000
76543	Singh	Finance	80000
76766	Crick	Biology	72000
83821	Brandt	Comp. Sci.	92000
ID	NAME	DEPT_NAME	SALARY
98345	Kim	Elec. Eng.	80000
12 rows se	lected.		

Table-2: Student

Create table Student(id number(10), name varchar2(15), dept_name varchar2(15), tot_cred number(5));

5	QL> desc student;		
	Name	Null?	Type
	ID		NUMBER(10)
	NAME		VARCHAR2(15)
	DEPT NAME		VARCHAR2(15)
	TOT CRED		NUMBER(5)
	_		,

Insert into Student values(&id, '&name', '&dept_name', &tot_cred);

SQL> select	t * from student	;	
ID	NAME	DEPT_NAME	TOT_CRED
128	Zhang	Comp. Sci.	102
12345	Shankar	Comp. Sci.	32
19991	Brandt	History	80
23121	Chavez	Finance	110
44553	Peltier	Physics	56
45678	Levy	Physics	46
54321	Williams	Comp. Sci.	54
55739	Sanchez	Music	38
70557	Snow	Physics	0
76543	Brown	Comp. Sci.	58
76653	Aoi	Elec. Eng.	60
ID	NAME	DEPT_NAME	TOT_CRED
98765	Bourikas	Elec. Eng.	98
	Tanaka	Biology	120
13 rows sel	lected.		

Table-3: Course

Create table Course(course_id varchar2(10), title varchar2(35), dept_name varchar2(15), credits number(5));

SQL> desc course; Name	Null?	Туре
COURSE_ID TITLE DEPT_NAME CREDITS		VARCHAR2(10) VARCHAR2(35) VARCHAR2(15) NUMBER(5)

Insert into course values('&course_id', '&title', '&dept_name', &credits);

SQL> select * from course;						
COURSE_ID	TITLE	DEPT_NAME	CREDITS			
BIO-101	INTRO. TO BIOLOGY	BIOLOGY	4			
BIO-301	GENETICS	BIOLOGY	4			
BIO-399	COMPUTATIONAL BIOLOGY	BIOLOGY	3			
CS-101	INTRO. TO COMPUTER SCIENCE	COMP. SCI.	4			
CS-190	GAME DESIGN	COMP. SCI.	4			
CS-315		COMP. SCI.	3			
CS-319	IMAGE PROCESSING	COMP. SCI.	3			
CS-347	DATABASE SYSTEM CONCEPTS	COMP. SCI.	3			
EE-181	INTRO. TO DIGITAL SYSTEMS	ELEC. ENG.	3			
FIN-201	INVESTMENT BANKING	FINANCE	3			
HIS-351	WORLD HISTORY	HISTORY	3			
COURSE_ID	TITLE	DEPT_NAME 	CREDITS			
MU-199	MUSIC VIDEO PRODUCTION	MUSIC	3			
		PHYSICS	4			
13 rows se	lected.					

Table-4: Teaches

Create table Teaches(id number(10), course_id varchar2(10), sec_id varchar2(10), semester varchar2(10), year number(5));

SQL> desc teaches; Name	Null?	Туре
ID COURSE_ID SEC_ID SEMESTER YEAR		NUMBER(10) VARCHAR2(10) VARCHAR2(10) VARCHAR2(10) NUMBER(5)

Insert into Teaches values(&id, '&course_id', '&sec_id', '&semester', &year);

SQL> select	t * from Tea	aches;		
ID	COURSE_ID	SEC_ID	SEMESTER	YEAR
76543	CS-101	1	Fall	2009
98345	CS-319	1	Fall	2009
10101	CS-101	1	FALL	2009
10101	CS-315	1	SPRING	2010
10101	CS-347	1	FALL	2009
12121	FIN-201	1	SPRING	2010
15151	MU-199	1	SPRING	2010
22222	PHY-101	1	FALL	2009
32343	HIS-351	1	SPRING	2010
45565	CS-101	1	SPRING	2010
45565	CS-319	1	SPRING	2010
ID	COURSE_ID	SEC_ID	SEMESTER	YEAR
76766	BIO-101	1	SUMMER	2009
76766	BIO-301	1	SUMMER	2010
83821	CS-190	1	SPRING	2009
83821	CS-190	2	SPRING	2009
83821	CS-319	2	SPRING	2010
98345	EE-181	1	SPRING	2009
17 rows sel	lected.			

Table-5: Takes

Create table Takes(id number(10), course_id varchar2(15), sec_id number(10), semester varchar2(15), year number(5), Grade varchar2(6));

SQL> desc takes; Name	Null?	Туре
ID COURSE_ID SEC_ID SEMESTER YEAR GRADE		NUMBER(10) VARCHAR2(15) NUMBER(10) VARCHAR2(15) NUMBER(5) VARCHAR2(6)

Insert into Teaches values(&id, '&course_id', &sec_id, '&semester', &year, '&grade');

	* from Takes;				
ID	COURSE_ID	SEC_ID	SEMESTER	YEAR	GRADE
128	CS-101	1	FALL	2009	A
128	CS-347		FALL	2009	Α-
12345	CS-101	1	FALL	2009	C
12345	CS-190	2	SPRING	2009	Α
12345	CS-315	1	SPRING	2010	Α
12345	CS-347	1	FALL	2009	Α
19991	HIS-351	1	SPRING	2010	В
23121	FIN-201	1	SPRING	2010	C+
44553	PHY-101	1	FALL	2009	B-
45678	CS-101	1	FALL	2009	F
45678	CS-101	1	SPRING	2010	B+
ID	COURSE_ID	SEC_ID	SEMESTER	YEAR	GRADE
45678	CS-319	1	SPRING	2010	В
54321	CS-101	1	FALL	2009	A-
54321	CS-190	2	SPRING	2009	B+
55739	MU-199	1	SPRING	2010	A-
76543	CS-101	1	FALL	2009	Α
76543	CS-319	2	SPRING	2010	Α
76653	EE-181	1	SPRING	2009	C
98765	CS-315	1	SPRING	2010	В
98765	CS-101	1	FALL	2009	C-
98988	BIO-101	1	SUMMER	2009	Α
98988	BIO-301	1	SUMMER	2010	
22 rows sel	lected.				

Practical-2

Create the below given and insert data accordingly.

Table-1: Job

job_id	job_name	min_sal	max_sal
it_prog	Programmer	4000	10000
mk_mgr	Marketing Manager	9000	15000
fi_mgr	Finance Manager	8200	12000
fi_acc	Account	4200	9000
lec	Lecturer	6000	17000
comp_op	Computer Operator	1500	3000

Table-2: Employee

emp_n o	emp_ name	emp_ sal	emp_ comm	dept _no	l_ name	dept_ name	job_id	location	Manage r_id	Hire date
101	Smith	800		20	shah	machine learning	fi_mgr	toronto	105	09-aug-96
102	Snehal	1600	300	25	gupta	data science	lec	las vegas		14-mar-96
103	Adama	1100	0	20	wales	machine learning	mk_mgr	ontario	105	30-nov-95
104	Aman	3000		15	sharma	virtual reality	comp_op	mexico	12	02-oct-97
105	Anita	5000	50,000	10	patel	big data analytics	comp_op	germany	107	01-jan-98
106	Sneha	2450	24,500	10	joseph	big data analytics	fi_acc	melbourne	105	26-sep-97
107	Anamika	2975		30	jha	artificial intelligence	it_prog	new york		15jul-97

Table-3: Deposit

A_no	Cname	Bname	Amount	Date
101	Anil	Andheri	7000	01-JAN-06
102	Sunil	Virar	5000	15-JUL-06
103	Jay	Villeparle	6500	12-MAR-06
104	Vijay	Andheri	8000	17-SEP-06
105	Keyur	Dadar	7500	19-NOV-06
106	Mayur	Borivali	5500	21-DEC-06

Tabl	le-4:	Borrov	V

Loanno	Cname	Bname	Amount
201	Anil	Ville parle	1000.00
206	Sunil	Ahmedabad	5000.00
311	Jay	Ahmedabad	3000.00
321	Vijay	Virar	2000.00
375	Keyur	Dadar	8000.00
481	Mayur	Borivali	3000.00

(i) Perform following queries

Q-1 Retrieve all data from employee, jobs and deposit.

A (a) Employee table

SQL> select * from employe	ee;						
EMP_NO EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID HIREDATE
101 Smith	800		20 Shah	Machine Learning	fi_mgr	Toronto	105 09-AUG-96
102 Snehal	1600	300	25 Gupta	Data Science	lec	Las Vegas	14-MAR-96
103 Adama	1100	0	20 Wales	Machine Learning	mk_mgr	Ontario	105 30-NOV-95
104 Aman	3000		15 Sharma	Virtual Reality	comp_op	Mexico	12 02-OCT-97
105 Anita	5000	50000	10 Patel	Big Data Analytics	comp_op	Germany	107 01-JAN-98
106 Sneha	2450	24500	10 Joseph	Big Data Analytics	fi_acc	Melbourne	105 26-SEP-97
107 Anamika	2975		30 Jha	Artificial Intelligence	it_prog	New York	15-JUL-97
7 rows selected.							

(b) Job table

SQL> select	t * from job;					
JOB_ID	JOB_TITLE	MIN_SAL	MAX_SAL			
it_prog	Programmer	4000	10000			
mk_mgr	Marketing manager	9000	15000			
fi_mgr	Finance manager	8200	12000			
fi_acc	Account	4200	9000			
lec	Lecturer	6000	17000			
comp_op	Computer operator	1500	3000			
6 rows selected.						

```
(c) Deposit Table
      SQL> select * from deposit;
      A NO CNAME
                                BNAME
                                                 AMOUNT A DATE
      101
             Anil
                                Andheri
                                                    7000 01-JAN-06
      102
             Sunil
                                Virar
                                                    5000 15-JUL-06
      103
             Jay
                                Villeparle
                                                    6500 12-MAR-06
      104
             Vijay
                                Andheri
                                                    8000 17-SEP-06
      105
             Keyur
                                Dadar
                                                    7500 19-NOV-06
      106
                                Borivali
                                                    5500 21-DEC-06
             Mayur
      6 rows selected.
      Give details of account no. and deposited rupees of customers having account opened between
O-2
      dates 01-01-06 and 25-07-06.
A
      SQL> select A_no,Amount from deposit where A_date>='01-jan-2006' and A_date<='25-jul-2006';
      A NO
               AMOUNT
      101
                 7000
      102
                5000
      103
                6500
Q-3
      Display all jobs with minimum salary is greater than 4000.
A
      SQL> select job title from job where min sal>4000;
      JOB TITLE
      Marketing manager
      Finance manager
      Account
      Lecturer
      Display name and salary of employee whose department no is 20. Give alias name to name of
Q-4
      employee.
A
      SQL> select emp_name as employee_name,emp_sal from employee where dept_no=20;
      EMPLOYEE NAME
                         EMP SAL
      Smith
                             800
      Adama
                            1100
```

Q-5	Display employee no, name and department details of those employee whose department lies in (10, 20).						
A	SQL> select emp_n	o,emp_name,dept_	_name from emplo	yee where dept_n	o>=10 and	dept_no<=20;	
	EMP_NO EMP_NA	ME DEPT_N	NAME				
	101 Smith 103 Adama	Machir	ne Learning ne Learning				
	104 Aman 105 Anita	Big Da	al Reality ata Analytics				
Q-6	106 Sneha Display the non-nu		ata Analytics				
A	SQL> select * from employee whe		•				
				100 TO	LOCATION	MANACED TO HITDEDATE	
	EMP_NO EMP_NAME E				LOCATION		
	103 Adama 105 Anita	5000 50000 1	0 Patel Big Data	earning mk_mgr Analytics comp_op	Ontario Germany	105 30-NOV-95 107 01-JAN-98	
	106 Sneha	2450 24500 1	0 Joseph Big Data	Analytics fi_acc	Melbourne	105 26-SEP-97	
Q-7	Display name of cu whose amount is no	=		(both columns sho	uld be disp	played as one)	
A	SQL> select a_			stomen Details	from d	enosit:	
			Citalic as ca	scomer_becarr	s II OIII u	срозіс,	
	CUSTOMER_DETAI	LS					
	101-Anil 102-Sunil						
	103-Jay						
	104-Vijay 105-Keyur						
	106-Mayur						
	6 rows selecte	d.					
Q-8	Display the content	t of job details wi	th minimum sala	ry either 2000 or 4	1000.		
A	SQL> select *	from job wher	e min_sal in	(2000,4000);			
	JOB_ID	JOB_TITLE		MIN	_SAL	MAX_SAL	
	it_prog	Programmer			4000	10000	

(ii)	To study various options of LIKE predicate.						
Q-1	Display all employee whose name start with 'A' and third character is "a'.						
A	SQL> select emp_name from employee where emp_name like 'A_a%'; EMP_NAMEAdama Aman Anamika						
Q-2	Display name, number and salary of those employees whose name is 5 characters long and first three characters are 'Ani'.						
A	SQL> select emp_name,emp_no,emp_sal from employee where emp_name like 'Ani'; EMP_NAME						
Q-3	Display all information of employee whose second character of name is either 'M' or 'N'.						
A	SQL> select * from employee where emp_name like '_m%' or emp_name like '_n%'; EMP_NO EMP_NAME EMP_SAL EMP_COMM DEPT_NO L_NAME DEPT_NAME JOB_ID LOCATION MANAGER_ID HIREDATE 101 Smith 800 20 Shah Machine Learning fi_mgr Toronto 105 09-AUG-96 102 Snehal 1600 300 25 Gupta Data Science lec Las Vegas 14-MAR-96 104 Aman 3000 15 Sharma Virtual Reality comp_op Mexico 12 02-OCT-97 105 Anita 5000 50000 10 Patel Big Data Analytics comp_op Germany 107 01-JAN-98 106 Sneha 2450 24500 10 Joseph Big Data Analytics fi_acc Melbourne 105 26-SEP-97 107 Anamika 2975 30 Jha Artificial Intelligence it_prog New York 15-JUL-97 6 rows selected.						
Q-4	Find the list of all customer name whose branch is in 'andheri' or 'dadar' or 'virar'.						
A	SQL> select cname from deposit where bname in('Andheri','Dadar','Virar'); CNAME						
Q-5	Display the job name whose first three character in job id field is 'FI_'.						
A	SQL> select job_title from job where job_id like 'fi_%'; JOB_TITLE Finance manager Account						

Q-6	Display the title/name of job who's last three character are '_MGR' and their maximum salary is greater than Rs 12000.							
A	SQL> select JOB_TITLE Marketing ma		job whe	re job_id like '%	_mgr'	and max	_sal>12000;	
Q-7	Display the non-null values of employees and also employee name second character should be 'n' and string should be 5-character long.							
A	SQL> select JOB_TITLE Marketing ma		job whe	re job_id like '%	G_mgr'	and max <u></u>	_sal>12000;	
Q-8	Display the nul	l values of emplo	yee and al	so employee name's	third cha	aracter sh	nould be 'a'.	
A		ree where emp_name like '_a% EMP_SAL EMP_COWM D		s null or manager_id is null;	JOB_ID	LOCATION	MANAGER_ID HIREDATE	
	102 Snehal 104 Aman 107 Anamika	1600 300 3000 2975	25 Gupta 15 Sharma 30 Jha	Data Science Virtual Reality Artificial Intelligence	lec comp_op it_prog	Las Vegas Mexico New York	14-MAR-96 12 02-OCT-97 15-JUL-97	
Q-9	What will be or	utput if you are gi	ving LIKE	E predicate as '%_%	'ESCA	PE '\'		
A	SQL> select	* from job v	where jo	b_id like '%_%	' esca	ape '\'	;	
	JOB_ID	JOB_TITU	.E		MI	N_SAL	MAX_SAL	
	it_prog mk_mgr fi_mgr fi_acc	Programm Marketin Finance Account	ng manag			4000 9000 8200 4200	10000 15000 12000 9000	
	comp_op	Computer	operat	or		1500	3000	

Appendix:

Table-1: Job

Create Table Job (job_id varchar2(15), job_title varchar2(30), min_sal number(7,2), max_sal number(7,2));

```
      SQL> desc job;
      Null?
      Type

      Name
      Null?
      Type

      JOB_ID
      VARCHAR2(15)

      JOB_TITLE
      VARCHAR2(30)

      MIN_SAL
      NUMBER(7,2)

      MAX_SAL
      NUMBER(7,2)
```

Insert into job values('&job id', '&job title', &min_sal, &max_sal);

SQL> select	* from job;		
JOB_ID	JOB_TITLE	MIN_SAL	MAX_SAL
it_prog	Programmer	4000	10000
mk_mgr	Marketing manager	9000	15000
fi_mgr	Finance manager	8200	12000
fi_acc	Account	4200	9000
lec	Lecturer	6000	17000
comp_op	Computer operator	1500	3000
6 rows sele	cted.		

Table-2: Employee

Create table Employee (emp_no number(3), emp_name varchar2(30), emp_sal number(8,2), emp_comm number(6,1), dept_no number(3), l_name varchar2(15), dept_name varchar(30), job_id varchar(10), location varchar(15), manager_id number(5), hiredate date);

SQL> desc employee;		
Name	Null?	Type
THE NO		
EMP_NO		NUMBER(3)
EMP_NAME		VARCHAR2(30)
EMP_SAL		NUMBER(8,2)
EMP_COMM		NUMBER(6,1)
DEPT_NO		NUMBER(3)
L_NAME		VARCHAR2(15)
DEPT_NAME		VARCHAR2(30)
JOB_ID		VARCHAR2(10)
LOCATION		VARCHAR2(15)
MANAGER_ID		NUMBER(5)
HIREDATE		DATE

Insert into customer values(&emp_no, '&emp_no', &emp_sal, &emp_comm, &dept_no, '&l_name', '&dept_name', '&job_id', '&location', &manager_id, '&hiredate');

EMP_NO EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID	HIREDATE
101 Smith	800		10 Shah	Machine Learning	fi_mgr	Toronto	105	09-AUG-96
102 Snehal	1600	300	25 Gupta	Data Science	lec	Las Vegas		14-MAR-96
103 Darshita	1100	500	20 Wales	Machine Learning	mk_mgr	Ontario	105	30-NOV-95
104 Aman	3000		10 Sharma	Virtual Reality	comp_op	Mexico	12	02-0CT-97
105 Anita	5000	50000	10 Patel	Big Data Analytics	comp_op	Germany	107	01-JAN-98
106 Sneha	2450	24500	10 Joseph	Big Data Analytics	fi_acc	Melbourne	105	26-SEP-97
107 Anamika	2975		30 Jha	Artificial Intelligence	it_prog	New York		15-JUL-97

Table-3: Deposit

Create table deposit(A_no varchar2(5), cname varchar2(15), bname varchar2(10), amount number(7,2), A_date date);

SQL> desc deposit; Name	Null?	Туре
A_NO CNAME BNAME AMOUNT A_DATE		VARCHAR2(5) VARCHAR2(15) VARCHAR2(10) NUMBER(7,2) DATE

Insert into deposit(&A_no, '&cname', '&bname', &amount, '&A_date');

SQL>	select	* from	deposit;				
A_NO	CNAME		BNAME	AMOUNT	A_DATE		
101	Anil		Andheri	7000	01-JAN-06		
102	Sunil		Virar	5000	15-JUL-06		
103	Jay		Villeparle	6500	12-MAR-06		
104	Vijay		Andheri	8000	17-SEP-06		
105	Keyur		Dadar	7500	19-NOV-06		
106	Mayur		Borivali	5500	21-DEC-06		
6 rows selected.							

Table-4: Borrow

Create table Borrow(loanno varchar2(6), cname varchar2(15), bname varchar2(15), amount number(7,2));

SQL> desc borrow; Name	Null?	Туре
LOANNO CNAME BNAME AMOUNT		VARCHAR2(6) VARCHAR2(15) VARCHAR2(15) NUMBER(7,2)

Insert into Borrow('&loanno', '&cname', '&bname', &amount);

SQL> se	elect * from	borrow;	
LOANNO	CNAME	BNAME	AMOUNT
201	Anil	Vrce	1000
206	Mehul	Ajni	5000
311	Sunil	Dharampeth	3000
321	Madhuri	Andheri	2000
375	Prmod	Virar	8000
481	Kranti	Nehru Place	3000
6 rows	selected.		

Practical-3 Perform various data manipulation commands, aggregate functions and sorting concepts on all created tables Q-1 List total deposit from deposit. Α SQL> select Sum(amount) from deposit; SUM(AMOUNT) 39500 List total loan from karolbagh branch. Q-2 Α SQL> select Sum(amount) from borrow where bname='Karolbagh'; SUM(AMOUNT) Q-3 Give maximum loan from branch vrce. Α SQL> select max(amount) from borrow where bname='Vrce'; MAX(AMOUNT) 1000 Q-4 Count total number of customers. A SQL> select count(cname) from deposit; COUNT(CNAME) 6 Q-5 Count total number of customer's cities. Α SQL> select count(distinct bname) from deposit; COUNT(DISTINCTBNAME) 5

```
Create table supplier from employee with all the columns.
Q-6
 A
        SQL> create table supplier as(select * from employee);
        Table created.
        QL> select * from supplier;
          EMP_NO EMP_NAME
                          EMP_SAL EMP_COMM DEPT_NO L_NAME
                                                        DEPT NAME
                                                                            JOB ID
                                                                                  LOCATION
                                                                                             MANAGER_ID HIREDATE
                                                                           fi_mgr
            101 Smith
                            800
                                            20 Shah
                                                        Machine Learning
                                                                                  Toronto
                                                                                                 105 09-AUG-96
            102 Snehal
                                            25 Gupta
                                                                                                    14-MAR-96
                                                        Data Science
                                                                                  Las Vegas
            103 Adama
                                            20 Wales
                                                        Machine Learning
                                                                                                 105 30-NOV-95
                                                                            mk_mgr
                                                                                                  12 02-0CT-97
                                            15 Sharma
                                                        Virtual Reality
                                                                           comp_op
                                                                                  Mexico
            105 Anita
                                           10 Patel
                                                        Big Data Analytics
                                                                           comp op
                                                                                  Germany
                                                                                                 107 01-JAN-98
            106 Sneha
                                                        Big Data Analytics
                                                                                  Melbourne
                                                                                                 105 26-SEP-97
                                            10 Joseph
                                                                            fi acc
                                                                                                   15-JUL-97
            107 Anamika
                                            30 Jha
                                                        Artificial Intelligence
                                                                                  New York
                                                                            it prog
        rows selected.
Q-7
       Create table sup1 from employee with first two columns.
Α
        SQL> create table sup1 as(select emp no,emp name from employee);
        Table created.
        SQL> select * from sup1;
             EMP NO EMP NAME
                  101 Smith
                  102 Snehal
                  103 Adama
                  104 Aman
                  105 Anita
                  106 Sneha
                  107 Anamika
        7 rows selected.
Q-8
       Create table sup2 from employee with no data.
 Α
       SQL> create table sup2 as(select * from employee where 1=0);
        Table created.
        SQL> select * from sup2;
        no rows selected
```

Q-9	Insert the data into sup2 from employee whose second character should be 'n' and string should be 5 characters long in employee name field.
A	SQL> insert into sup2 (select * from employee where emp_name like '_n'); 2 rows created. SQL> select * from sup2; EMP_NO EMP_NAME
Q-10	Delete all the rows from sup1.
A	SQL> select * from sup1; EMP_NO EMP_NAME 101 Smith 102 Snehal 103 Adama 104 Aman 105 Anita 106 Sneha 107 Anamika 7 rows selected. SQL> truncate table sup1; Table truncated. SQL> select * from sup1; no rows selected
Q-11	Delete the detail of supplier whose sup_no is 103.
A	SQL> delete from supplier where emp_no = 103; 1 row deleted. SQL> select * from supplier; EMP_NO EMP_NAME EMP_SAL EMP_COMM DEPT_NO L_NAME DEPT_NAME JOB_ID LOCATION MANAGER_ID HIREDATE 101 Smith 800 20 Shah Machine Learning fi_mgr Toronto 105 09-AUG-96 102 Snehal 1600 300 25 Gupta Data Science lec Las Vegas 14-MAR-96 104 Aman 3000 15 Sharma Virtual Reality comp_op Mexico 12 02-OCT-97 105 Anita 5000 50000 10 Patel Big Data Analytics comp_op Germany 107 01-JAH-98 106 Sneha 2450 24500 10 Joseph Big Data Analytics fi_acc Melbourne 105 26-SEP-97 107 Anamika 2975 30 Jha Artificial Intelligence it_prog New York 15-JUL-97

Q-12	Rename the tab	ole sup2.						
A	SQL> alter table sup2 ren	name to supplier2;						
	Table altered.							
	SQL> select * from suppl:	ier2;						
	EMP_NO EMP_NAME		IP_COMM	DEPT_NO L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID HIREDATE
	105 Anita 106 Sneha	5000 2450	50000 24500	10 Patel 10 Joseph	Big Data Analytics Big Data Analytics		Germany Melbourne	107 01-JAN-98 105 26-SEP-97
Q-13	Destroy table s	up1 with al	ll the	data.				
A	SQL> drop t	able sup	01;					
	Table dropp	ed.						
	SQL> select select * fr		sup	1;				
	ERROR at li ORA-00942:		r vi	ew does n	ot exist			
Q-14	Update the value	ue dept_no	to 10	where secon	d character of emp.	name is	s 'm'.	
A	SQL> update employee set	dept_no = 10 wher	e emp_na	me like '_m%';				
	2 rows updated.							
	SQL> select * from employ	yee;						
	EMP_NO EMP_NAME	EMP_SAL EM	IP_COMM	DEPT_NO L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID HIREDATE
	101 Smith	800		10 Shah	Machine Learning	fi_mgr	Toronto	105 09-AUG-96
	102 Snehal 103 Adama	1600 1100	300 0	25 Gupta 20 Wales	Data Science Machine Learning	lec mk_mgr	Las Vegas Ontario	14-MAR-96 105 30-NOV-95
	104 Aman	3000		10 Sharma	Virtual Reality	comp_op	Mexico	12 02-0CT-97
	400 4 14	5000	50000	10 Patel	Big Data Analytics	comp_op	Germany	107 01-JAN-98
	105 Anita							
	105 Anita 106 Sneha 107 Anamika	2450 2975	24500	10 Joseph 30 Jha	Big Data Analytics Artificial Intelligence	fi_acc it_prog	Melbourne New York	105 26-SEP-97 15-JUL-97

A	SQL> select * from employee	;							
	EMP_NO EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO L_NAME	DEPT_NAME	J08	B_ID	LOCATION	MANAGER_ID HIREDATE
	101 Smith 102 Snehal 103 Adama 104 Aman 105 Anita 106 Sneha 107 Anamika	800 1600 1100 3000 5000 2450 2975	300 0 50000 24500	20 Wales 10 Sharma 10 Patel	Machine Learning Data Science Machine Learning Virtual Reality Big Data Analytics Big Data Analytics Artificial Intelligence	led mk_ cor cor fi	_mgr c _mgr np_op np_op _acc _prog	Toronto Las Vegas Ontario Mexico Germany Melbourne New York	105 09-AUG-9 14-MAR-9 105 30-NOV-9 12 02-OCT-9 107 01-JAN-9 105 26-SEP-9 15-JUL-9
	7 rows selected.								
	SQL> update employee set em	p_name = 'I	Darshita' w	here emp_no=103;					
	1 row updated.								
	SQL> select * from employee								
	EMP_NO EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO L_NAME	DEPT_NAME	308	B_ID	LOCATION	MANAGER_ID HIREDATE
	101 Smith 102 Snehal 103 Darshita 104 Aman 105 Anita	800 1600 1100 3000 5000	300 0	20 Wales 10 Sharma 10 Patel	Machine Learning Data Science Machine Learning Virtual Reality Big Data Analytics	led mk_ cor	_mgr np_op np_op	Toronto Las Vegas Ontario Mexico Germany	105 09-AUG- 14-MAR- 105 30-NOV- 12 02-OCT- 107 01-JAN-
	106 Sneha 107 Anamika	2450 2975		10 Joseph 30 Jha	Big Data Analytics Artificial Intelligence		_acc _prog	Melbourne New York	
							_		
) -16	107 Anamika 7 rows selected.	2975		30 Jha		it	_		105 26-SEP-9 15-JUL-9
Q-16 A	107 Anamika 7 rows selected.	2975		30 Jha	Artificial Intelligence	it	_		
	107 Anamika 7 rows selected. Add one column	phone	e to em	30 Jha	Artificial Intelligence	it	_	New York	
	107 Anamika 7 rows selected. Add one column SQL> select * from employee;	phone	e to em	ployee with	Artificial Intelligence Size of column is 10 DEPT_NAME Machine Learning Data Science Machine Learning Virtual Reality Big Data Analytics Big Data Analytics	it]	LOCATI Toront Las Ve Ontari Mexico German Melbou	New York ON MANAGI ogas o y	15-JUL- !
	107 Anamika 7 rows selected. Add one column SQL> select * from employee; EMP_NO EMP_NAME 101 Smith 102 Snehal 103 Darshita 104 Aman 105 Anita 106 Sneha	2975 phone EMP_SAL 800 1600 1100 3000 5000 2450	EMP_COMM	DEPT_NO L_NAME 10 Shah 25 Gupta 20 Wales 10 Sharma 10 Patel 10 Joseph	Artificial Intelligence Size of column is 10 DEPT_NAME Machine Learning Data Science Machine Learning Virtual Reality Big Data Analytics Big Data Analytics	it_ JOB_ID fi_mgr lec mk_mgr comp_op comp_op fi_acc	LOCATI Toront Las Ve Ontari Mexico German Melbou	New York ON MANAGI ogas o y	ER_ID HIREDATE
	107 Anamika 7 rows selected. Add one column SQL> select * from employee; EMP_NO EMP_NAME 101 Smith 102 Snehal 103 Darshita 104 Aman 105 Anita 106 Sneha 107 Anamika	2975 phone EMP_SAL 800 1600 1100 3000 5000 2450	EMP_COMM	DEPT_NO L_NAME 10 Shah 25 Gupta 20 Wales 10 Sharma 10 Patel 10 Joseph	Artificial Intelligence Size of column is 10 DEPT_NAME Machine Learning Data Science Machine Learning Virtual Reality Big Data Analytics Big Data Analytics	it_ JOB_ID fi_mgr lec mk_mgr comp_op comp_op fi_acc	LOCATI Toront Las Ve Ontari Mexico German Melbou	New York ON MANAGI ogas o y	ER_ID HIREDATE
	107 Anamika 7 rows selected. Add one column SQL> select * from employee; EMP_NO EMP_NAME 101 Smith 102 Snehal 103 Darshita 104 Aman 105 Anita 106 Sneha 107 Anamika 7 rows selected. SQL> Alter table employee	2975 phone EMP_SAL 800 1600 1100 3000 5000 2450	EMP_COMM	DEPT_NO L_NAME 10 Shah 25 Gupta 20 Wales 10 Sharma 10 Patel 10 Joseph	Artificial Intelligence Size of column is 10 DEPT_NAME Machine Learning Data Science Machine Learning Virtual Reality Big Data Analytics Big Data Analytics	it_ JOB_ID fi_mgr lec mk_mgr comp_op comp_op fi_acc	LOCATI Toront Las Ve Ontari Mexico German Melbou	New York ON MANAGI ogas o y	ER_ID HIREDATE
	107 Anamika 7 rows selected. Add one column SQL> select * from employee; EMP_NO EMP_NAME 101 Smith 102 Snehal 103 Darshita 104 Aman 105 Anita 106 Sneha 107 Anamika 7 rows selected. SQL> Alter table employee 2 add phone varchar2(10);	2975 phone EMP_SAL 800 1600 1100 3000 5000 2450	EMP_COMM	DEPT_NO L_NAME 10 Shah 25 Gupta 20 Wales 10 Sharma 10 Patel 10 Joseph	Artificial Intelligence Size of column is 10 DEPT_NAME Machine Learning Data Science Machine Learning Virtual Reality Big Data Analytics Big Data Analytics	it_ JOB_ID fi_mgr lec mk_mgr comp_op comp_op fi_acc	LOCATI Toront Las Ve Ontari Mexico German Melbou	New York ON MANAGI ogas o y	ER_ID HIREDATE
	107 Anamika 7 rows selected. Add one column SQL> select * from employee; EMP_NO EMP_NAME 101 Smith 102 Snehal 103 Darshita 104 Aman 105 Anita 106 Sneha 107 Anamika 7 rows selected. SQL> Alter table employee 2 add phone varchar2(10); Table altered.	2975 phone EMP_SAL 800 1100 3000 5000 2450 2975	EMP_COMM 300 0 50000 24500	DEPT_NO L_NAME 10 Shah 25 Gupta 20 Wales 10 Sharma 10 Patel 10 Joseph	Artificial Intelligence Size of column is 10 DEPT_NAME Machine Learning Data Science Machine Learning Virtual Reality Big Data Analytics Big Data Analytics Artificial Intelligence	it_ JOB_ID fi_mgr lec mk_mgr comp_op comp_op fi_acc	LOCATI Toront Las Ve Ontari Mexico German Melbou	New York ON MANAGI o gas o y y rne	ER_ID HIREDATE

SQL> select * from employe	e;							
EMP_NO EMP_NAME	EMP_SAL EM	MP_COMM DE	PT_NO L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID H	IREDATE PHONE
101 Smith 102 Snehal 103 Darshita 104 Aman 105 Anita 106 Sneha	800 1600 1100 3000 5000 2450	300 0 50000 24500	10 Shah 25 Gupta 20 Wales 10 Sharma 10 Patel 10 Joseph	Machine Lear Data Science Machine Lear Virtual Real Big Data Ana Big Data Ana	lec ning mk_mgr ity comp_o lytics comp_o lytics fi_acc	Las Vegas Ontario p Mexico p Germany Melbourne	1 105 3 12 0 107 0 105 2	
107 Anamika	2975		30 Jha	Artificial I	ntelligence it_pro	g New York	1	5-JUL-97
7 rows selected.								
SQL> alter table employee 2 modify emp_name varch	nar2(30);							
Table altered.								
SQL> select * from employe	ee;							
EMP_NO EMP_NAME		EMP_SAL	EMP_COMM [DEPT_NO L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID HIREDATE PHONE
101 Smith 102 Snehal 103 Darshita 104 Aman 105 Anita 106 Sneha 107 Anamika		800 1600 1100 3000 5000 2450 2975	300 0 50000 24500	10 Shah 25 Gupta 20 Wales 10 Sharma 10 Patel 10 Joseph 30 Jha	Machine Learning Data Science Machine Learning Virtual Reality Big Data Analytics Big Data Analytics Artificial Intelligenc	fi_mgr lec mk_mgr comp_op comp_op fi_acc e it prog	Toronto Las Vegas Ontario Mexico Germany Melbourne New York	105 09-AUG-96 14-MAR-96 105 30-NOV-95 12 02-OCT-97 107 01-JAU-98 105 26-SEP-97 15-JUL-97
107 Allallita		2313		J0 J110	A CITICIAI INCEILIGENC	c It_prog	NEW TOTA	13-30L-37
than 1000 of	employe	ee.						on of salary gr
Count the tota than 1000 of	employe	ee. t(dis	stinct)) 					on of salary gr
Count the tota than 1000 of SQL> select COUNT(DIST	employe t coun	ee. t(dis :PT_NC	stinct)) 4	: dept_no) from emp	oloyee	where	emp_sal>100
Count the total than 1000 of SQL> selection COUNT(DIST	employet coun	ee. t(dis PT_NC	stinct)) 4 ployees	dept_no	ng order, des	oloyee	where	
Count the total than 1000 of SQL> selection COUNT(DIST	employet coun	ee. t(dis PT_NC	stinct)) 4 ployees	: dept_no	ng order, des	oloyee	where	emp_sal>100
Count the total than 1000 of a SQL> selection COUNT (DIST	t coun INCTDE	t(dis	stinct)) 4 ployees	dept_no	ng order, des	oloyee	where	emp_sal>100
Count the total than 1000 of a SQL> selection COUNT (DIST Display the display	employe t coun INCTDE etail of a emoloyee	ee. PT_NC all emp es in as	stinct) 4 ployees	dept_no	ng order, des	oloyee	where	emp_sal>100
Count the total than 1000 of sQL> select COUNT(DIST Display the d i) Details of sQL> select * from e	employe t coun INCTDE etail of a emoloyee	ee. t(dis PT_NC all emp es in as	stinct) 4 ployees	in ascendi	ng order, des	cending of 108_comp	where order of LOCATION op Mexico rog New York op Germany	emp_sal>100 their name and

ii) Details of emoloyees in descending order of their name

EMP_NO EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID HIREDATE PHON
102 Snehal	1600	300	25 Gupta	Data Science	lec	Las Vegas	14-MAR-96
106 Sneha	2450	24500	10 Joseph	Big Data Analytics	fi_acc	Melbourne	105 26-SEP-97
101 Smith	800		10 Shah	Machine Learning	fi_mgr	Toronto	105 09-AUG-96
103 Darshita	1100	500	20 Wales	Machine Learning	mk_mgr	Ontario	105 30-NOV-95
105 Anita	5000	50000	10 Patel	Big Data Analytics	comp_op	Germany	107 01-JAN-98
107 Anamika	2975		30 Jha	Artificial Intelligence	it_prog	New York	15-JUL-97
104 Aman	3000		10 Sharma	Virtual Reality	comp_op	Mexico	12 02-OCT-97

iii) Details of emoloyees in ascending order of their no

EMP_NO EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID HIREDATE PHONE
101 Smith	800		10 Shah	Machine Learning	fi_mgr	Toronto	105 09-AUG-96
102 Snehal	1600	300	25 Gupta	Data Science	lec	Las Vegas	14-MAR-96
103 Darshita	1100	500	20 Wales	Machine Learning	mk_mgr	Ontario	105 30-NOV-95
104 Aman	3000		10 Sharma	Virtual Reality	comp_op	Mexico	12 02-OCT-97
105 Anita	5000	50000	10 Patel	Big Data Analytics	comp op	Germany	107 01-JAN-98
106 Sneha	2450	24500	10 Joseph	Big Data Analytics	fi_acc	Melbourne	105 26-SEP-97
107 Anamika	2975		30 Jha	Artificial Intelligence	it prog	New York	15-JUL-97

iv) Details of emoloyees in descending order of their name

EMP_NO EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID HIREDATE PHONE
107 Anamika	2975		30 Jha	Artificial Intelligence	it_prog	New York	15-JUL-97
106 Sneha	2450	24500	10 Joseph	Big Data Analytics	fi_acc	Melbourne	105 26-SEP-97
105 Anita	5000	50000	10 Patel	Big Data Analytics	comp_op	Germany	107 01-JAN-98
104 Aman	3000		10 Sharma	Virtual Reality	comp_op	Mexico	12 02-OCT-97
103 Darshita	1100	500	20 Wales	Machine Learning	mk_mgr	Ontario	105 30-NOV-95
102 Snehal	1600	300	25 Gupta	Data Science	lec	Las Vegas	14-MAR-96
101 Smith	800		10 Shah	Machine Learning	fi_mgr	Toronto	105 09-AUG-96

	order.	io ili asce	numg	order and a	ccordingly displa	ay em	p_comm	in descending
A	SQL> select * from employee order b	by dept_no asc,emp	_comm desc;					
	EMP_NO EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO L_NAME	DEPT_NAME	JOB_I	D LOCATION	MANAGER_ID HIREDATE PHONE
	101 Smith	800		10 Shah	Machine Learning	fi_mg	r Toronto	105 09-AUG-96
	104 Aman	3000		10 Sharma	Virtual Reality	comp		12 02-OCT-97
	105 Anita	5000	50000	10 Patel	Big Data Analytics	comp		107 01-JAN-98
	106 Sneha	2450	24500	10 Joseph	Big Data Analytics	fi_ac	c Melbourne	105 26-SEP-97
	103 Darshita	1100	500	20 Wales	Machine Learning	mk_mg	r Ontario	105 30-NOV-95
	102 Snehal	1600	300	25 Gupta	Data Science	lec	Las Vegas	14-MAR-96
	107 Anamika	2975		30 Jha	Artificial Intelligence	it_pr	og New York	15-JUL-97
	7 rows selected.							
-21	Update the value of	of emp_co	mm to	500 where	e dept_no is 20.			
A	SQL> select * from employee;							
	EMP_NO EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID HIREDATE PHONE
	101 Smith	800		10 Shah	Machine Learning	fi_mgr	Toronto	105 09-AUG-96
	102 Snehal	1600	300	25 Gupta	Data Science	lec	Las Vegas	14-MAR-96
	103 Darshita	1100	0	20 Wales	Machine Learning	mk_mgr	Ontario	105 30-NOV-95
	104 Aman 105 Anita	3000 5000	50000	10 Sharma 10 Patel	Virtual Reality Big Data Analytics	comp_op	Mexico Germany	12 02-0CT-97 107 01-JAN-98
	106 Sneha	2450	24500	10 Joseph	Big Data Analytics	comp_op fi_acc	Melbourne	107 01-JAN-96 105 26-SEP-97
	107 Anamika	2975	24300	30 Jha	Artificial Intelligence	it_prog	New York	15-JUL-97
	7 rows selected.							
	SQL> select count(distinct dept_no)	from employee wher	e emp_sal>10	a0;				
	COUNT(DISTINCTDEPT_NO)							
	4							
	SQL> update employee set emp_comm=50	00 where dept_no=20	;					
	1 row updated.							
	SQL> select * from employee;							
	EMP_NO EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID HIREDATE PHONE
	101 Smith	800		10 Shah	Machine Learning	fi_mgr	Toronto	105 09-AUG-96
	102 Snehal	1600	300	25 Gupta	Data Science	lec	Las Vegas	14-MAR-96
	103 Darshita	1100	500	20 Wales	Machine Learning	mk_mgr	Ontario	105 30-NOV-95
	104 Aman 105 Anita	3000 5000	50000	10 Sharma 10 Patel	Virtual Reality Big Data Analytics	comp_op	Mexico Germany	12 02-0CT-97 107 01-JAN-98
	106 Sneha	2450	24500	10 Pater 10 Joseph	Big Data Analytics	comp_op fi_acc	Melbourne	107 01-JAN-96 105 26-SEP-97
	107 Anamika	2975		30 Jha	Artificial Intelligence	it_prog	New York	15-JUL-97
	7 rows selected.							

	salary in descend		cenar	ing order wi	th null value first	and ac	Cording	ry sort employee
A	SQL> select * from employee orde	er by emp_comm asc nul	ls first;					
	EMP_NO EMP_NAME	EMP_SAL	EMP_COMM	DEPT_NO L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID HIREDATE PHONE
	101 Smith	800		10 Shah	Machine Learning	fi_mgr	Toronto	105 09-AUG-96
	104 Aman	3000		10 Sharma	Virtual Reality	comp_op	Mexico	12 02-OCT-97
	107 Anamika	2975		30 Jha	Artificial Intelligence	it_prog	New York	15-JUL-97
	102 Snehal	1600	300	25 Gupta	Data Science	lec	Las Vegas	14-MAR-96
ŀ	103 Darshita	1100	500	20 Wales	Machine Learning	mk_mgr	Ontario	105 30-NOV-95
	106 Sneha	2450	24500	10 Joseph	Big Data Analytics	fi_acc	Melbourne	105 26-SEP-97
	105 Anita	5000	50000	10 Patel	Big Data Analytics	comp_op	Germany	107 01-JAN-98
	7 rows selected.							
-23	Display the emp	comm in as	cendi	ng order wi	th null value last	and acc	cordingl	v sort emp no i
_	Display the emp_descending order	•		ng order wi	th null value last	and acc	cordingl	y sort emp_no ii
)-23 A	descending order	er by emp_comm asc nul	ls last;					-
	descending order	er by emp_comm asc nul	ls last;	ng order wi	th null value last	and acc		-
	descending order	er by emp_comm asc nul	ls last;					-
_	descending order SQL> select * from employee orde EMP_NO EMP_NAME	er by emp_comm asc nuli	Ls last; EMP_COMM	DEPT_NO L_NAME	DEPT_NAME	JOB_ID	LOCATION	MANAGER_ID HIREDATE PHONE
_	descending order SQL> select * from employee orde EMP_NO EMP_NAME 102 Snehal	er by emp_comm asc nuli EMP_SAL 1600	Ls last; EMP_COMM 	DEPT_NO L_NAME 25 Gupta	DEPT_NAME Data Science	JOB_ID	LOCATION 	MANAGER_ID HIREDATE PHONE
	descending order SQL> select * from employee orde EMP_NO EMP_NAME 102 Snehal 103 Darshita	er by emp_comm asc nuli EMP_SAL 1600 1100	Ls last; EMP_COMM	DEPT_NO L_NAME 25 Gupta 20 Wales	DEPT_NAME Data Science Machine Learning	JOB_ID lec mk_mgr	LOCATION 	MANAGER_ID HIREDATE PHONE
	descending order SQL> select * from employee order EMP_NO EMP_NAME 102 Snehal 103 Darshita 106 Sneha	EMP_Comm asc null EMP_SAL 1600 1100 2450	Ls last; EMP_COMM 300 500 24500	DEPT_NO L_NAME 25 Gupta 20 Wales 10 Joseph	DEPT_NAME Data Science Machine Learning Big Data Analytics	JOB_ID lec mk_mgr fi_acc comp_op	LOCATION Las Vegas Ontario Melbourne	MANAGER_ID HIREDATE PHONE 14-MAR-96 105 30-NOV-95 105 26-SEP-97
	descending order SQL> select * from employee order EMP_NO EMP_NAME 102 Snehal 103 Darshita 106 Sneha 105 Anita	EMP_Comm asc null EMP_SAL 1600 1100 2450 5000	Ls last; EMP_COMM 300 500 24500	DEPT_NO L_NAME	DEPT_NAME Data Science Machine Learning Big Data Analytics Big Data Analytics	JOB_ID lec mk_mgr fi_acc	LOCATION Las Vegas Ontario Melbourne Germany	MANAGER_ID HIREDATE PHONE

Appendix:

Same as Practical-2