LAB 1

SQL Commands :

create table Product1(Prod_id int,Prod_Name varchar(20),Prod_Price int,Prod_Color

varchar(12),Manufacturer varchar(10))

insert into Product1 values(101,'Fridge',40000,'Blue','Voltas')

insert into Product1 values(102,'Television',55000,'Black','Sony')

insert into Product1 values(103,'Washing Machine',10000,'Blue','LG')

insert into Product1 values(104,'Television',32000,'Black','Samsung')

insert into Product1 values(105,'Washing Machine',Null,'Red','Whirlpool')

insert into Product1 values(106,'Vacuum Cleaner',10000,'Red','Whirlpool')

insert into Product1 values(107,'Vacuum Cleaner',12000,'Blue','Kent')

insert into Product1 values(108,'Television',10000,'Black','LG')

insert into Product1 values(109,'Washing machine',30000,'Red','Panasonic')

insert into Product1 values(110,'Fridge',55000,Null,'Godrej')

*select * from Product1*

select Prod_Name from Product1

select Prod_Name,Prod_Price from Product1

*select * from Product1 where Prod_Name='Fridge'*

*select * from Product1 where Prod_Name='Television'*

select Prod_Price,Prod_Color from Product1 where Prod_Name='Washing Machine'

select Manufacturer from Product1 where Prod_Name='Telivision'OR Prod_Name='Vacuum Cleaner'

*select * from Product1 where Prod_Price>30000*

select Prod_Name,Prod_color from Product1 where Prod_Price>30000 AND Prod_Price<40000

select Prod_Name from Product1 where Prod_Color='Black' AND Prod_Price<30000

Delete:

Delete from Product1 where Prod_Price>40000

Delete from Product1 where Prod_Color='Black'

Delete from Product1 where Prod_Name='Washing Machine'

Delete from Product1 where Manufacturer='LG'

Delete from Product1 where Prod_id in ('107','108','110')

LAB 2

SQL Commands:

create table Customer (C_id integer primary key,First_Name varchar(8),Last_Name varchar(8),Country varchar(4));

insert into Customer values(1,'John','Doe','USA');

insert into Customer values(2,'Robert','Luna','USA');

insert into Customer values(3,'David','Robinson','UK');

insert into Customer values(4,'Mark','Cage','UK');

insert into Customer values(5,'Betty','Taylor','UAE');

*select * from Customer;*

alter table Customer add Phone varchar(12);

update Customer set phone='817-466-8833' where C_id=1;

update Customer set phone='412-862-0502' where C_id=2;

update Customer set phone='208-340-7906' where C_id=3;

update Customer set phone='307-242-6285' where C_id=4;

update Customer set phone='806-749-2958' where C_id=5;

insert into Customer values(5,'Mark','Alexander','Denmark','990-267-9088');

delete from Customer where C_id=5;

alter table Customer modify Last_Name varchar(10);

alter table Customer modify Country varchar(7);

insert into Customer values(5,'Mark','Alexander','Denmark','990-267-9088');

alter table Customer drop column Last_Name;

Part B

create table Employee (Eid integer , Ename varchar(8) , Salary float);

insert into Employee values(1,'Ajay',83020.561);

insert into Employee values(2,'Ravi',50600.567);

insert into Employee values(3,'Rajesh',78110.487);

insert into Employee values(4,'Prakash',67230.678);

insert into Employee values(5,'Anuraag',77901.456);

insert into Employee values(6,'Bharat',64000.287);

*select * from Employee;*

select Salary,Ename from Employee;

*select * from Employee where Salary > 55000 and Salary < 80000;*

alter table Employee modify Eid integer primary key;

update Employee set Salary = 80000.45 where Ename = 'Anuraag';

update Employee set Salary = 11000.320 where Ename = 'Ajay';

update Employee set Salary = null where Ename = 'Ravi'

Part C

create table Student(Sroll integer , Sname varchar(20),Dob date);

insert into Student values(1,'Vijay Kumar','12/jan/2012');

insert into Student values(2,'Ravi Kumar','13/mar/2011');

insert into Student values(3,'Rajkesh Ranjan','1/july/2009');

insert into Student values(4,'Prakash Jha','3/feb/2011');

insert into Student values(5,'Ashutosh Srivastava','11/dec/2010');

insert into Student values(6,'Akash Rajiv','09/feb/2012');

*select *from Student;*

select Sname from Student where Sroll in (1,2,3,4);

select Sname from Student where Dob = '11/dec/2010';

select Sname from Student where Dob in ('12/jan/2012','13/mar/2011');

select Sname from Student where Dob > '31/dec/2010';

Create table dep (did int primary key, dname varchar(10));

Crate table emp (eid int primary key, ename varchar(10), did int, Foreign key(did) references dep(did));

LAB 3

SQL Commands:

create table Product2(Prod_id integer primary key,Prod_name varchar(20),Prod_price float(20),Brand_Name varchar(8),Quantity Number);

insert into Product2 values(101,'Laptop',45000.20,'Dell',10);

insert into Product2 values(102,'Laptop',32000.34,'Lenovo',8);

insert into Product2 values(103,'Laptop',50000.00,'HP',20);

insert into Product2 values(104,'Head Phone',5000.00,'Sony',30);

insert into Product2 values(105,'Head Phone',2400.40,'Boat',56);

insert into Product2 values(106,'Keyboard',1000.27,'Lenovo',200);

insert into Product2 values(107,'Keyboard',600.00,'Dell',250);

insert into Product2 values(108,'Mouse',300.05,'HP',180);

insert into Product2 values(109,'Mouse',500.45,'Intex',350);

insert into Product2 values(110,'Pen Drive',400.25,'Kingston',320);

insert into Product2 values(111,'Pen Drive',600.90,'Sandisk',45);

*select *from Product2*

select Prod_name from Product2 where Quantity>100;

select Brand_name ,Prod_price from Product2 where Prod_name='Laptop';

select Brand_name,Prod_name from Product2;

select distinct(Brand_name) from Product2;

select sum(Prod_price) from Product2;

select avg(Prod_price) from Product2;

select max(Prod_price) from Product2;

select min(Prod_price) from Product2;

select count(*) from Product2;

select sum(Quantity) from Product2 where Prod_name='Pen Drive';

select max(Prod_price) from Product2 where Prod_name='Laptop';

select avg(Prod_price) from Product2 where Prod_name='Keyboard';

select Prod_name from Product2 order by Prod_price asc;

select Prod_name,Prod_price from Product2 order by Prod_price asc;

select Brand_name from Product2 order by Brand_name desc;

select count(prod_name),Brand_name from Product2 group by Brand_name;

select sum(Quantity),prod_name from Product2 group by Prod_name;

select avg(Prod_price),Prod_name from Product2 group by Prod_name;

select Prod_name,max(Prod_price) from Product2 group by Prod_name;

select count(prod_name),Prod_name from Product2 group by Prod_name;

Part B

```
create table Coach(Cid integer primary key,Cname varchar(20),Dob date);

insert into Coach values(1,'John',To_date('12-mar-1998','DD/MM/YYYY'));

insert into Coach values(2,'Mark',To_date('14-jun-1996','DD/MM/YYYY'));

insert into Coach values(3,'Taylor',To_date('17-oct-2001','DD/MM/YYYY'));

insert into Coach values(4,'James',To_date('10-dec-1997','DD/MM/YYYY'));

insert into Coach values(5,'Tom',To_date('21-jun-2003','DD/MM/YYYY'));

insert into Coach values(6,'Johny',To_date('18-oct-1996','DD/MM/YYYY'));

select *from Coach;

select to_char(Dob,'MON') from Coach;

select to_char(Dob,'YYYY') from Coach;

select to_char(Dob,'DD') from Coach;

select to_char(Dob,'DAY') from Coach;

select Cname from Coach where to_char(Dob,'Mon')='Dec';

select Cid,Cname from Coach where to_char(Dob,'YYYY')='1997' or to_char(Dob,'YYYY')='1998';

select Cid,Cname from Coach where to_char(Dob,'YYYY')>'2000';

select count(Cname) from Coach where to_char(Dob,'YYYY')<'2000';
```

select count(distinct to_char(dob,'YYYY')) from Coach;

select cname,(select to_char(current_date,'YYYY') from dual) -to_char(Dob,'YYYY') age from Coach;

select cname from Coach where (select to_char(current_date,'YYYY') from dual)
-to_char(Dob,'YYYY')>23;

LAB 4

SQL Commands:

Table 1 Galleries

create table Galleries(Gid integer primary key,city varchar(20));

insert into Galleries values(1,'London');

insert into Galleries values(2,'New York');

insert into Galleries values(3,'Munich');

*select * from Galleries;*

Table 2 Paintings

create table Paintings(pid integer primary key,pname varchar(20),Gid integer,price integer)

insert into Paintings values(1,'Patterns',3,5000);

insert into Paintings values(2,'Ringer',1,4500);

insert into Paintings values(3,'Gift',1,3200);

insert into Paintings values(4,'Violin Lessons',2,6700);

insert into Paintings values(5,'Curiousity',2,9800);

*select * from Paintings;*

Table 3 Sales_agents

create table Sales_agents(aid integer primary key,last_name varchar(20), first_name varchar(20),Gid integer,agency_fee integer)

insert into Sales_agents values(1,'Brown','Denis',2,2250);

insert into Sales_agents values(2,'White','Kate',3,3120);

insert into Sales_agents values(3,'Black','Sarah',2,1640);

insert into Sales_agents values(4,'Smith','Helen',1,4500);

insert into Sales_agents values(5,'Stewart','Tom',3,2130);

*select * from Sales_agents;*

Table 4 Manager

create table Manager(aid integer primary key,Gid integer);

insert into Manager values(1,2);

insert into Manager values(2,3);

insert into Manager values(4,1);

*select * from Manager;*

*select * from Galleries cross join Paintings;*

select Pname,city from Paintings inner join Galleries on Paintings.gid=Galleries.gid;

select First_name,last_name from Sales_agents where aid in (select aid from Manager)

select Sales_agents.first_name,Sales_agents.last_name from Sales_agents cross join Manager where Manager.aid!=Sales_agents.aid and Manager.Gid=Sales_agents.Gid;

select Sales_agents.first_name,Sales_agents.last_name from Sales_agents cross join Manager where Manager.Gid=(select Gid from Galleries where City='New York') and Manager.aid=Sales_agents.aid;

select Sales_agents.first_name, Sales_agents.last_name from Sales_agents inner join Paintings on Sales_agents.Gid=Paintings.gid where Paintings.pname='Gift';

select max(Agency_fee) from Sales_agents where aid in (select aid from Manager);

select First_name,Last_name,Pname from Sales_agents inner join Manager on Sales_agents.aid=Manager.aid inner join Paintings on Paintings.gid=Manager.gid;

select Sales_agents.first_name,Sales_agents.last_name from Sales_agents cross join Manager where Manager.Gid=(select Gid from Paintings where pname='Patterns') and Manager.aid=Sales_agents.aid;

EID	ENAME	SALARY
1	Ajay	83020.561
2	Ravi	50600.567
3	Rajesh	78110.487
4	Prakash	67230.678
5	Anuraag	77901.456
6	Bharat	64000.287

C_ID	FIRST_NAME	LAST_NAME	COUNTRY	PHONE
1	John	Doe	USA	-
2	Robert	Luna	USA	-
3	David	Robinson	UK	-
4	Mark	Cage	UK	-
5	Betty	Taylor	UAE	-

SUM(PROD_PRICE)
137802.86

SUM(QUANTITY)
365

CNAME
James

CNAME	AGE
John	24
Mark	26
Taylor	21
James	25
Tom	19
Johny	26

PROD_ID	PROD_NAME	PROD_PRICE	PROD_COLOR	MANUFACTURER
101	Fridge	40000	Blue	Voltas
103	Washing Machine	10000	Blue	LG
105	Washing Machine	-	Red	Whirlpool
106	Vacuum Cleaner	10000	Red	Whirlpool
107	Vacuum Cleaner	12000	Blue	Kent
109	Washing machine	30000	Red	Panasonic

MANUFACTURER
Whirlpool
Kent

SROLL	SNAME	DOB
1	Vijay Kumar	12-JAN-12
2	Ravi Kumar	13-MAR-11
3	Rajkesh Ranjan	01-JUL-09
4	Prakash Jha	03-FEB-11
5	Ashutosh Srivastava	11-DEC-10
6	Akash Rajiv	09-FEB-12

PROD_ID	PROD_NAME	PROD_PRICE	BRAND_NAME	QUANTITY
101	Laptop	45000.2	Dell	10
102	Laptop	32000.34	Lenovo	8
103	Laptop	50000	HP	20
104	Head Phone	5000	Sony	30
105	Head Phone	2400.4	Boat	56
106	Keyboard	1000.27	Lenovo	200
107	Keyboard	600	Dell	250
108	Mouse	300.05	HP	180
109	Mouse	500.45	Intex	350
110	Pen Drive	400.25	Kingston	320
111	Pen Drive	600.9	Sandisk	45

COUNT(PROD_NAME)	BRAND_NAME
1	Sony
1	Intex
1	Kingston
1	Sandisk
1	Boat
2	Lenovo
2	Dell
2	HP

CID	CNAME	DOB
1	John	12-MAR-98
2	Mark	14-JUN-96
3	Taylor	17-OCT-01
4	James	10-DEC-97
5	Tom	21-JUN-03
6	Johny	18-OCT-96

GID	CITY	PID	PNAME	GID	PRICE
1	London	1	Patterns	3	5000
1	London	2	Ringer	1	4500
1	London	3	Gift	1	3200
1	London	4	Violin Lessons	2	6700
1	London	5	Curiousity	2	9800
2	New York	1	Patterns	3	5000
2	New York	2	Ringer	1	4500
2	New York	3	Gift	1	3200
2	New York	4	Violin Lessons	2	6700
2	New York	5	Curiousity	2	9800
3	Munich	1	Patterns	3	5000
3	Munich	2	Ringer	1	4500
3	Munich	3	Gift	1	3200
3	Munich	4	Violin Lessons	2	6700
3	Munich	5	Curiousity	2	9800

FIRST_NAME	LAST_NAME
Helen	Smith

Results Explain Describe Saved SQL History

PROD_ID	PROD_NAME	PROD_PRICE	PROD_COLOR	MANUFACTURER
101	Fridge	40000	Blue	Voltas
102	Television	55000	Black	Sony
103	Washing Machine	10000	Blue	LG
104	Television	32000	Black	Samsung
105	Washing Machine	-	Red	Whirlpool
106	Vacuum Cleaner	10000	Red	Whirlpool
107	Vacuum Cleaner	12000	Blue	Kent
108	Television	10000	Black	LG
109	Washing machine	30000	Red	Panasonic
110	Fridge	55000	-	Godrej

10 rows returned in 3.52 seconds   CSV Export

TO_CHAR(DOB,'DD')
12
14
17
10
21
18

FIRST_NAME	LAST_NAME
Kate	White

PROD_ID	PROD_NAME	PROD_PRICE	PROD_COLOR	MANUFACTURER
101	Fridge	40000	Blue	Voltas
106	Vacuum Cleaner	10000	Red	Whirlpool
109	Washing machine	30000	Red	Panasonic

PROD_NAME
Television

C_ID	FIRST_NAME	LAST_NAME	COUNTRY	PHONE
1	John	Doe	USA	817-466-8833
2	Robert	Luna	USA	412-862-0502
3	David	Robinson	UK	208-340-7906
4	Mark	Cage	UK	307-242-6285
5	Betty	Taylor	UAE	806-749-2958

SALARY	ENAME
83020.561	Ajay
50600.567	Ravi
78110.487	Rajesh
67230.678	Prakash
77901.456	Anuraag
64000.287	Bharat

EID	ENAME	SALARY
1	Ajay	11000.32
2	Ravi	50600.567
3	Rajesh	78110.487
4	Prakash	67230.678

SNAME
Vijay Kumar
Ravi Kumar

AVG(PROD_PRICE)
12527.532727272727272727272727272727

MAX(PROD_PRICE)
50000

PROD_NAME	MAX(PROD_PRICE)
Laptop	50000
Mouse	500.45
Head Phone	5000
Keyboard	1000.27
Pen Drive	600.9

CID	CNAME
1	John
4	James

CNAME
John
Mark
James
Johny

FIRST_NAME	LAST_NAME
Sarah	Black
Tom	Stewart

PROD_ID	PROD_NAME	PROD_PRICE	PROD_COLOR	MANUFACTURER
101	Fridge	40000	Blue	Voltas
110	Fridge	55000	-	Godrej

PROD_NAME	PROD_PRICE
Mouse	300.05
Pen Drive	400.25
Mouse	500.45
Keyboard	600
Pen Drive	600.9
Keyboard	1000.27
Head Phone	2400.4
Head Phone	5000
Laptop	32000.34
Laptop	45000.2
Laptop	50000

AID	LAST_NAME	FIRST_NAME	GID	AGENCY_FEE
1	Brown	Denis	2	2250
2	White	Kate	3	3120
3	Black	Sarah	2	1640
4	Smith	Helen	1	4500
5	Stewart	Tom	3	2130

MAX(AGENCY_FEE)
4500

PROD_ID	PROD_NAME	PROD_PRICE	PROD_COLOR	MANUFACTURER
101	Fridge	40000	Blue	Voltas
102	Television	55000	Black	Sony
104	Television	32000	Black	Samsung
110	Fridge	55000	-	Godrej

PROD_ID	PROD_NAME	PROD_PRICE	PROD_COLOR	MANUFACTURER
101	Fridge	40000	Blue	Voltas
106	Vacuum Cleaner	10000	Red	Whirlpool
107	Vacuum Cleaner	12000	Blue	Kent
109	Washing machine	30000	Red	Panasonic

C_ID	FIRST_NAME	COUNTRY	PHONE
1	John	USA	817-466-8833
2	Robert	USA	412-862-0502
3	David	UK	208-340-7906
4	Mark	UK	307-242-6285
5	Mark	Denmark	990-267-9088

SNAME
Vijay Kumar
Ravi Kumar
Rajkesh Ranjan
Prakash Jha

PROD_NAME
Keyboard
Keyboard
Mouse
Mouse
Pen Drive

COUNT(*)
11

TO_CHAR(DOB,'MON')
MAR
JUN
OCT
DEC
JUN
OCT

COUNT(DISTINCTTO_CHAR(DOB,'YYYY'))
5

C_ID	FIRST_NAME	LAST_NAME	COUNTRY
1	John	Doe	USA
2	Robert	Luna	USA
3	David	Robinson	UK
4	Mark	Cage	UK
5	Betty	Taylor	UAE

BRAND_NAME
Sony
Intex
Kingston
Sandisk
Boat
Lenovo
Dell
HP

SUM(QUANTITY)	PROD_NAME
38	Laptop
530	Mouse
86	Head Phone
450	Keyboard
365	Pen Drive

TO_CHAR(DOB,'DAY')
THURSDAY
FRIDAY
WEDNESDAY
WEDNESDAY
SATURDAY
FRIDAY

GID	CITY
1	London
2	New York
3	Munich

PNAME	CITY
Patterns	Munich
Ringer	London
Gift	London
Violin Lessons	New York
Curiousity	New York

PROD_NAME
Fridge
Television
Washing Machine
Television
Washing Machine
Vacuum Cleaner
Vacuum Cleaner
Television
Washing machine
Fridge

PROD_ID	PROD_NAME	PROD_PRICE	PROD_COLOR	MANUFACTURER
101	Fridge	40000	Blue	Voltas
103	Washing Machine	10000	Blue	LG
104	Television	32000	Black	Samsung
105	Washing Machine	-	Red	Whirlpool
106	Vacuum Cleaner	10000	Red	Whirlpool
107	Vacuum Cleaner	12000	Blue	Kent
108	Television	10000	Black	LG
109	Washing machine	30000	Red	Panasonic

```
ORA-12899: value too large for column "SYSTEM"."CUSTOMER"."LAST_NAME" (actual: 9, maximum: 8)
```

EID	ENAME	SALARY
3	Rajesh	78110.487
4	Prakash	67230.678
5	Anuraag	77901.456
6	Bharat	64000.287

SNAME
Vijay Kumar
Ravi Kumar
Prakash Jha
Akash Rajiv

AVG(PROD_PRICE)
800.135

COUNT(PROD_NAME)	PROD_NAME
3	Laptop
2	Mouse
2	Head Phone
2	Keyboard
2	Pen Drive

PROD_PRICE	PROD_COLOR
10000	Blue
-	Red

EID	ENAME	SALARY
1	Ajay	11000.32
2	Ravi	-
3	Rajesh	78110.487
4	Prakash	67230.678

MAX(PROD_PRICE)
50000

BRAND_NAME
Sony
Sandisk
Lenovo
Lenovo
Kingston
Intex
HP
HP
Dell
Dell
Boat

TO_CHAR(DOB,'YYYY')
1998
1996
2001
1997
2003
1996

CID	CNAME
3	Taylor
5	Tom

AID	GID
1	2
2	3
4	1

FIRST_NAME	LAST_NAME
Denis	Brown

FIRST_NAME	LAST_NAME	PNAME
Kate	White	Patterns
Helen	Smith	Ringer
Helen	Smith	Gift
Denis	Brown	Violin Lessons
Denis	Brown	Curiousity

PROD_ID	PROD_NAME	PROD_PRICE	PROD_COLOR	MANUFACTURER
102	Television	55000	Black	Sony
104	Television	32000	Black	Samsung
108	Television	10000	Black	LG

PROD_NAME	PROD_COLOR
Television	Black

PROD_ID	PROD_NAME	PROD_PRICE	PROD_COLOR	MANUFACTURER
101	Fridge	40000	Blue	Voltas
106	Vacuum Cleaner	10000	Red	Whirlpool
107	Vacuum Cleaner	12000	Blue	Kent
109	Washing machine	30000	Red	Panasonic

BRAND_NAME	PROD_PRICE
Dell	45000.2
Lenovo	32000.34
HP	50000

SNAME
Ashutosh Srivastava

PROD_NAME
Mouse
Pen Drive
Mouse
Keyboard
Pen Drive
Keyboard
Head Phone
Head Phone
Laptop
Laptop
Laptop

AVG(PROD_PRICE)	PROD_NAME
42333.513333333333333333333333333333333	Laptop
400.25	Mouse
3700.2	Head Phone
800.135	Keyboard
500.575	Pen Drive

FIRST_NAME	LAST_NAME
Denis	Brown
Kate	White
Helen	Smith

PROD_NAME	PROD_PRICE
Fridge	40000
Television	55000
Washing Machine	10000
Television	32000
Washing Machine	-
Vacuum Cleaner	10000
Vacuum Cleaner	12000
Television	10000
Washing machine	30000
Fridge	55000

PID	PNAME	GID	PRICE
1	Patterns	3	5000
2	Ringer	1	4500
3	Gift	1	3200
4	Violin Lessons	2	6700
5	Curiousity	2	9800

EID	ENAME	SALARY
1	Ajay	83020.561
2	Ravi	50600.567
3	Rajesh	78110.487
4	Prakash	67230.678
5	Anuraag	80000.45
6	Bharat	64000.287

C_ID	FIRST_NAME	LAST_NAME	COUNTRY	PHONE
1	John	Doe	USA	817-466-8833
2	Robert	Luna	USA	412-862-0502
3	David	Robinson	UK	208-340-7906
4	Mark	Cage	UK	307-242-6285
5	Mark	Alexander	Denmark	990-267-9088

BRAND_NAME	PROD_NAME
Dell	Laptop
Lenovo	Laptop
HP	Laptop
Sony	Head Phone
Boat	Head Phone
Lenovo	Keyboard
Dell	Keyboard
HP	Mouse
Intex	Mouse
Kingston	Pen Drive
Sandisk	Pen Drive

MIN(PROD_PRICE)
300.05

COUNT(CNAME)
4