Week-2

Database Schema for a customer-sale scenario

Customer (Cust id: integer, cust\_name: string)

Item (item\_id: integer,item\_name: string, price: integer)

Sale (bill\_no: integer, bill\_data: date, cust\_id: integer, item\_id: integer, qty\_sold: integer)

For the above schema, perform the following—

a. Create the tables with the appropriate integrity constraints

b. Insert around 10 records in each of the tables

c. List all the bills for the current date with the customer names and item numbers

d. List the total Bill details with the quantity sold, price of the item and the final amount

e. List the details of the customer who have bought a product which has a price>200

f. Give a count of how many products have been bought by each customer

g. Give a list of products bought by a customer having cust\_id as 5

h. List the item details which are sold as of today

i. Create a view which lists out the bill\_no, bill\_date, cust\_id, item\_id, price, qty\_sold, amount j.Create a view which lists the daily sales date wise for the last one week

a)

--create the customer table

SQL> create table customer2(custid number(3) primary key,custname varchar2(20));

Table created.

--create the item table

SQL> create table item(itemid number(10) primary key,itemname varchar2(20),price number(5,2));

Table created.

--create the sale table

SQL> create table sale(billno number(5) primary key,billdate date,custid number(3) references customer2,itemid number(10) references item,qtysold number(5));

Table created.

b)

--Now insert the values to the tables.

--inserting values to the customer table

SQL> insert into customer2 values(&custid,'&custname');

Enter value for custid: 1

Enter value for custname: rithu

old 1: insert into customer2 values(&custid,'&custname')

new 1: insert into customer2 values(1,'rithu')

1 row created.

--similarly insert more 9 rows

--After inserting 10 rows ,display the customer table

SQL> select \* from customer2;

CUSTID CUSTNAME

---------- --------------------

1 rithu

2 sri

3 ravi

4 raju

5 kumar

6 sony

7 athul

8 amar

9 chaitu

10 rama

10 rows selected.

--inserting values to the item table

SQL> insert into item values(&itemid,'&itemname',&price);

Enter value for itemid: 11

Enter value for itemname: bolt

Enter value for price: 12.32

old 1: insert into item values(&itemid,'&itemname',&price)

new 1: insert into item values(11,'bolt',12.32)

1 row created.

--similarly insert more 9 rows

--After inserting 10 rows ,display the item table

SQL> select \* from item;

ITEMID ITEMNAME PRICE

---------- -------------------- ----------

11 bolt 12.32

12 screw 7.3

13 pen 9.3

14 book 5

15 pencil 207.38

16 eraser 6.52

17 keys 10.2

18 box 526

19 lock 83.2

20 bottle 50.62

10 rows selected.

--inserting values to the sale table

SQL> insert into sale values(&billno,'&billdate',&custid,&itemid,&qtysold);

Enter value for billno: 101

Enter value for billdate: 12-sep-22

Enter value for custid: 1

Enter value for itemid: 11

Enter value for qtysold: 5

old 1: insert into sale values(&billno,'&billdate',&custid,&itemid,&qtysold)

new 1: insert into sale values(101,'12-sep-22',1,11,5)

1 row created.

--similarly insert more 9 rows

--After inserting 10 rows ,display the sale table

SQL> select \* from sale;

BILLNO BILLDATE CUSTID ITEMID QTYSOLD

---------- --------- ---------- ---------- ----------

101 12-SEP-22 1 11 5

102 11-MAR-22 2 12 6

103 08-NOV-21 3 13 9

104 11-APR-00 4 14 8

105 11-MAR-22 5 15 4

106 03-JUN-18 6 16 5

107 03-AUG-16 7 17 19

108 02-FEB-14 8 18 16

109 14-MAR-18 9 19 19

110 11-MAR-22 10 20 17

10 rows selected.

c)

SQL> select custname,i.itemid from customer2 c,item i,sale s where c.custid=s.custid and i.itemid=s.itemid and billdate=to\_char(sysdate);

no rows selected

(or)

SQL> select custname,i.itemid from customer2 c,item i,sale s where c.custid=s.custid and i.itemid=s.itemid and billdate='12-sep-22';

CUSTNAME ITEMID

-------------------- ----------

rithu 11

d)

SQL> select qtysold,i.price,qtysold\*price finalamount from item i,sale s where i.itemid=s.itemid;

QTYSOLD PRICE FINALAMOUNT

---------- ---------- -----------

5 12.32 61.6

6 7.3 43.8

9 9.3 83.7

8 5 40

4 207.38 829.52

5 6.52 32.6

19 10.2 193.8

16 526 8416

19 83.2 1580.8

17 50.62 860.54

10 rows selected.

e)

SQL> select c.custid,c.custname,itemname,i.itemid,i.price from customer2 c,item i,sale s where c.custid=s.custid and i.itemid=s.itemid and price>200;

CUSTID CUSTNAME ITEMNAME ITEMID PRICE

---------- -------------------- -------------------- ---------- ----------

5 kumar pencil 15 207.38

8 amar box 18 526

f)

SQL> select count(itemid) itemcount,c.custid from customer2 c,sale s where c.custid=s.custid group by s.custid;

ITEMCOUNT CUSTID

---------- ----------

1 1

1 6

1 2

1 4

1 5

1 8

1 3

1 7

1 9

1 10

10 rows selected.

g)

SQL> select i.itemname,i.price from item i,sale s where i.itemid=s.itemid and s.custid=5;

ITEMNAME PRICE

-------------------- ----------

pencil 207.38

h)

SQL> select i.itemid,i.itemname,i.price from item i,sale s where i.itemid=s.itemid and s.billdate=to\_char(sysdate);

no rows selected

i)

SQL> create view v1 as select s.billno,s.billdate,s.custid,i.itemid,i.price,s.qtysold from item i,sale s where i.itemid=s.itemid;

View created.

SQL> select \* from v1;

BILLNO BILLDATE CUSTID ITEMID PRICE QTYSOLD

---------- --------- ---------- ---------- ---------- ----------

101 12-SEP-22 1 11 12.32 5

102 11-MAR-22 2 12 7.3 6

103 08-NOV-21 3 13 9.3 9

104 11-APR-00 4 14 5 8

105 11-MAR-22 5 15 207.38 4

106 03-JUN-18 6 16 6.52 5

107 03-AUG-16 7 17 10.2 19

108 02-FEB-14 8 18 526 16

109 14-MAR-18 9 19 83.2 19

110 11-MAR-22 10 20 50.62 17

10 rows selected.

j)

SQL> create view v2 as select billdate,qtysold from sale s where billdate between '8-mar-22' and '15-mar-22';

View created.

SQL> select \* from v2;

BILLDATE QTYSOLD

--------- ----------

11-MAR-22 6

11-MAR-22 4

11-MAR-22 17

Week-3

2. Database Schema for a Student Library scenario

Student (Stud\_no : integer,Stud\_name: string)

Membership (Mem\_no: integer,Stud\_no: integer)

Book (book\_no: integer, book\_name:string, author: string)

Iss\_rec(iss\_no:integer, iss\_date: date, Mem\_no: integer, book\_no: integer)

For the above schema, perform the following:

a. Create the tables with the appropriate integrity constraints

b. Insert around 10 records in each of the tables

c. List all the student names with their membership numbers

d. List all the issues for the current date with student and Book names

e. List the details of students who borrowed book whose author is CJDATE

f. Give a count of how many books have been bought by each student

g. Give a list of books taken by student with stud\_no as 5

h. List the book details which are issued as of today

i. Create a view which lists out the iss\_no, iss \_date, stud\_name, book name

j. Create a view which lists the daily issues-date wise for the last one week

a)

--create student table

SQL> create table student(studno number(10) primary key,studname varchar2(20));

--create membership table

SQL> create table membership(memno number(10) primary key,studno number(10) references student);

--create book table

SQL> create table book(bookno number(10) primary key,bookanme varchar2(20),author varchar2(20));

--create issrec table

SQL> create table issrec(issno number(10) primary key,issdate date,memno number(10) references membership,bookno number(10) references book);

b)

--now insert the values to the tables

--Insert values to the student table

SQL> insert into student values(&studno,'&studname');

Enter value for studno: 1

Enter value for studname: ramu

old 1: insert into student values(&studno,'&studname')

new 1: insert into student values(1,'ramu')

1 row created.

--similarly insert more 9 rows.

--After inserting 10 rows, display the student table.

SQL> select \* from student;

STUDNO STUDNAME

---------- --------------------

1 ramu

2 somu

3 ravi

4 geetha

5 madhu

6 leela

7 krishna

8 radha

9 nani

10 rows selected.

--insert values to membership tabe.

SQL> insert into membership values(&memno,&studno);

Enter value for memno: 11

Enter value for studno: 1

old 1: insert into membership values(&memno,&studno)

new 1: insert into membership values(11,1)

1 row created.

--similarly insert more 9 rows

--After inserting 10 rows,display membership table.

SQL> select \* from membership;

MEMNO STUDNO

---------- ----------

11 1

12 2

13 3

14 4

15 5

16 6

17 7

18 8

19 9

20 10

10 rows selected.

--insert values to the book tabe

SQL> insert into book values(&bookno,'&bookname','&author');

Enter value for bookno: 21

Enter value for bookname: DQ

Enter value for author: AA

old 1: insert into book values(&bookno,'&bookname','&author')

new 1: insert into book values(21,'DQ','AA')

1 row created.

--similarly insert more 9 rows

--After inserting 10 rows,display the book table.

SQL> select \* from book;

BOOKNO BOOKNAME AUTHOR

---------- -------------------- --------------------

21 DQ AA

22 ABCD BB

23 SK CC

24 VJ DD

25 VD EE

26 RK FF

27 SC GG

28 PK HH

29 DK II

30 SV JJ

10 rows selected.

--insert values to the issrec table

SQL> insert into issrec values(&issrec,'&issdate',&memno,&bookno);

Enter value for issrec: 101

Enter value for issdate: 22-mar-22

Enter value for memno: 11

Enter value for bookno: 21

old 1: insert into issrec values(&issrec,'&issdate',&memno,&bookno)

new 1: insert into issrec values(101,'22-mar-22',11,21)

1 row created.

--similarly insert more 9 rows.

--After inserting 10 rows,display the issrec table

SQL> select \* from issrec;

SQL> select \* from issrec;

ISSNO ISSDATE MEMNO BOOKNO

---------- --------- ---------- ----------

101 21-MAR-22 11 21

102 22-FEB-11 12 22

103 21-MAR-22 13 23

104 06-SEP-02 14 24

105 15-JUL-08 15 25

106 14-OCT-14 16 26

107 02-AUG-21 17 27

108 15-AUG-00 18 28

109 28-OCT-21 19 29

110 31-DEC-21 20 30

10 rows selected.

c)

SQL> select s.studname,m.memno from student s,membership m where s.studno=m.studno;

STUDNAME MEMNO

-------------------- ----------

ramu 11

somu 12

ravi 13

geetha 14

madhu 15

leela 16

krishna 17

radha 18

nani 19

latha 20

10 rows selected.

d)

SQL> select s.studname,b.bookname,i.issdate from student s,book b,issrec i,membership m where s.studno=m.studno and m.memno=i.memno and i.bookno=b.bookno and issdate=to\_char(sysdate);

no rows selected

e)

SQL> select s.studno,s.studname from student s,membership m,book b,issrec i where s.studno=m.studno and m.memno=i.memno and i.bookno=b.bookno and author='GG';

STUDNO STUDNAME

---------- --------------------

7 krishna

f)

SQL> select s.studno,count(i.bookno) as bookcount from student s,book b,membership m,issrec i where s.studno=m.studno and m.memno=i.memno and b.bookno=i.bookno group by s.studno;

STUDNO BOOKCOUNT

---------- ----------

1 1

6 1

2 1

4 1

5 1

8 1

3 1

7 1

9 1

10 1

10 rows selected.

g)

SQL> select b.bookno,bookname,author from student s,book b,issrec i,membership m where s.studno=m.studno and i.memno=m.memno and b.bookno=i.bookno and s.studno=5;

BOOKNO BOOKNAME AUTHOR

---------- -------------------- --------------------

25 VD EE

h)

SQL> select b.bookno,bookname,author from book b,issrec i where b.bookno=i.bookno and issdate=to\_char(sysdate);

no rows selected

i)

SQL> create view v2 as select i.issno,issdate,studname,bookname from issrec i,student s,book b,membership m where s.studno=m.studno and i.memno=m.memno and b.bookno=i.bookno;

View created.

SQL> select \* from v2;

ISSNO ISSDATE STUDNAME BOOKNAME

---------- --------- -------------------- --------------------

101 21-MAR-22 ramu DQ

102 22-FEB-11 somu ABCD

103 21-MAR-22 ravi SK

104 06-SEP-02 geetha VJ

105 15-JUL-08 madhu VD

106 14-OCT-14 leela RK

107 02-AUG-21 krishna SC

108 15-AUG-00 radha PK

109 28-OCT-21 nani DK

110 31-DEC-21 latha SV

10 rows selected.

j)

SQL> create view v5 as select i.issno,issdate,i.memno from issrec i,membership m where i.memno=m.memno and issdate between '16-mar-22' and '21-mar-22';

View created.

SQL> select \* from v5;

ISSNO ISSDATE MEMNO

---------- --------- ----------

101 21-MAR-22 11

103 21-MAR-22 13

Week-4

3. Database Schema for a Employee-pay scenario

employee (emp\_id : integer,emp\_name: string)

Department (dept\_id: integer,dept\_name:string)

Paydetails (emp\_id : integer,dept\_id: integer, basic: integer, deductions: integer, additions: integer, DOJ: date)

Payroll (emp\_id : integer, pay\_date: date)

For the above schema, perform the following:

Create the tables with the appropriate integrity constraints

a. Insert around 10 records in each of the tables

b. List the employee details department wise

c. List all the employee names who joined after particular date

d. List the details of employees whose basic salary is between 10,000 and 20,000

e. Give a count of how many employees are working in each department

f. Give a names of the employees whose netsalary>10,000

g. List the details for an employee\_id=5

h. Create a view which lists out the emp\_name, department, basic, deductions, netsalary

i. Create a view which lists the emp\_name and his netsalary

--create employee table

SQL> create table employee(empid number(10) primary key,empname varchar2(20));

Table created.

--create department table

SQL> create table department(deptid number(10) primary key,deptname varchar2(20));

Table created.

--create paydetails table

SQL> create table paydetails(empid number(10) references employee,deptid number(10) references department,basic number(10),deductions number(10),additions number(10),DOJ date);

Table created.

--create payroll table

SQL> create table payroll(empid number(10) references employee,paydate date);

Table created.

a)

--insert values to the employee table

SQL> insert into employee values(&empid,'&empname');

Enter value for empid: 11

Enter value for empname: amritha

old 1: insert into employee values(&empid,'&empname')

new 1: insert into employee values(11,'amritha')

1 row created.

--similarly insert more 9 rows

--After inserting 10 rows,display employee table.

SQL> select \* from employee;

EMPID EMPNAME

---------- --------------------

11 amritha

12 akshitha

13 arun

14 amar

15 ankush

16 aadhya

17 akshaya

18 anu

19 aditya

20 anand

10 rows selected.

--insert values to the department table

SQL> insert into department values(&deptid,'&deptname');

Enter value for deptid: 1

Enter value for deptname: IT

old 1: insert into department values(&deptid,'&deptname')

new 1: insert into department values(1,'IT')

1 row created.

--similarly insert more 9 rows

--After inserting 10 rows,display the department table.

SQL> select \* from department;

DEPTID DEPTNAME

---------- --------------------

1 IT

2 CSE

3 EEE

4 ECE

5 CIVIL

6 MECH

7 CHEM

8 AI

9 CS

10 DS

10 rows selected.

--insert values to the paydetails.

SQL> insert into paydetails values(&empid,&deptid,&basic,&deductions,&additions,'&DOJ');

Enter value for empid: 11

Enter value for deptid: 1

Enter value for basic: 40000

Enter value for deductions: 1000

Enter value for additions: 9000

Enter value for doj: 28-mar-22

old 1: insert into paydetails values(&empid,&deptid,&basic,&deductions,&additions,'&DOJ')

new 1: insert into paydetails values(11,1,40000,1000,9000,'28-mar-22')

1 row created.

--similarly insert more 9 rows.

--After inserting 10 rows,display the paydetails table.

SQL> select \* from paydetails;

EMPID DEPTID BASIC DEDUCTIONS ADDITIONS DOJ

---------- ---------- ---------- ---------- ---------- ---------

11 1 40000 1000 9000 28-MAR-22

12 2 35000 1500 10000 27-MAR-22

13 3 30000 2000 9500 26-MAR-22

14 4 25000 2500 10500 25-MAR-22

15 5 20000 3000 11000 29-MAR-22

16 6 15000 800 11500 06-SEP-21

17 7 10000 500 10000 17-OCT-19

18 8 45000 3500 8000 19-APR-21

19 9 50000 4000 8500 10-FEB-20

20 10 48000 2000 9000 19-DEC-19

10 rows selected.

--insert values to the payroll table

SQL> insert into payroll values(&empid,'&paydate');

Enter value for empid: 11

Enter value for paydate: 15-dec-12

old 1: insert into payroll values(&empid,'&paydate')

new 1: insert into payroll values(11,'15-dec-12')

1 row created.

--similarly insert more 9 rows.

--After inserting 10 rows,display payroll table.

SQL> select \* from payroll;

EMPID PAYDATE

---------- ---------

11 15-DEC-12

12 18-NOV-13

13 20-OCT-14

14 21-SEP-15

15 22-AUG-16

16 23-JUL-17

17 24-JUN-18

18 25-MAY-19

19 29-MAR-22

20 25-MAR-22

10 rows selected.

b)

SQL> select e.empid,e.empname,d.deptname from employee e,paydetails p,department d where e.empid=p.empid and p.deptid=d.deptid;

EMPID EMPNAME DEPTNAME

---------- -------------------- --------------------

11 amritha IT

12 akshitha CSE

13 arun EEE

14 amar ECE

15 ankush CIVIL

16 aadhya MECH

17 akshaya CHEM

18 anu AI

19 aditya CS

20 anand DS

10 rows selected.

c)

SQL> select empname,doj from employee e,paydetails p where e.empid=p.empid and doj>'25-mar-22';

EMPNAME DOJ

-------------------- ---------

amritha 28-MAR-22

akshitha 27-MAR-22

arun 26-MAR-22

ankush 29-MAR-22

d)

SQL> select empname,e.empid from employee e,paydetails p where e.empid=p.empid and basic between 10000 and 20000;

EMPNAME EMPID

-------------------- ----------

ankush 15

aadhya 16

akshaya 17

e)

SQL> select deptid,count(empid) as totalemployees from paydetails group by deptid;

DEPTID TOTALEMPLOYEES

---------- --------------

1 1

6 1

2 1

4 1

5 1

8 1

3 1

7 1

9 1

10 1

10 rows selected.

f)

SQL> select empname from employee e,paydetails p where basic+additions-deductions>10000 and e.empid=p.empid;

EMPNAME

--------------------

amritha

akshitha

arun

amar

ankush

aadhya

akshaya

anu

aditya

anand

10 rows selected.

g)

SQL> select e.empid,empname from employee e where e.empid=15;

EMPID EMPNAME

---------- --------------------

15 ankush

h)

SQL> create view v6 as select empname,d.deptname,basic,deductions,basic+additions-deductions as netsalary from employee e,department d,paydetails p where e.empid=p.empid and d.deptid=p.deptid;

View created.

SQL> select \* from v6;

EMPNAME DEPTNAME BASIC DEDUCTIONS NETSALARY

-------------------- -------------------- ---------- ---------- ----------

amritha IT 40000 1000 48000

akshitha CSE 35000 1500 43500

arun EEE 30000 2000 37500

amar ECE 25000 2500 33000

ankush CIVIL 20000 3000 28000

aadhya MECH 15000 800 25700

akshaya CHEM 10000 500 19500

anu AI 45000 3500 49500

aditya CS 50000 4000 54500

anand DS 48000 2000 55000

10 rows selected.

i)

SQL> create view v7 as select empname,basic+additions-deductions as netsalary from employee e,paydetails p where e.empid=p.empid;

View created.

SQL> select \* from v7;

EMPNAME NETSALARY

-------------------- ----------

amritha 48000

akshitha 43500

arun 37500

amar 33000

ankush 28000

aadhya 25700

akshaya 19500

anu 49500

aditya 54500

anand 55000

10 rows selected.

Week-5

4. Database Schema for a Video Library scenario

Customer (cust\_no: integer,cust\_name: string)

Membership (Mem\_no: integer, cust\_no: integer)

Cassette (cass\_no:integer, cass\_name:string, Language: String)

Iss\_rec(iss\_no: integer, iss\_date: date, mem\_no: integer, cass\_no: integer)

For the above schema, perform the following—

a. Create the tables with the appropriate integrity constraints

b. Insert around 10 records in each of the tables

c. List all the customer names with their membership numbers

d. List all the issues for the current date with the customer names and cassette names

e. List the details of the customer who has borrowed the cassette whose title is “ The Legend”

f. Give a count of how many cassettes have been borrowed by each customer

g. Give a list of books which has been taken by the student with mem\_no as 5

h. List the cassettes issues for today

i. Create a view which lists outs the iss\_no, iss\_date, cust\_name, cass\_name

j. Create a view which lists issues-date wise for the last one week

a)

--create customer table

SQL> create table customer(custno number(10) primary key,custname varchar2(20));

Table created.

--create membership table

SQL> create table membershipp(memno number(10) primary key,custno number(10) references customer);

Table created.

--create cassette table

SQL> create table cassette(cassno number(10) primary key,cassname varchar2(20),language varchar2(20));

Table created.

--create issrec table

SQL> create table issrec(issno number(10) primary key,issdate date,memno number(10) references membershipp,cassno number(10) references cassette);

Table created.

b)

--insert values to the customer table

SQL> insert into customer values(&custno,'&custname');

Enter value for custno: 1

Enter value for custname: ravi

old 1: insert into customer values(&custno,'&custname')

new 1: insert into customer values(1,'ravi')

1 row created.

Similarly insert remaining 9 rows into the table

After inserting 10 rows,display the customer table

--display the table

SQL> select \* from customer;

CUSTNO CUSTNAME

---------- --------------------

1 ravi

2 raju

3 ramu

4 jaanu

5 pramodh

6 seetha

7 geetha

8 pranay

9 goutham

10 ajay

10 rows selected.

--insert values into the membership table

SQL> insert into membershipp values(&memno,&custno);

Enter value for memno: 11

Enter value for custno: 1

old 1: insert into membershipp values(&memno,&custno)

new 1: insert into membershipp values(11,1)

1 row created.

Similar insert remaining 9 rows into the table

--display the table

SQL> select \* from membershipp;

MEMNO CUSTNO

---------- ----------

11 1

22 2

33 3

44 4

55 5

66 6

77 7

88 8

99 9

100 10

10 rows selected.

--insert values into the cassette table

SQL> insert into cassette values(&cassno,'&cassname','&language');

Enter value for cassno: 111

Enter value for cassname: aaa

Enter value for language: hindi

old 1: insert into cassette values(&cassno,'&cassname','&language')

new 1: insert into cassette values(111,'aaa','hindi')

1 row created.

Similarly enter the remaining 9 rows

--display the table

SQL> select \* from cassette;

CASSNO CASSNAME LANGUAGE

---------- -------------------- --------------------

111 aaa hindi

222 bbb telugu

333 ccc tamil

444 ddd english

555 eee malyali

666 fff telugu

777 ggg english

888 hhh telugu

999 iii tamil

1000 jjj hindi

10 rows selected.

--insert the values into the table

SQL> insert into issrec values(&issno,'&issdate',&memno,&cassno);

Enter value for issno: 1111

Enter value for issdate: 22-mar-22

Enter value for memno: 11

Enter value for cassno: 111

old 1: insert into issrec values(&issno,'&issdate',&memno,&cassno)

new 1: insert into issrec values(1111,'22-mar-22',11,111)

1 row created.

Similarly enter the 9 rows into the table

--display the table

SQL> select \* from issrec;

ISSNO ISSDATE MEMNO CASSNO

---------- --------- ---------- ----------

1111 22-MAR-22 11 111

2222 21-MAR-22 22 222

3333 20-MAR-22 33 333

4444 11-JUN-22 44 444

5555 29-AUG-22 55 555

6666 23-MAR-22 66 666

7777 06-OCT-22 77 777

8888 25-MAR-22 88 888

9999 16-APR-22 99 999

10000 16-JUL-22 100 1000

10 rows selected.

c)

SQL> select c.custname,m.memno from customer c,membershipp m where m.custno=c.custno;

CUSTNAME MEMNO

-------------------- ----------

ravi 11

raju 22

ramu 33

jaanu 44

pramodh 55

seetha 66

geetha 77

pranay 88

goutham 99

ajay 100

10 rows selected.

d)

SQL> select c.custname,cs.cassname,i.issdate from customer c,cassette cs,issrec i,membershipp m where c.custno=m.custno and m.memno=i.memno and cs.cassno=i.cassno and issdate=to\_char(sysdate);

CUSTNAME CASSNAME ISSDATE

-------------------- -------------------- ---------

jaanu ddd 11-JUN-22

e)

SQL> select c.custname,c.custno from customer c,cassette cs,issrec i,membershipp m where c.custno=m.custno and m.memno=i.memno and cs.cassno=i.cassno and cassname='bbb';

CUSTNAME CUSTNO

-------------------- ----------

raju 2

f)

SQL> select c.custno,count(cs.cassno) as count from customer c,membershipp m,cassette cs,issrec i where c.custno=m.memno and m.memno=i.memno and i.cassno=cs.cassno group by c.custno;

no rows selected

g)

SQL> select cs.cassname from cassette cs,membershipp m,issrec i where i.cassno=cs.cassno and i.memno=m.memno and m.memno=99;

CASSNAME

--------------------

Iii

h)

SQL> select cs.cassname from cassette cs,issrec i where cs.cassno=i.cassno and issdate=to\_char(sysdate);

CASSNAME

--------------------

Ddd

i)

SQL> create view f as select issno,issdate,custname,cassname from customer c,cassette cs,membershipp m,issrec i where c.custno=m.custno and m.memno=i.memno and i.cassno=cs.cassno;

View created.

SQL> select \* from f;

ISSNO ISSDATE CUSTNAME CASSNAME

---------- --------- -------------------- --------------------

1111 22-MAR-22 ravi aaa

2222 21-MAR-22 raju bbb

3333 20-MAR-22 ramu ccc

4444 11-JUN-22 jaanu ddd

5555 29-AUG-22 pramodh eee

6666 23-MAR-22 seetha fff

7777 06-OCT-22 geetha ggg

8888 25-MAR-22 pranay hhh

9999 16-APR-22 goutham iii

10000 16-JUL-22 ajay jjj

10 rows selected.

j)

SQL> create view s as select issno,issdate,cassname,custname from customer c,cassette cs,membershipp m,issrec i where c.custno=m.custno and m.memno=i.memno and i.cassno=cs.cassno and issdate between '22-mar-22' and '29-mar-22';

View created.

SQL> select \* from s;

ISSNO ISSDATE CASSNAME CUSTNAME

---------- --------- -------------------- --------------------

1111 22-MAR-22 aaa ravi

6666 23-MAR-22 fff seetha

8888 25-MAR-22 hhh pranay

Week-6

5. Database Schema for a student-Lab scenario

Class (class\_no: string,descrip: string)

Student (stud\_no: integer, stud\_name: string, class\_no: string)

Lab (mach\_no: integer, Lab\_no: integer, description: String)

Allotment (Stud\_no: Integer, mach\_no: integer, dayof week: string)

For the above schema, perform the following:

a. Create the tables with the appropriate integrity constraints

b. Insert around 10 records in each of the tables

c. List all the machine allotments with the student names, lab and machine numbers

d. List the total number of lab allotments day wise

e. Give a count of how many machines have been allocated to the ‘CSIT’ class

f. Give a machine allotment etails of the stud\_no 5 with his personal and class details

g. Count for how many machines have been allocatedinLab\_no1 for the day of the week as “Monday”

h. How many students class wise have allocated machines in the labs

i. Create a view which lists out the stud\_no, stud\_name, mach\_no, lab\_no, dayofweek

j. Create a view which lists the machine allotment details for “Thursday”.

a)

--create class table

SQL> create table class1(classno number(10) primary key,classdesc varchar2(20));

Table created.

--create student table

SQL> create table student2(studno number(10) primary key,studname varchar2(20),classno number(10) references class1);

Table created.

--create lab table

SQL> create table lab2(machno number(10) primary key,labno number(10),labdesc varchar2(20));

Table created.

--create allotment table

SQL> create table allotment1(studno number(10) references student2,machno number(10) references lab2,dayofweek varchar2(20));

Table created.

b)

--insert values to the class table

SQL> insert into class1 values(&classno,'&classdesc');

Enter value for classno: 101

Enter value for classdesc: IT-C

old 1: insert into class1 values(&classno,'&classdesc')

new 1: insert into class1 values(101,'IT-C')

1 row created.

--after inserting 10 rows,display the class table

SQL> select \* from class1;

CLASSNO CLASSDESC

---------- --------------------

101 IT-C

102 EEE-A

103 ECE-B

104 CS-A

105 DS-D

106 CSE-E

107 AI-A

108 MECH-A

109 CIVIL-B

110 CHEM-A

10 rows selected.

--insert values to the student table

SQL> insert into student2 values(&studno,'&studname',&classno);

Enter value for studno: 11

Enter value for studname: virat

Enter value for classno: 101

old 1: insert into student2 values(&studno,'&studname',&classno)

new 1: insert into student2 values(11,'virat',101)

1 row created.

--after inserting 10 rows,display the student table

SQL> select \* from student2;

STUDNO STUDNAME CLASSNO

---------- -------------------- ----------

11 virat 101

12 sachin 102

13 ABD 103

14 jadeja 104

15 saina 105

16 sindhu 106

17 pushpa 107

18 sania 108

19 raj 109

20 smriti 110

10 rows selected.

--insert values to the lab table

SQL> insert into lab2 values(&machno,&labno,'&labdesc');

Enter value for machno: 1

Enter value for labno: 201

Enter value for labdesc: DBMS lab

old 1: insert into lab2 values(&machno,&labno,'&labdesc')

new 1: insert into lab2 values(1,201,'DBMS lab')

1 row created.

--after inserting 10 rows,display lab table

SQL> select \* from lab2;

MACHNO LABNO LABDESC

---------- ---------- --------------------

1 201 DBMS lab

2 202 JAVA lab

3 203 PYTHON lab

4 204 C lab

5 205 C++ lab

6 206 BEE lab

7 207 AP lab

8 208 UNIX lab

9 209 LINUX lab

10 210 DS lab

10 rows selected.

--insert values to the allotment table

SQL> insert into allotment1 values(&studno,&machno,'&dayofweek');

Enter value for studno: 11

Enter value for machno: 1

Enter value for dayofweek: sunday

old 1: insert into allotment1 values(&studno,&machno,'&dayofweek')

new 1: insert into allotment1 values(11,1,'sunday')

1 row created.

--after inserting 10 rows,display the table

SQL> select \* from allotment1;

STUDNO MACHNO DAYOFWEEK

---------- ---------- --------------------

11 1 sunday

12 2 monday

13 3 tuesday

14 4 wednesday

15 5 thursday

16 6 friday

17 7 saturday

18 8 sunday

19 9 monday

20 10 tuesday

10 rows selected.

c)

SQL> select l.machno,s.studno,s.studname,l.labno,l.labdesc from class1 c,student2 s,lab2 l,allotment1 a where c.classno=s.classno and s.studno=a.studno and l.machno=a.machno;

MACHNO STUDNO STUDNAME LABNO LABDESC

---------- ---------- -------------------- ---------- --------------------

1 11 virat 201 DBMS lab

2 12 sachin 202 JAVA lab

3 13 ABD 203 PYTHON lab

4 14 jadeja 204 C lab

5 15 saina 205 C++ lab

6 16 sindhu 206 BEE lab

7 17 pushpa 207 AP lab

8 18 sania 208 UNIX lab

9 19 raj 209 LINUX lab

10 20 smriti 210 DS lab

10 rows selected.

d)

SQL> select count(l.labno) as allotments,a.dayofweek from lab2 l,allotment1 a where l.machno=a.machno group by a.dayofweek;

ALLOTMENTS DAYOFWEEK

---------- --------------------

1 saturday

2 sunday

1 friday

2 monday

1 wednesday

2 tuesday

1 thursday

7 rows selected.

e)

SQL> select c.classdesc, count(l.machno) as machinecount from lab2 l,class1 c,allotment1 a,student2 s where l.machno=a.machno and c.classno=s.classno and s.studno=a.studno and c.classdesc='IT-C' group by c.classdesc;

CLASSDESC MACHINECOUNT

-------------------- ------------

IT-C 1

f)

SQL> select s.studno,s.studname,l.machno,c.classno,c.classdesc from lab2 l,student2 s,allotment1 a,class1 c where l.machno=a.machno and c.classno=s.classno and s.studno=a.studno and s.studno=15;

STUDNO STUDNAME MACHNO CLASSNO CLASSDESC

---------- -------------------- ---------- ---------- --------------------

15 saina 5 105 DS-D

g)

SQL> select a.dayofweek,count(l.machno) as machinecount from lab2 l,allotment1 a where l.machno=a.machno and labno=201 and a.dayofweek='sunday' group by a.dayofweek;

DAYOFWEEK MACHINECOUNT

-------------------- ------------

sunday 1

h)

SQL> select c.classdesc,count(s.studno) as studentcount from lab2 l,allotment1 a,class1 c,student2 s where l.machno=a.machno and c.classno=s.classno and s.studno=a.studno group by c.classdesc;

CLASSDESC STUDENTCOUNT

-------------------- ------------

IT-C 1

ECE-B 1

MECH-A 1

CS-A 1

CSE-E 1

DS-D 1

CIVIL-B 1

CHEM-A 1

EEE-A 1

AI-A 1

10 rows selected.

i)

SQL>create view v11 as select s.studno,s.studname,l.labno,a.dayofweek from student2 s,lab2 l,class1 c,allotment1 a where l.machno=a.machno and c.classno=s.classno and s.studno=a.studno;

View created

SQL>select \* from v11;

j)

SQL>create view v13 as select l.machno,l.labno,l.labdesc,a.dayofweek from lab2 l,allotment1 a where l.machno=a.machno and a.dayofweek=’thursday’;

View created

SQL>select \* from v13;