**DBMS SLIPS – ASSIGNMENT 2**

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**Slip no1:**

**Consider the following entities and their relationships.**

**Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Emp(eno ,ename ,designation ,salary, Date\_Of\_Joining)**

**Dept(dno,dname ,loc)**

**The relationship between Dept & Emp is one-to-many. Constraints: - Primary Key, ename should not be NULL, salary must be greater than 0.**

**SQL> create table emp(eno number primary key,ename varchar(20),designation varchar(20),salary number,date\_of\_joining varchar(20));**

**SQL> desc emp;**

**SQL> insert into emp(eno,ename,designation,salary,date\_of\_joining)**

**2  values(1,'Mr. Advait','Assistant',54000,'23/03/2002');**

**SQL> insert into emp(eno,ename,designation,salary,date\_of\_joining)**

**2  values(2,'Mr. Roy','ceo',50000,'15/06/2019');**

**SQL> insert into emp(eno,ename,designation,salary,date\_of\_joining)**

**2  values(3,'Mr. Abhay','manager',60000,'10/06/2013');**

**SQL> insert into emp(eno,ename,designation,salary,date\_of\_joining)**

**2  values(4,'Mr. Raghav','manager',420000,'01/03/2003');**

**1 row created.**

**SQL> select \* from emp;**

**SQL> create table dept(dno number primary key,dname varchar(20),loc varchar(10),eno references emp);**

**SQL> desc dept**

**SQL> insert into dept(dno,dname,loc,eno)**

**2  values(101,'computer','pune',1);**

**SQL> insert into dept(dno,dname,loc,eno)**

**2  values(102,'computer science','mumbai',2);**

**SQL> insert into dept(dno,dname,loc,eno)**

**2  values(103,'Quqlity','mumbai',3);**

**SQL>**

**SQL>   insert into dept(dno,dname,loc,eno)**

**2  values(104,'Account','mumbai',4);**

**SQL> select \* from dept;**

**Q.3 Consider the above tables and Execute the following queries:**

**1. Add column phone\_No into Emp table with data type int.**

**SQL> alter table emp**

**2  add phone\_no int;**

**SQL> desc emp;**

**2. Delete the details of Employee whose designation is ‘Manager’.**

**SQL> Delete from emp**

**2  where designation='manager';**

**Q4. Consider the above database and execute the following queries: [25 Marks]**

**1.**   **Display the count of employees department wise.**

**SQL> select count(emp.eno),dname from emp,dept**

**2  where emp.eno=dept.eno**

**3  group by dname;**

**2.**   **Display the name of employee who is ‘Manager’ of “Account Department”.**

**SQL> select ename from emp,dept**

**2  where emp.eno=dept.eno**

**3  and designation='manager' and dname='Account';**

**3.**   **Display the name of department whose location is “Pune” and “Mr. Advait” is working in it**

**SQL> select dname from emp,dept**

**2  where emp.eno=dept.eno**

**3  and loc='pune' and ename='Mr. Advait';**

**4.**   **Display the names of employees whose salary is greater than 50000 and       department is “Quality”.**

**SQL> select ename from emp,dept**

**2  where emp.eno=dept.eno**

**3  and salary>50000 and dname='Quqlity';**

**5.**   **Update Dateofjoining of employee to ‘15/06/2019’ whose department is ‘computer science’ and name is “Mr. Roy’.**

**update emp set date\_of\_joining='15/06/2019'**

**where ename='Mr.Roy' and dno in(select dno from dept where dname='computer science');**

**slip no:2--Q3. Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Sales\_order (ordNo, ordDate)**

**Client (clientNo, ClientName, addr**)

**The relationship between Client & Sales\_order is one-to-many.**

**Constraints: - Primary Key, ordDate should not be NULL**

**SQL> create table client(cno varchar(10) primary key,cname varchar(20),addr varchar(20));**

**SQL> desc client**

**SQL> insert into client values('CN001','Abhay','Pune');**

**SQL> insert into client values('CN002','Patil','Pune');**

**SQL> insert into client values('CN003','Mr.Roy','Pimpri');**

**SQL> insert into client values('CN004','Raj','Mumbai');**

**SQL> select \* from client;**

**SQL> create table sales\_order(ordno int primary key,ordDate varchar(23) not null,**

**cno varchar(10) references client on delete cascade);**

**SQL> desc sales\_order;**

**SQL> insert into sales\_order values(1,'23/06/2015','CN001');**

**SQL> insert into sales\_order values(2,'09/03/2019','CN002');**

**SQL> insert into sales\_order values(3,'09/08/2009','CN004');**

**SQL> insert into sales\_order values(4,'09/08/2019','CN002');**

**SQL> select \* from sales\_order;**

**Q.3Consider the above tables and execute the following queries:**

**1. Add column amount into Sales\_order table with data type int.**

**SQL> alter table sales\_order**

**2  add amount int;**

**Table altered.**

**SQL> desc sales\_order;**

**2. Delete the details of the clients whose names start with ‘A’ character.**

**SQL> delete from client**

**2  where cname like'A%';**

**1 row deleted.**

**SQL> select \* from client;**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Delete sales order details of client whose name is “Patil” and order date is “09/08/2019”.**

**SQL> delete from sales\_order**

**2  where ordDate='09/08/2019'**

**3  and cno in(select cno from client where cname='Patil');**

**1 row deleted.**

**SQL> select \* from sales\_order;**

**2)Change order date of client\_No ‘CN001’ ‘18/03/2019’**.

**SQL> update sales\_order**

**2  set ordDate='18/03/2019'**

**3  where cno='CN001';**

**0 rows updated.**

**3)** **Delete all sales\_record having order date is before ‘10 /02/2018’.**

**SQL> delete from sales\_order**

**2  where ordDate<'20/10/2019';**

**2 rows deleted.**

**4)Display date wise sales\_order given by clients.**

**SQL> select ordDate,ordno,amount,cno from sales\_order**

**2  order by ordDate;**

**no rows selected**

**5) Update the address of client to “Pimpri” whose name is ‘Mr. Roy’**

**SQL> update client**

**2  set addr='pimpri'**

**3  where cname='Mr.Roy';**

**1 row updated.**

**Slip no-3:-Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Hospital (hno ,hname , city, Est\_year, addr)**

**Doctor (dno , dname , addr, Speciality)**

**The relationship between Hospital and Doctor is one - to – Many Constraints: - Primary Key, Est\_year should be greater than 1990.**

**SQL> create table hospital(hno int primary key,hname varchar(20),city varchar(20),est\_year numeric(4) check(est\_year>1990),addr varchar(20));**

**Table created.**

**SQL> desc hospital;**

**SQL> insert into hospital values(101,'balaji','pune',1993,'kharadi road');**

**1 row created.**

**SQL>  insert into hospital values(103,'vedant','mumbai',1993,'dharavi');**

**1 row created.**

**SQL> insert into hospital values(104,'ruby','pimpri',1993,'kharadi road');**

**1 row created.**

**SQL> insert into hospital values(105,'birla','chinchwad',1993,'tyr');**

**1 row created.**

**SQL> insert into hospital values(106,'qw','pune',1993,'kalptaru');**

**1 row created.**

**SQL> select \* from hospital;**

**SQL> create table doctor(dno int primary key,dname varchar(20),addr1 varchar(20),speciality varchar(20),hno int references hospital on delete cascade);**

**Table created.**

**SQL> desc doctor;**

**SQL> insert into doctor values(1,'dr.joshi','pune','skin',104);**

**1 row created.**

**SQL> insert into doctor values(2,'dr.mane','nashik','surgeon',103);**

**1 row created.**

**SQL> insert into doctor values(3,'dr.patil','pune','gynecologist',101);**

**1 row created.**

**SQL> insert into doctor values(4,'dr.Raghav','pune','skin',105);**

**1 row created.**

**SQL> insert into doctor values(5,'dr.Abhay','mumbai','internist',104);**

**1 row created.**

**SQL> insert into doctor values(6,'dr.joshi','pune','surgeon',106);**

**1 row created.**

**SQL> insert into doctor values(7,'dr.Riya','pune','skin',103);**

**1 row created.**

**SQL> insert into doctor values(8,'dr.Gawade','pune','head',104);**

**1 row created.**

**SQL> select \* from doctor;**

**8 rows selected.**

**Q.3Consider the above tables and execute the following queries:**

**1. Delete addr column from Hospital** **table.**

**SQL> alter table hospital**

**2  drop column addr1;**

**2. Display doctor name, Hospital name and specialty of doctors from “Pune City” .**

**SQL> select dname,hname,speciality from doctor,hospital**

**2  where doctor.hno=hospital.hno**

**3  and city='pune';**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display the names of the hospitals which are located at “Pimpri” city.**

**SQL> select hname from hospital,doctor**

**2  where doctor.hno=hospital.hno**

**3  and city='pimpri';**

**2.**   **Display the names of doctors who are working in “Birla” Hospital and**

**city name is “Chinchwad”**

**SQL> select dname from doctor,hospital**

**2  where doctor.hno=hospital.hno**

**3  and hname='birla' and city='chinchwad';**

**3.**   **Display the specialty of the doctors who are working in “Ruby” hospital.**

**SQL> select speciality from hospital,doctor**

**2  where doctor.hno=hospital.hno**

**3  and hname='ruby';**

**4.**   **Give the count of doctor’s hospital wise which are located at “Pimple Gurav”.**

**SQL> select hname,count(dno) from doctor,hospital**

**2  where doctor.hno=hospital.hno**

**3  and addr='kharadi road'**

**4  group by hname;**

**5.**   **Update an address of Doctor to “Pimpri” whose hospital is “Ruby clinic”**

**SQL> update doctor set addr1='pimpri'**

**2  where hno in(select hno from hospital where hname='ruby');**

**3 rows updated.**

**Slip no-4:Q3. Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Patient (PCode, Name, Addr, Disease)**

**Bed (Bed\_No, RoomNo, loc)**

**Relationship: - There is one-one relationship between patient and bed. Constraints: - Primary key, RoomNo must be greater than Bed\_No, Addr should not be null.**

**SQL> create table patient(pcode int primary key,name varchar(20) not null,addr varchar(20),disease varchar(10));**

**Table created.**

**SQL> desc patient;**

**SQL> insert into patient values(11,'Raghav','pimple gurav','listeria');**

**1 row created.**

**SQL> insert into patient values(12,'Abhay','pune','norovirus');**

**1 row created.**

**SQL> insert into patient values(13,'Mr.Roy','mumbai','cholera');**

**1 row created.**

**SQL> insert into patient values(14,'Sachin','pimple gurav','dengue');**

**1 row created.**

**SQL> insert into patient values(15,'Priya','nashik','listeria');**

**1 row created.**

**SQL> select \* from patient;**

**SQL> create table bed(bno int primary key,rno int not null,loc varchar(10) not null,pcode int references patient on delete cascade);**

**Table created.**

**SQL> desc bed;**

**SQL> insert into bed values(1,105,'pune',11);**

**1 row created.**

**SQL> insert into bed values(2,102,'2nd floor',12);**

**1 row created.**

**SQL> insert into bed values(3,103,'4th floor',13);**

**1 row created.**

**SQL> insert into bed values(4,104,'1st floor',11);**

**1 row created.**

**SQL> insert into bed values(5,105,'3rd floor',14);**

**1 row created.**

**SQL> insert into bed values(6,106,'2nd floor',15);**

**1 row created.**

**SQL> select \* from bed;**

**6 rows selected.**

**Q.3Consider the above tables and execute the following queries:**

**1. Display the details of patients who are from “Pimple Gurav”**

**SQL> select \* from patient**

**2  where addr='pimple gurav';**

**2.**   **Delete the details of patient whose Bed\_No is 1 and RoomNo is 105.**

**SQL> select \* from patient,bed**

**2  where patient.pcode=bed.pcode**

**3  and bno=1 and rno=105;**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display the count of patient room wise**.

**SQL> select count(patient.pcode) from patient,bed**

**2  where patient.pcode=bed.pcode**

  3  group by rno;

**2.**   **Display the names of patients who are admitted in room no 101.**

**SQL> select name from patient,bed**

**2  where patient.pcode=bed.pcode**

**3  and rno=102;**

**3.**   **Display the disease of patient whose bed\_No is 1**

**SQL> select disease from patient,bed**

**2  where patient.pcode=bed.pcode**

**3  and bno=1;**

**4.**   **Display the room\_no and bed\_no of patient whose name is “Mr Roy”**

**SQL> select rno,bno from patient,bed**

**2  where patient.pcode=bed.pcode**

**3  and name='Mr.Roy';**

**5.**   **Give the details of Patient who is admitted on 2nd flr in roomno 102.**

**SQL> select \* from patient,bed**

**2  where patient.pcode=bed.pcode**

**3  and loc='2nd floor' and rno=102;**

**Slip no-5:Q3. Consider the following entities and their relationships.**

**Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Customer (cust\_no, cust\_name, address, city)**

**Loan (loan\_no, loan\_amt)**

**The relationship between Customer and Loan is Many to Many Constraint:**

**Primary key, loan\_amt should be > 0.**

**Connected.**

**SQL>  create table customer(cno int primary key,cname varchar(20) not null,addr varchar(20),city varchar(10));**

**Table created.**

**SQL> desc customer**

**SQL> insert into customer values(101,'Dhiraj','kharadi','pune');**

**1 row created.**

**SQL> insert into customer values(102,'Patil','kalptaru','pimpri');**

**1 row created.**

**SQL> insert into customer values(103,'Abhay','west','pimpri');**

**1 row created.**

**SQL> insert into customer values(104,'Raghav','rt','nashik');**

**1 row created.**

**SQL> insert into customer values(105,'Dhanu','bvh','pune');**

**1 row created.**

**SQL> select \* from customer;**

**SQL> create table loan(lno int primary key,lamt int check(lamt>0),cno int references customer on delete cascade);**

**Table created.**

**SQL>**

**SQL> insert into loan values(1,120000,101);**

**1 row created.**

**SQL> insert into loan values(2,100000,102);**

**1 row created.**

**SQL> insert into loan values(3,30000,103);**

**1 row created.**

**SQL> insert into loan values(4,120,104);**

**1 row created.**

**SQL> insert into loan values(5,1000000,105);**

**1 row created.**

**SQL> select \* from loan;**

**Q.3Consider the above tables and execute the following queries:**

**1. Add Phone\_No column in customer table with data type int.**

**SQL> alter table customer**

**2  add phone\_no int;**

**Table altered.**

**SQL> desc customer**

**2)Delete the details of customer whose loan\_amt<1000.**

**Delete cno,cname,addr,city, from customer**

**Where customer.cno=loan.cno**

**And lamt<1000;**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Find details of all customers whose loan\_amt is greater than 10 lack.**

**SQL> select \* from customer,loan**

**2  where customer.cno=loan.cno**

**3  and lamt>1000000;**

**no rows selected**

**2.**   **List all customers whose name starts with 'D' character.**

**SQL> select \* from customer**

**2  where cname like 'D%';**

**3. List the names of customer in descending order who has taken a loan from Pimpri city.**

**SQL> select \* from customer**

**2  where city='pimpri'**

**3  order by cname desc;**

**4.Display customer details having maximum loan amount**

**SQL> select max(lamt) from customer,loan**

**2  where customer.cno=loan.cno;**

**5.Update the address of customer whose name is “Mr. Patil” and loan\_amt is greater than 100000.**

**update customer set addr='pune'**

**where cname='patil' and lno in(select lno from laon where lamt>100000);**

**Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Project (pno, pname, start\_date, budget, status) Department (dno, dname, HOD, loc)**

**The relationship between Project and Department is Many to One. Constraint: Primary key. Project Status Constraints:**

**C – Completed,**

**P - Progressive,**

**I – Incomplete**

**SQL> create table project(pno int primary key,pname varchar(20),sdate date,budget int,status varchar(20) check(status in('c','i','p')));**

**Table created.**

**SQL> desc project;**

**SQL> insert into project values(1,'abc','09/mar/20',2300000,'c');**

**1 row created.**

**SQL>  insert into project values(2,'xyz','01/apr/18',200000,'i');**

**1 row created.**

**SQL>  insert into project values(3,'st','23/mar/27',1200000,'p');**

**1 row created.**

**SQL> insert into project values(4,'vb','12/feb/20',600000,'c');**

**1 row created.**

**SQL>  insert into project values(5,'qrt','16/jan/23',3400000,'p');**

**1 row created.**

**SQL> select \* from project;**

**SQL> create table department(dno int primary key,dname varchar(20),hod varchar(20),loc varchar(20),pno int references project on delete cascade);**

**Table created.**

**SQL> desc department**

**SQL> insert into department values(101,'computer','desai','pune',1);**

**1 row created.**

**SQL> insert into department values(102,'commerce','mane','pune',2);**

**1 row created.**

**SQL> insert into department values(103,'computer','kadam','pune',3);**

**1 row created.**

**SQL> insert into department values(104,'engineering','sam','pune',4);**

**1 row created.**

**SQL> select \* from department;**

**Consider the above tables and execute the following queries:**

**1.**   **Drop loc column from department table**.

**alter table department**

**drop  column loc;**

**2. Display the details of project whose start\_date is before one month and status is “Progressive”**

**SQL> select \* from project**

**2  where sdate>'12/feb/20' and status='p';**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display the names of project and department who are worked on projects whose status is ‘Completed’**

**SQL>**

**SQL> Select pname,dname,hod,loc from department,project**

**2  where department.pno= project.pno**

**3  and project.status='c';**

**2.**   **Display total budget of each department.**

**SQL> Select sum(budget),dname from department,project**

**2  where department.pno=project.pno**

**3  group by dname;**

**3.**   **Display incomplete project of each department.**

**SQL> select pname,status ,count(department.dno) from department,project**

**2  where department.pno=project.pno**

**3  and project.status='i'**

**4  group by status,pname;**

**4.**   **Display all project working under 'Mr.Desai'.**

**SQL> Select pname from department,project**

**2  where department.pno=project.pno**

**3  and hod= 'desai';**

**PNAME**

**--------------------**

**Abc**

**5.Display department wise HOD.**

**SQL> select dname,hod  from department,project**

**2  where department.pno=project.pno**

**3  order by dname;**

**slip no\_7:Q3. Consider the following entities and their relationships.**

**Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Room (roomno, desc, rate)**

**Guest (gno, gname, no\_of\_days)**

**The relationship between Room and Guest is One to One. Constraint:**

**Primary key, no of days should be > 0.**

**SQL> create table room(rno int primary key,des varchar(20),rate number);**

**Table created.**

**SQL> desc room;**

**SQL> insert into room values(101,’A/C’,1500);**

**1 row created.**

**SQL> insert into room values(102,’Non A/C’,750);**

**1 row created.**

**SQL> insert into room values(103,’A/C’,2000);**

**1 row created.**

**SQL> insert into room values(104,’Non A/C’,1200);**

**1 row created.**

**SQL> select \* from room;**

**SQL> create table guest(gno int primary key,gname varchar(20),nod number check (nod>0));**

**Table created.**

**SQL> desc guest;**

**SQL> insert into guest values(101,'Mr.Bharat',3);**

**1 row created.**

**SQL> insert into guest values(102,'Mr.Nilesh',4);**

**1 row created.**

**SQL> insert into guest values(103,'Mr.Advait',7);**

**1 row created.**

**SQL> insert into guest values(104,'Miss.Sapana',2);**

**1 row created.**

**SQL> select \* from guest;**

**Consider the above tables and execute the following queries:**

**1.**   **Update the rate of room to 5000 whose type is “AC”**

**SQL> update room set rate=5000**

**2  where des='A/C';**

**2 rows updated.**

**SQL> select \* from room;**

**2.**   **Display the name of guest who is staying 2 days in roomno 101**

**select gname from room,guest**

**where room.rno=guest.rno**

**and nod=2 and rno=101;**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display room details according to its rates in ascending order**

**SQL> select des,rate from room**

**2  order by des asc;**

**2.**   **Display the roomno in which “Mr. Advait” is staying for 7 days**

**select rno from room,guest**

**where room.rno=guest.rno**

**and gname='Mr.Advait' and nod=7;**

**3.**   **Find no. of AC rooms.**

**SQL> select count(rno) from room**

**2  where des='A/C';**

**4.**   **Find names of guest with maximum room charges.**

**select gname from room,guest**

**where guest.rno=room.rno**

**and rate=(select max(rate) from room);**

**5.**   **Display guest wise halt days.**

**Select gname,nod from guest**

**Order by gname;**

**SQL> Select gname,nod from guest**

**2  Order by gname;**

**Slip\_no 8:Q3. Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Book (Book\_no, title, author, price, year\_published) Customer (cid, cname, addr)**

**Relation between Book and Customer is Many to Many with quantity as descriptive attribute. Constraint: Primary key, price should be >0;**

**SQL> create table book(bno int primary key,title varchar(10),author varchar(20),**

**price int check(price>0),yp number);**

**Table created.**

**SQL> desc book;**

**SQL> insert into book values(101,'dreams','mr.Raj',150,2017);**

**1 row created.**

**SQL> insert into book values(102,'life','mr.Raghav',100,2019);**

**1 row created.**

**SQL> insert into book values(103,'rt story','mr.Gadhave',190,2011);**

**1 row created.**

**SQL> insert into book values(104,'Dad','dr.Sam',200,2001);**

**1 row created.**

**SQL> insert into book values(105,'Struggle','mr.Raj',250,2017);**

**1 row created.**

**SQL> insert into book values(106,'Joker','Mr. Talore',230,2011);**

**1 row created.**

**SQL> select \* from book;**

**6 rows selected.**

**SQL> create table customer(cid int primary key,cname varchar(20),addr varchar(20),bno int references book);**

**Table created.**

**SQL> desc customer;**

**SQL> insert into customer values(1,'Abhay','pune',101);**

**1 row created.**

**SQL> insert into customer values(2,'Sam','Mumbai',102);**

**1 row created.**

**SQL> insert into customer values(3,'Raghav','pimpri',103);**

**1 row created.**

**SQL> insert into customer values(4,'Abhay','mumbai',104);**

**1 row created.**

**SQL> insert into customer values(5,'Ganesh','Nashik',105);**

**1 row created.**

**SQL> select \* from customer;**

**SQL> create table customerbook(bcid int primary key,bno int references book,**

**cid int references customer);**

**Table created.**

**SQL> desc customerbook;**

**SQL> insert into customerbook values(11,101,1);**

**1 row created.**

**SQL> insert into customerbook values(12,102,2);**

**1 row created.**

**SQL> insert into customerbook values(13,101,3);**

**1 row created.**

**SQL> insert into customerbook values(14,103,1);**

**1 row created.**

**SQL> insert into customerbook values(15,106,4);**

**1 row created.**

**SQL> select \* from customerbook;**

**Consider the above tables and execute the following queries:**

**1.Display the name of book whose author is “Mr. Gadhave”.**

**SQL> select title from book**

**2  where author='mr.Gadhave';**

**2.Add column EMailId into customer table.**

**SQL> alter table customer**

**2  add emailID varchar2(20);**

**Table altered.**

**SQL> desc customer;**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display customer details from 'Mumbai'.**

**SQL> select \* from customer**

**2  where addr='mumbai';**

**2. Display author wise details of book.**

**SQL> select author,title from book**

**2  order by author;**

**6**      **rows selected.**

**3)Display customer name that has purchased more than 3 books.**

**SQL> select count(book.bno),cname from customer,book,customerbook**

**2  where customer.cid=customerbook.cid**

**3  and book.bno=customerbook.bno and book.bno>3**

**4  group by cname;**

**3.**   **Display book names having price between 100 and 200 and published**

**year is 2019.**

**SQL> select book.title from book,customer,customerbook**

**2  where customer.cid=customerbook.cid**

**3  and book.bno=customerbook.bno**

**4  and yp=2019 and price between 100 and 200;**

**TITLE**

**----------**

**life**

**5. Update the title of book to “DBMS” whose author is “Mr. Talore”.**

**SQL> update book set title='DBMS'**

**2  where author='Mr. Talore';**

**1 row updated.**

**SQL> select \* from book;**

**6 rows selected.**

**Slip\_no:9 Q3. Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Property (pno, desc, area, rate)**

**Owner (owner\_name, addr, phno) The relationship between owner and Property is One to Many. Constraint: Primary key, rate should be > 0**

**SQL>  create table property(pno int primary key,des varchar(20) not null,area varchar(20) not null,rate int check(rate>0));**

**Table created.**

**SQL> desc property;**

**SQL> insert into property values(101,'vegr','nashik',1030000);**

**1 row created.**

**SQL> insert into property values(102,'tr','Pune',100000);**

**1 row created.**

**SQL> insert into property values(103,'vbh','pune',1030000);**

**1 row created.**

**SQL> insert into property values(104,'vsdr','mumbai',20000);**

**1 row created.**

**SQL> insert into property values(105,'hjjr','nashik',10000);**

**1 row created.**

**SQL> select \* from property;**

**SQL> create table owner(name varchar(20),addr varchar(20),phno int,pno int references property);**

**Table created.**

**SQL> desc owner;**

**SQL> insert into owner values('Mr.Mane','Mumbai',1762386534,101);**

**1 row created.**

**SQL> insert into owner values('Mr.Patil','Mumbai',1762386534,102);**

**1 row created.**

**SQL> insert into owner values('Mr.Joshi','Pune',6892386534,103);**

**1 row created.**

**SQL> insert into owner values('Mr.Bhagat','Pune',6876783865,101);**

**1 row created.**

**SQL> insert into owner values('Mr.Abhay','Pune',6753386534,104);**

**1 row created.**

**SQL> select \* from owner;**

**Consider the above tables and execute the following queries:**

**1. Display area of property whose rate is less than 100000**

**SQL> select area from property**

**2  where rate>100000;**

**2.**   **Give the details of owner whose property** **is at “Pune”**

**SQL> select \* from owner**

**2  where addr='Pune';**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display area wise property details.**

**SQL> select area,des from property**

**2  order by area;**

**2.**   **Display property owned by 'Mr.Patil' having minimum rate.**

**SQL> select min(rate) from property,owner**

**2  where property.pno=owner.pno**

**3  and name='Mr.Patil';**

**3.**   **Delete all properties from “pune” owned by “Mr. Joshi”.**

**SQL> delete from owner**

**2  where addr='Pune' and name='Mr.Joshi';**

**1 row deleted.**

**SQL> select \* from owner;**

**4. Update the phone Number of “Mr. Joshi” to 9922112233 who is having property**

**at “Uruli Kanchan”**

**SQL> update owner set phno=9922112233**

**2  where addr='Urali Kanchan';**

**1 row updated.**

**SQL> select \* from owner;**

**5.Delete column address from Owner table.**

**Alter table owner**

**drop column addr;**

**slip\_no-10:Q3. Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Employee (emp\_no, name, skill, payrate)**

**Position (posting\_no, skill)**

**The relationship between Employee and Position is Many to Many with day and**

**shift as descriptive attribute. Constraint: Primary key, payrate should be > 0.**

**Connected.**

**SQL>  create table employee(eno int primary key,name varchar(20),skill varchar(20) not null,payrate int check(payrate>0));**

**Table created.**

**SQL> desc employee;**

**SQL> insert into employee values(1,'Rghav','manager',23000);**

**1 row created.**

**SQL> insert into employee values(2,'Mane','waiter',23000);**

**1 row created.**

**SQL> insert into employee values(3,'Priya','ceo',23000);**

**1 row created.**

**SQL> insert into employee values(4,'Abhay','chef',23000);**

**1 row created.**

**SQL> select \* from employee;**

**SQL> create table position(pno int primary key,skill varchar(20),eno int**

**references employee);**

**Table created.**

**SQL> desc position;**

**SQL> insert into position values(201,'mg',1);**

**1 row created.**

**SQL> insert into position values(203,'ceo',2);**

**1 row created.**

**SQL> insert into position values(202,'wt',3);**

**1 row created.**

**SQL> insert into position values(205,'wdf',4);**

**1 row created.**

**SQL> insert into position values(204,'whd',2);**

**1 row created.**

**SQL> select \* from position;**

**SQL> create table ep(epno int primary key,eno int references employee,pno int references position);**

**Table created.**

**SQL> desc ep;**

**SQL> insert into ep values(11,1,201);**

**1 row created.**

**SQL> insert into ep values(12,2,202);**

**1 row created.**

**SQL> insert into ep values(13,2,203);**

**1 row created.**

**SQL> insert into ep values(14,3,202);**

**1 row created.**

**SQL> insert into ep values(15,1,204);**

**1 row created.**

**SQL> select \* from ep;**

**Consider the above tables and execute the following queries:**

**1. Display skill of employees name wise.**

**SQL> select name,skill from employee**

**2  order by name;**

**2)Update the posting of employee to 220** **whose skill is “Manager”.**

**SQL> update position set pno=220**

**2  where skill='mg';**

**1 row updated.**

**SQL> select \* from position;**

**6 rows selected.**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1. Find the names and rate of pay of all employees who has allocated a duty.**

**SQL> select name,payrate from employee;**

**2. Give employee number who is working at posting\_no. 201, but don’t have the**

**skill of waiter**

**SQL> select employee.name,employee.skill from employee,position,ep**

**2  where employee.eno=ep.eno**

**3  and position.pno=ep.pno**

**4  and position.pno=201 and employee.skill not in('waiter');**

**no rows selected**

**3)Display a list of names of employees who have skill of chef and who has**

**assigned a duty.**

**select name from employee,position,ep**

**where employee.eno=ep.eno**

**and position.pno=ep.pno**

**and employee.skill='chef';**

**4.**   **Display shift wise employee details.**

**SQL> select name,employee.skill from employee,position,ep**

**2  where employee.eno=ep.eno**

**3  and position.pno=ep.pno**

**4  group by employee.skill,name;**

**no rows selected**

**5.**   **Update payrate of employees to 20000 whose skill is waiter.**

**SQL> update employee set payrate=20000**

**2  where skill='waiter';**

**1 row updated.**

**SQL> select \* from employee;**

**Slip\_no:11:Q3. Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Bill (billno, day, tableno, total)**

**Menu (dish\_no, dish\_desc, price)**

**The relationship between Bill and Menu is Many to Many with quantity as descriptive attribute.**

**Constraint: Primary key, price should be > 0.**

**SQL>  create table bill(bno int primary key not null,day varchar(10),tbno int,**

**total int);**

**Table created.**

**SQL> desc bill;**

**SQL> insert into bill values(301,'monday',109,1120);**

**1 row created.**

**SQL> insert into bill values(302,'sunday',123,9120);**

**1 row created.**

**SQL> insert into bill values(303,'tuesday',122,4200);**

**1 row created.**

**SQL> insert into bill values(304,'monday',176,2210);**

**1 row created.**

**SQL> select \* from bill;**

**SQL> create table menu(dno int primary key not null,ddes varchar(10), price int check(price>0),bno int references bill);**

**Table created.**

**SQL> desc menu;**

**SQL> insert into menu values(101,'veg',200,301);**

**1 row created.**

**SQL> insert into menu values(102,'non-veg',300,303);**

**1 row created.**

**SQL> insert into menu values(103,'non-veg',400,301);**

**1 row created.**

**SQL> insert into menu values(104,'veg',250,301);**

**1 row created.**

**SQL> insert into menu values(105,'non-veg',800,302);**

**1 row created.**

**SQL> insert into menu values(106,'veg',600,304);**

**1 row created.**

**SQL> select \* from menu;**

**6 rows selected.**

**SQL> create table bm(bmno int primary key,ddate varchar(10),bno int references bill,mno int references menu);**

**Table created.**

**SQL> desc bm;**

**SQL> insert into bm values(1,'12/02/10',301,102);**

**1 row created.**

**SQL> insert into bm values(2,'09/07/19',303,104);**

**1 row created.**

**SQL> insert into bm values(3,'02/06/11',302,101);**

**1 row created.**

**SQL> insert into bm values(4,'12/02/09',304,102);**

**1 row created.**

**SQL> select \* from bm;**

**Consider the above tables and execute the following queries:**

**1.**   **Display the tableno whose dish\_desc is “Veg”.**

**SQL> select tno from menu,bill,bm**

**2  where bill.bno=bm.bno**

**3  and menu.mno=bm.mno**

**4  and dis='veg';**

**2.**   **Display the special menu of Monday.**

**SQL> select dis from bill,menu,bm**

**2  where bill.bno=bm.bno**

**3  and menu.mno=bm.mno**

**4  and day='monday';**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display receipt which includes bill\_no with Dish description, price, quantity**

**and total amount of each menu.**

**SQL> select sum(bill.total),menu.dis,menu.price,bm.qunt from bill,menu,bm**

**2  where bill.bno=bm.bno**

**3  and menu.mno=bm.mno**

**4  group by menu.dis,menu.price,bm.qunt;**

**2)Find total amount collected by hotel on date 09/07/2019.**

**SQL> select sum(total) from bill,menu,bm**

**2  where bill.bno=bm.bno**

**3  and menu.mno=bm.mno**

**4  and ddate='09/07/19';**

**3)Count number of menus of billno 301**

**SQL> select count(dis) from bill,menu,bm**

**2  where bill.bno=bm.bno**

**3  and menu.mno=bm.mno**

**4  and bill.bno=301;**

**4)Display menu details having price between 100 and 500.**

**SQL> select dis,price from menu**

**2  where price between 100 and 500;**

**5. Display the tableno and day whose bill amount is zero.**

**SQL> select tno,day from bill**

**2  where total=0;**

**no rows selected**

**slip-no:12 Q3 Consider the following entities and their relationships. Create a**

**RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Movies (M\_name, release\_year, budget)**

**Actor (A\_name, role, charges, A\_address)**

**Producer (producer\_id, name, P\_address)**

**Relationship:- Each actor has acted in one or more movie. Each producer has produced many movies but each movie can be produced by more than one producers.**

**Each movie has one or more actors acting in it, in different roles.**

**Constraint: Primary key, release\_year > 2000, A\_address and P\_address**

**should not be same**.

**Consider the above tables and execute the following queries:**

**1. List the names of movies with the highest budget.**

**2. Display the details of producer who have produced more than one movie in a year.**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1. List the names of movies with the second highest budget 2. List the names of actors who have acted in the maximum number of movies.**

**3. List the names of movies, produced by more than one producer.**

**4. List the names of actors who are given with the maximum charges for their movie.**

**5. List the names of actors who have acted in at least one movie, in which ‘Akshay’ has acted.**

**Q3. Consider the following entities and their relationships. Create a RDB in 3 NF with appropriate data types and Constraints. [15 Marks]**

**Driver (driver\_id, driver\_name, address)**

**Car (license\_no, model, year)**

**Relation between Driver and Car is Many to Many with date and time as descriptive attribute.**

**Constraint: Primary key, driver\_name should not be null**

**SQL>  create table driver(did int primary key,dname varchar(10),addr varchar(10));**

**Table created.**

**SQL> desc driver;**

**SQL> insert into driver values(101,'Raghav','pune');**

**1 row created.**

**SQL> insert into driver values(102,'ram','mumbai');**

**1 row created.**

**SQL> insert into driver values(103,'Abhay','pune');**

**1 row created.**

**SQL> insert into driver values(104,'Ganesh','Nanded');**

**1 row created.**

**SQL> insert into driver values(105,'Ritik','Nashik');**

**1 row created.**

**SQL> select \* from driver;**

**SQL> create table car(lno varchar(10) primary key,model varchar(10),year number,did int references driver);**

**Table created.**

**SQL> desc car;**

**SQL> insert into car values('DPU123','w12b',1987,101);**

**1 row created.**

**SQL> insert into car values('DPU781','SUV300',2019,103);**

**1 row created.**

**SQL> insert into car values('DPU231','swif',2001,105);**

**1 row created.**

**SQL> insert into car values('DPU018','ty12',1999,102);**

**1 row created.**

**SQL> insert into car values('DPU810','nh79',2001,104);**

**1 row created.**

**SQL> select \* from car;**

**SQL> create table dc(dco int primary key,did int references driver,lno varchar(10) references car);**

**Table created.**

**SQL> desc dc;**

**SQL> insert into dc values(301,101,'DPU123');**

**1 row created.**

**SQL> insert into dc values(302,102,'DPU781');**

**1 row created.**

**SQL> insert into dc values(303,103,'DPU123');**

**1 row created.**

**SQL> insert into dc values(304,101,'DPU018');**

**1 row created.**

**SQL> insert into dc values(305,105,'DPU810');**

**1 row created.**

**SQL> select \* from dc;**

**Consider the above tables and execute the following queries:**

**1. Display the name of driver whose license no is “DPU123”.**

**SQL> select dname from driver,car,dc**

**2  where driver.did=dc.did**

**3  and car.lno=dc.lno**

**4  and car.lno='DPU123';**

**2.**   **Delete the details of car whose model is “swift”.**

**SQL> delete from car**

**2  where model='swif';**

**1 row deleted.**

**SQL> select \* from car;**

**Q4. Consider the above tables and execute the following queries: [25 Marks]**

**1.**   **Display details of all persons who are driving ‘Alto’ car**

**SQL> select dname from driver,car,dc**

**2  where driver.did=dc.did**

**3  and car.lno=dc.lno**

**4  and model='Alto';**

**2.Update model of car to “SUV300” whose manufactured year is 2019.**

**SQL> update car set model='SUV300'**

**2  where year=2019;**

**2 rows updated.**

**SQL> select \* from car;**

**6**      **rows selected.**

**3.Display car details manufactured before year 2000.**

**4.In which day ‘Mr. Ram’ drives maximum number of cars.**

**SQL> select count(car.model),dname from driver,car,dc**

**2  where driver.did=dc.did**

**3  and car.lno=dc.lno**

**4  and dname='ram'**

**5  group by dname;**

**5.Display total number of drivers who drives car in each year.**

**SQL> select count(driver.did),year,dname from driver,car,dc**

**2  where driver.did=dc.did**

**3  and car.lno=dc.lno**

**4  group by year,dname;**

**6 rows selected.**

**2013 Pattern Slips**

**Slip 1: Consider the following Entities and Relationships**

**Customer** (cust\_no, cust\_name, address, city)

**Loan** (loan\_no, loan\_amt)

         Relation between Customer and Loan is **Many to Many**

**Constraint:** Primary key, loan\_amt should be > 0.

Create table customer

(custnonumber(4) primary key,

cnamevarchar(20),dd

address varchar(20),

city varchar(20)

);

Insert into customer values(101,’bajirao’,’Maharastra chowk’,’Pimpri’);

Insert into customer values(102,’Seeta’,’Bhosari’,’Pimpri’);

Insert into customer values(103,’Geeta’,’Navi Peth’,’Nashik’);

Insert into customer values(104,’Sachin’,’Sagavi’,’Nashik’);

Create table loan

(loannonumber(4) primary key,

loanamtnumber(10) constraint loanchk check(loanamt>0)

);

Insert into loan values(201,’10000012’);

Insert into loan values(202,’32467236’);

Insert into loan values(203,’348118447’);

Insert into loan values(204,’342349223’);

Insert into loan values(205,’5697689122’);

Create table cl

(custnonumber(4) references customer(custno),

loannonumber(4) references loan(loanno));

Insert into cl values (101,201);

Insert into cl values (101,202);

Insert into cl values (102,203);

Insert into cl values (104,205);

Insert into cl values (103,201);

·        Find details of all customers whose loan is greater than 10 lakhs.

Select distinct cname,address,city,loanamt

From customer,loan,cl

Where customer.custno=cl.custno and

    loan.loanno=cl.loanno and

    loanamt> 1000000;

·        List all customers whose name starts with 'ba'.

Select distinct cname

From customer,loan,cl

Where cname like 'ba%' and

customer.custno=cl.custno and

    loan.loanno=cl.loanno ;

·        Display details of customer maximum loan amount.

Select distinct customer.custno,cname,address,city,loanamt

From customer,loan,cl

Where customer.custno=cl.custno and

    loan.loanno=cl.loanno and

loanamt=(select max(loanamt) from loan);

·        Calculate total of all loan amount

Select sum(loanamt)

from customer, loan, cl

where  customer.custno=cl.custno and

    loan.loanno=cl.loanno;

·        List names of all customers in descending order who has taken a loan in Nasik city.me

Select distinct cname,city

From customer,loan,cl

Where customer.custno=cl.custno and

    loan.loanno=cl.loanno and

       city=’Nashik’ order by cnamedesc;

**Slip 2 Consider the following Entities and Relationships**

**Department** (dept\_no, dept\_name, location)

**Employee** (emp\_no, emp\_name, address, salary, designation)

        Relation between Department and Employee is **One to Many**

**Constraint:** Primary key, salary should be > 0

Create table dept

(dnonumber(4) primary key,

Dnamevarchar(20),

location varchar(20));

insert into dept values(101,’computer’,’pune’);

insert into dept values(102,’finance’,’pimpri’);

insert into dept values(103,’computer’,’nashik’);

insert into dept values(104,’warehouse’,’pune’);

insert into dept values(105,’account’,’bhosali’);

create table emp11

(enonumber(4) primary key,

enamevarchar(20),

address varchar(20),

salary number(6) constraint salch11 check (salary>0),

designation varchar(20),

dnonumber(4) references dept(dno));

insert into emp11 values(201,’seema’,’Pimpri’,’10253’,’Manager’,’101’);

insert into emp11 values(202,’alok’,’pimpri’,’356854’,’HR’,’102’);

insert into emp11 values(203,’anil’,’nashik’,’45854’,’IT’,’103’);

insert into emp11 values(204,’rahul’,’pune’,’56253’,’HR’,’104’);

insert into emp11 values(205,’atual’,’bhosali’,’1253’,’Supervicer’,’105’);

insert into emp11 values(206,’geeta’,’Pimpri’,’10223’,’Manager’,’101’);

**write queries for following.**

·  Find total salary of all computer department employees.

Select sum(salary)as total\_salary

From emp, dept

Where emp.dno=dept.dno and

       dname=’computer’;

·  Find the name of department whose salary is above 10000.

Select distinct dname,salary

Fromemp, dept

          wheredept.dno=emp.dno and

                 salary>10000;

·  Count the number of employees in each department.

Select dname,count(\*) as count

from emp,dept

wheredept.dno=emp.dnogroup by dname;

·  Display the maximum salary of each department.

select max(salary),dname from emp,dept

where dept.dno=emp.dno group by dname;

·  Display department wise employee list.

select distinctdname, ename

from emp, dept

wheredept.dno=emp.dnoorder by dname;

**Slip 3 Consider the following Entities and Relationships**[30 Marks]

**Project** (pno, pname, start\_date, budget, status)

**Department**(dno, dname, HOD)

Relation between Project and Department is **Many to One**

**Constraint:** Primary key.

                      Project Status Constraints: C – completed,

                      P-Progressive, I-Incomplete

create table dep1

(dnonumber(4)primary key,

dnamevarchar(20),

HOD varchar(10)

);

insert into dep1 values (101,'computer','Mr.Desai');

insert into dep1 values(102,'math','sanjay');

insert into dep1 values(103,'computer','rohit');

insert into dep1 values(104,'stat','pawar');

insert into dep1 values(105,'electronics','rakesh');

create table pro1

(pnonumber(4)primary key,

pnamevarchar(20),

sdate date,

budget number(5),

status varchar(25),

dnonumber(4) references dep1(dno));

insert into pro1 values(1,'mathematics',’1 mar 2013’,’500000’,'C',102);

insert into pro1 values(2,'cost',’23 feb 2014’,’3437’,'I',104);

insert into pro1 values(3,'mathematics',’3 apr 2011’,’2345096’,'P',102);

insert into pro1 values(4,'eng',’11 Nov 2013’,’23431’,’C’,105);

insert into pro1 values(5,’programming',’14 oct 2011’,’23453’, 'C',101);

**Create a Database in 3NF & write queries for following.**

·        List the project name and department details worked in projects that are ‘Complete’.

select pname,dname,HOD,status from dep1,pro1

where dep1.dno=pro1.dno and

status=’C’;

·        Display total budget of each department.

Select dname, sum(budget) from dep1,pro1

where dep1.dno=pro1.dno group by dname;

·        Display incomplete project of each department

Select dname, status from dep1,pro1

Where status=’I’and

 dep1.dno=pro1.dno group by dname,status;

·        Find the names of departments that have budget greater than 50000

Select dname,  budget from dep1,pro1

Where budget> 50000 and

 dep1.dno=pro1.dno;

·        Display all project working under 'Mr.Desai'.

Select pname from dep1,pro1

Where HOD='Mr.Desai' and

 dep1.dno=pro1.dno;

**Slip 4**

**Consider the following Entities and Relationships**[30 Marks]

**Room** (roomno, desc, rate)

**Guest** (gno, gname, no\_of\_days)

Relation between Room and Guest is **One to One**.

**Constraint:** Primary key, no of days should be > 0.

create table room

(rnonumber(4)primary key,

roomtypevarchar(20),

rate varchar(10));

insert into room values(1,'ac',500);

insert into room values(2,'nonac',1500);

insert into room values(3,'ac',300);

insert into room values(4,'ac',800);

insert into room values(5,'nonac',600);

create table guest

(gnonumber(4),

gnamevarchar(10),

no\_of\_daysvarchar(22) constraint no\_day check(no\_of\_days>0));

insert into guest values(1,'akshay',5);

insert into guest values(2,'sanjay',3);

insert into guest values(3,'raje',1);

insert into guest values(4,'rohit',5);

insert into guest values(5,'mane',4);

**Create a Database in 3NF & write queries for following.**

·        Display room details according to its rates  in ascending order.

select \* from room order by rateasc;

·        Find the names of guest who has allocated room for more than 3 days

select  distinctgname from guest

 where no\_of\_days>3;

.

·        Find no. of AC rooms.

select distinct rno,roomtype from room,guest

 where guest.gno=room.rno and

roomtype=’ac’;

·        Display total amount for NON-AC rooms.

select roomtype, sum(rate) from room

 where roomtype=’nonac’ group by roomtype;

·        Find names of guest with maximum room charges.

select gnamefromguest,room

where guest.gno=room.rno and

rate=( select max(rate) from room);

**Slip  5Consider the following Entities and Relationships**[30 Marks]

**Book** (Book\_no, title, author, price, year\_published)

**Customer** (cid, cname, addr)

        Relation between Book and Customer is **Many to Many** with quantity as

        descriptive attribute.

**Constraint:** Primary key, price should be >0.

create table book

(bnonumber(4) primary key,

title varchar(20),

author varchar(20),

price number(5) constraint prchk check(price>0),

pu\_yearnumber(4)

);

Insert into book values(101,’C programming’, ’Yashwant Kantekar’,’524’,’1995’);

Insert into book values(102,’Database’,’Korth’,’124’,’2013’);

Insert into book values(103,’Finance Accounting’,’Sachin’,’322’,’2014’);

Insert into book values(104,’OB’,’Alok’,’824’,’2015’);

Insert into book values(105,’E Commerce’,’Khan’,’254’,’2012’);

Create table cust

(cidnumber(4) primary key,

cnamevarchar(20),

addrvarchar(20)

);

Insert into cust values(201,’alok’,’pune’);

Insert into cust values(202,’atual’,’pimpri’);

Insert into cust values(203,’neetin’,’pune’);

Insert into cust values(204,’seema’,’hadapsar’);

Insert into cust values(205,’geeta’,’bhosari’);

Create table bc1

(bnonumber(4) references book(bno),

cidnumber(4) references cust(cid),

quantity number(3)

);

Insert into bc1values(101,201,3);

Insert into bc1values(102,202,2);

Insert into bc1values(103,203,4);

Insert into bc1values(104,204,1);

Insert into bc1values(105,205,30);

**Create a Database in 3NF & write queries for following.**

·        Display customer details from 'Pune’.

select \* from cust

where addr =’pune’;

·        Display author wise details of book.

Select author,bno,title,price,pu\_year

from book order by author;

·        Display all customers who have purchased the books published in the year 2013.

Select cname,pu\_year

From cust,book,bc1

wherecust.cid=bc1.cid and

book.bno=bc1.bno and

        pu\_year=’2013’;

·        Display customer name that has purchased more than 3 books.

Select distinct cname,title, quantity fromcust,book,bc1

Where cust.cid=bc1.cid and

book.bno=bc1.bno and

quantity>3;

·        Display book names having price between 100 and 200 and published in the year 2013.

select title,price

frombook

where   price between 100 and 200 and

pu\_year=’2013’;

**Slip 6**

**Property** (pno, desc, area, rate)

**Owner** (owner\_name, addr, phno)

Relation between owner and Property is **One to Many**.

**Constraint:** Primary key, rate should be > 0

**Create a Database in 3NF & write queries for following.**

create table property1

  (pnonumber(4) primary key,

desvarchar(20),

areavarchar(20),

rate number(10) constraint rtchk1 check(rate>0)

);

insert into property1 values(1,’landline’,’chinchwad’,’10000’);

insert into property1 values (2,’House’,’chinchwad’,’10450’);

insert into property1 values (3,’landline’,’pune’,’10540’);

insert into property1 values (4,’Agriculturalland’,’hdapsar’,’14500’);

insert into property1 values (5,’House’,’pune’,’10626’);

create table owner1

  (ownernamevarchar(20),

addressvarchar(20),

phnonumber(10),

pnonumber(4) REFERENCES property1(pno));

insert into owner1 values('patil','chinchwad',1234567,1);

insert into owner1 values('seema','chinchwad',45342333,2);

insert into owner1 values('seeta','pune',12334237,3);

insert into owner1 values('suhas','hadapsar',123213567,4);

insert into owner1 values('patil','pune',1234567,5);

insert into owner1 values('seeta','pune',12334237,2);

·        Display area wise property details

Select distinct area,ownername,des,rate from  property, owner

Where property.pno=owner.pno order by area;

·        Display property owned by 'Mr.Patil' having minimum rate.

Select distinct desfrom property1, owner1

Where property1.pno=owner1.pnoand

rate=(select min(rate) from property1, owner1

Where property1.pno=owner1.pno and ownername=’patil’);

·        Display all properties with owner name that having highest rate of properties located in Chinchwad area.

Select distinct ownername,des from  property1, owner1

Where property1.pno=owner1.pno and

rate=(select max(rate) from property1 where area=’chinchwad’ );

·        Display owner name having maximum no. of properties

Select distinct ownername, count(\*) from property1, owner1

Where property1.pno=owner1.pno group by ownername

Having max(owner1.pno)= (select count (\*) from property1);

**Slip 7**

**Employee** (emp\_no, name, skill, payrate, workdate)

**Position** (posting\_no, skill)

Relation between Employee and Position is **Many to Many** with day and shift as descriptive attribute.

**Constraint:** Primary key, payrate should be > 0

create table employee11

  (enonumber(4) primary key,

namevarchar(15),

skillvarchar(15),

payratenumber(10) constraint paychk check (payrate>0),

workdate date

);

Insert into employee11 values(1,’seema’,’manager’,25423,’1 Mar 2010’);

Insert into employee11 values(2,’sheeta’,’supervisor’,56478,’2 Feb 2012’);

Insert into employee11 values(3,’geeta’,’cleark’,65423, ’13 Dec 1999’);

Insert into employee11 values(4,’suhas’,’chef’,55423, ’21 Nov 2013’);

Insert into employee11 values(5,’sachin’,’waiter’,27423, ’11 Oct 2012’);

create table **position**

(pnonumber(4) primary key,

skillvarchar(15)

);

Insert into position values(201,’manager’);

Insert into positionvalues(202,’supervisor’);

Insert into position values(203,’cleark’);

Insert into positionvalues(204,’chef’);

Insert into positionvalues(205,’waiter’);

Create table ep

(enonumber(4) references employee11(eno),

pnonumber(4) references position(pno),

dayvarchar(10),

shiftvarchar(10)

);

Insert into ep values (1,201,’Monday’,’allocate’);

Insert into ep values (2,202,’Tuesday’,’notallocat’);

Insert into ep values (3,203,’Friday’,’allocate’);

Insert into epvalues (4,204,’Monday’,’allocate’);

Insert into ep values (5,205,’Friday’,’notallocat’);

**Create a Database in 3NF& write queries for following.**

·  Find the names and rate of pay all employees who allocated a duty.

Select distinct name,payrate from position, employee11,ep

Where employee11.eno=ep.eno and

**position**.pno=ep.pno and

shift=’allocate’;

·  Give employee number who are working at posting\_no. 201, but don’t have the skills of waiter.

Select *ep.eno from position,* employee11,ep

Where employee11.eno=ep.eno and

**position**.pno=ep.pno and

**ep**.pno=’201’ and

position.skill<>’waiter’;

·  Display a list of names of employees who have skill of chef and who has assigned a duty.

Select name from position, employee11,ep

Where employee11.eno=ep.eno and

**position**.pno=ep.pno and

**position**.skill=’chef’ and

shift=’allocate’;

·  Display emp\_no and dates for all employees who are working on Tuesday and at least one other day.

Select ep.eno,  workdate from position*,* employee11,ep

Where employee11.eno=ep.eno and

**position**.pno=ep.pno and

day in (’Tuesday’,’Friday’);

·  Display shiftwise employee details.

Select shift,ep.eno, name,position.skill,workdate from position*,* employee11,ep

Where employee11.eno=ep.eno and

**position**.pno=ep.pno order by shift;

**Slip 8**

**Bill** (billno, day, tableno, total)

**Menu** (dish\_no, dish\_desc, price)

Relation between Bill and Menu is **Many to Many** with quantity as descriptive attribute.

**Constraint:** Primary key, price should be > 0.

create table bill

(bnonumber(4) primary key,

day date,

tablenonumber(4),

total number(7)

);

Insert into bill values(301,’8 Jan 2013’,1,1000);

Insert into bill values(302,’1 Dec 2013’,2,1020);

Insert into bill values(303,’23 Feb 2014’,3,3424);

Insert into bill values(304,’8 Jan 2013’,2,2422);

Insert into bill values(305,’30 Nov 2013’,6,1000);

create table menu

(dnonumber(4) primary key,

ddescvarchar(20),

price number(5) constraint pchk check(price>0)

);

Insert into menu values(211,’Pav Bhaji’,600);

Insert into menu values(212,’Panner Mahkanwala’,634);

Insert into menu values(213,’Roti’,20);

Insert into menu values(214,’Kaju Masala’,345);

create table bm1

(bnonumber(4) references bill(bno),

dnonumber(4) references menu(dno),

quantity number(10));

Insert into bm1values(301,211,3);

Insert into bm1values(302,212,2);

Insert into bm1values(302,213,4);

Insert into bm1values(303,214,1);

Insert into bm1values(303,213,5);

Insert into bm1values(304,212,1);

Insert into bm1values(304,213,4);

**Create a Database in 3NF & write queries for following.**

·        Display receipt which includes bill\_no with Dish description, price, quantity and total amount of each menu.

Select bm1.bno,ddesc,price,total, quantity from bill,menu,bm1

Where bm1.bno=bill.bno and

bm1.dno=menu.dno order by ddesc;

·        Find total amount collected by hotel on date 08/01/2013

Select sum (price) from bill,menu,bm1

Where bm1.bno=bill.bno and

bm1.dno=menu.dno and

day=’8 Jan 2013’;

·        Count number of menus of billno 301.

Select count(bm1.dno) from bill,menu,bm1

Where bm1.bno=bill.bno and

bm1.dno=menu.dno and

bm1.bno=’301’;

·        Display menu details having   price between 100 and 500.

Select bm1.bno,ddesc,price,total from bill,menu,bm1

Where bm1.bno=bill.bno and

bm1.dno=menu.dno and

price between 100 and 500;

·        Display total number of bills collected from each table on 01/12/2013.

Select count (bm1.bno), tableno from bill,menu,bm1

Where bm1.bno=bill.bno and

bm1.dno=menu.dno and

day=’1 Dec 2013’ group by tableno;

**Slip 9**

**Musician** (mno, mname, addr, phno)

**Album** (title, copy\_right\_date, format)

Relation between Musicians and Album is **One to Many**.

**Constraint:** Primary key.

create table musician

  (mnonumber(4) primary key,

namevarchar(20),

addrvarchar(20),

phnonumber(10)

);

insert into musician values (1,'A RRehman','Pune',123456);

insert into musician values (2,'Arijit Singh’,'Bombay',2323413);

insert into musician values (3,’Nihira Joshi’,'Nashik',344553);

insert into musician values (4,’Anu Malik’,'Pune',12324231);

create table album

  (titlevarchar(20),

codate date,

formatvarchar(20),

mnonumber(4) REFERENCES musician(mno));

insert into album values('track1','2 March 2010','audio',1);

insert into album values('track2','30 Nov 2012','video',2);

insert into album values('track2','22 Jan 1999','video',3);

insert into album values('track3','22 Jan 1999','audio',4);

insert into album values('track5','4 Jun 1889','video',3);

**Create a Database in 3NF & write queries for following.**

·        Display all albums composed by ‘A R Rehman’.

Select title from musician, album

Where musician.mno=album.mno and

name='A RRehman';

·        Display musician details who have composed Audio album.

Select distinct name,addr,phno,title,codate,format from musician, album

Where musician.mno=album.mno and

Format=’audio’;

·        Find all musicians who have composed maximum albums.

select name, format from musician, album

Where musician.mno=album.mno and title=(select max(title)from album);

Select name,count(\*) from musician,album

Where musician.mno=album.mno group by name

Having max(album.mno)= (select count (\*) from album);

·        Display musician wise album details.

Select name,title from musician, album

Where musician.mno=album.mno order by name;

**Slip 10**

**Consider the following Entities and Relationships**[30 Marks]

**Sailor** (sid, sname, age)

**Boats** (bid, bname, color)

Relation between Sailer and Boats is **Many to Many** with day as descriptive attribute.

**Constraint:** Primary key, age should be > 0.

Create table sailor

(sidnumber(4) primary key,

snamevarchar(10),

age number(5) constraint ack check(age>0)

);

Insert into sailor values(101,’ram’,34);

Insert into sailor values(102,’alok’,44);

Insert into sailor values(103,’surya’,42);

Insert into sailor values(104,’priti’,37);

Insert into sailor values(105,’atual’,41);

Create table boats

(bid number(4) primary key,

bnamevarchar(10),

color varchar(10)

);

Insert into boats values(201,’Hindustan’,’blue’);

Insert into boats values(202,’ABC’,’red’);

Insert into boats values(203,’XYZ’,’black’);

Insert into boats values(204,’Joshi’,’blue’);

Insert into boats values(205,’PQR’,’green’);

Create table sb

( sid number(4) references sailor(sid),

          bid number(4) references boats(bid),

          day varchar(10)

);

Insert into sb values(101,201,’Sunday’);

Insert into sb values(102,202,’Friday’);

Insert into sb values(103,203,’Tuesdy’);

Insert into sb values(104,204,’Monday’);

Insert into sb values(105,205,’Friday’);

Insert into sb values(105,202,’Sunday’);

**Create a Database in 3NF & write queries for following.**

·        Display details of all boats sailed by sailor ‘Ram’.

Select sb.bid,bname,color from sb,boats,sailor

Where sb.bid=boats.bid and

sb.sid =sailor.sid and

sname=’ram’;

·        Display Sailor names working on blue boat.

Select sname from sb,boats,sailor

Where sb.bid=boats.bid and

sb.sid =sailor.sid and

color=’blue’;

·        Count number of boats sailed by each sailor.

Select sname,count(\*) from sb,boats,sailor

Where sb.bid=boats.bid and

sb.sid =sailor.sid group by sname;

·        Find the name of sailor who sailed the boat on both Tuesday & Friday.

Select sname,day from sb,boats,sailor

Where sb.bid=boats.bid and

sb.sid =sailor.sid and

day in (’Tuesdy’,’Friday’);

·        Display details of the boats which is sailed maximum times on Sundays.

Select distinct bname, count(\*) from sb,boats,sailor

Where sb.bid=boats.bid and

sb.sid =sailor.sidand day=’Sunday’ group by bname

having max(boats.bid)=(select count(\*)from sp);

**Slip 11:-**

**Supplier** (sid, sname, addr)

**Parts** (pid, pname, pdesc)

Relation between Supplier and Parts is **Many to Many** with cost as descriptive attribute.

**Constraint:**Primary key, cost should be > 0.

create table supplier1

(snonumber(4) primary key,

snamevarchar(20),

addrvarchar(20)

);

insert into supplier1values(201,’Mr Pawar’,’Mumbai’);

insert into supplier1values(202,’Mr Suhas’,’Pune’);

insert into supplier1values(203,’Mr Sachin’,’Nashik’);

insert into supplier1values(204,’Miss Sonali’,’Mumbai’);

insert into supplier1values(205,’Miss Geeta’,’Pune’);

create table parts1

(pnonumber(4) primary key,

pnamevarchar(20),

desvarchar(20)

);

insert into parts1 values(301,’wheel’,’rounded’);

insert into parts1 values(302,’pencil’,’natraj’);

insert into parts1 values(303,’tire’,’plated’);

insert into parts1values(304,’break line’,’steel’);

insert into parts1 values(305,’skrew’,’rounded’);

create table sp1

(snonumber(4) references supplier1(sno),

pnonumber(4) references parts1(pno),

price number(5) constraints pck1 check(price>0)

);

insert into sp1values(201,301,500);

insert into sp1 values(202,302,40);

insert into sp1values(203,303,1200);

insert into sp1values(204,304,300);

insert into sp1values(205,305,20);

**Create a Database in 3NF & write queries for following.**

·        Display Supplier details from 'Mumbai' city.

Select \* from supplier1

Where addr=’Mumbai’;

·        Update cost by 25 % for all parts supplied by supplier ‘Mr. Pawar’.

update sp1Set price=price+(0.5)

Where sp1.sno=(select sp1.sno from supplier1, sp1

Where supplier1.sno=sp1.sno and

sname=’MrPawar’);

·        Display all parts supplied by each supplier.

Select pname,sname from supplier1,parts1,sp1

Where supplier1.sno=sp1.sno and

parts.pno=sp1.pno group by pname,sname;

·        Display details of parts which are supplied at maximum price by each supplier.

Select distinct sname,max(price) from supplier1,parts1,sp1

Where supplier1.sno=sp1.sno group by  sname;

·        Display all suppliers who supply part ‘wheel’ and also display its cost.

Select sname,price from supplier1,parts1,sp1

Where supplier1.sno=sp1.sno and

parts1.pno=sp1.pno and

pname=’wheel’;

**Slip 12:-**

**Medical\_store** (mno, mname, city, phno)

**Drug** (dno, dname, type, company, price)

Relation between Medical\_store and Drug as **Many to Many** with quantity as descriptive attribute.

**Constraint:** Primary key, price should be > 0.

**Create a Database in 3NF & write queries for following.**

create table medst

(mnonumber(4) primary key,

mnamevarchar(20),

cityvarchar(20),

phnonumber(10)

);

Insert into medst values(101,’Sai medical’,’Pune’,1234567);

Insert into medst values(201,’Priti medical’,’Pimpri’,234567);

Insert into medst values(301,’Om medical’,’Hadpsar’,3456789);

Insert into medst values(401,’Surbhi medical’,’Pimpri’,4567890);

Insert into medst values(501,’Sai medical’,’Nashik’,5678912);

create table drug

(dnonumber(4) primary key,

dnamevarchar(20),

typevarchar(20),

companyvarchar(10),

price number(5) constraint pcheck1 check(price>0)

);

Insert into drug values(211,’Omini’,’Acidity’,’SunPharma’,40);

Insert into drug values(311,’Crocin’,’sardi’,’ABC’,32);

Insert into drug values(411,’Crocin’,’Flue’,’XYZ’,35);

Insert into drug values(511,’Calcium’,’Pain’,’ABC’,120);

Insert into drug values(611,’Action 500’,’Sardi’,’SunPharma’,40);

Create table md1

(mnonumber(4) references medst(mno),

dnonumber(4) references drug(dno),

quantity number(4)

);

Insert into md1values(101,211,1);

Insert into md1values(201,311,2);

Insert into md1values(301,411,1);

Insert into md1values(401,511,5);

Insert into md1values(501,611,3);

Insert into md1values(101,311,4);

Insert into md1 values(501,311,2);

·        Update price of drug   by 5 %  of  'ABC' Company.

Update drug set price=price+(0.05)

Where drug.dno=(select md1.dno from medst,drug,md1

Where medst.mno=md1.mno and

drug.dno=md1.dno and company =’XYZ’);

·        Display names of all medical store where ‘Crocin’ is available.

SelectDISTINCT company from medst,drug,md1

Where medst.mno=md1.mno and

drug.dno=md1.dno and

dname=’Crocin’;

·        Count total number of drug of ‘SunPharma’ company in ‘Sai medical’ store.

Select count(md1.dno) from medst,drug,md1

Where medst.mno=md1.mno and

drug.dno=md1.dno and

mname=’Sai medical’ and

company =’SunPharma’;

·        Delete all drugs supplied by ‘SunPharma‘

Delete from(select \* from drug inner join md1 on drug.dno=md1.dno andcompany =’SunPharma’);

Delete from drug where company =’SunPharma’;

delete from drug

Where dno=(select md1.dno from medst,drug,md1

Where medst.mno=md1.mno and

drug.dno=md1.dno and

mname=’Om medical’ and company =’XYZ’);

·        Display the details of medical store having maximum quantity of Crocin.

select mname, count(\*) from medst,drug,md1

Where medst.mno=md1.mno and

drug.dno=md1.dno group by mname

having max(md1.mno)=(select count(\*) from medst,drug

where dname=’Crocin’);

**Slip 13:-**

**Account** (ano, branchname, balance)

**Customer** (cust\_no, cust\_name, street, city)

Relation between Account and Customer is **Many to Many**.

**Constraint:** Primary key, balance should be > 500.

Create table account

(anonumber(4) primary key,

bnamevarchar(20),

balnumber(7) constraint bchk check(bal>0)

);

Insert into account values(101,’Chinchwad’,’1098453’);

Insert into account values(102,’Pune’,’239843’);

Insert into account values(103,’Pimpri’,’342333’);

Insert into account values(104,’Chinchwad’,’1098453’);

Insert into account values(105,’Mumbai’,’3458453’);

Insert into account values(106,’Pune’,’34’);

Create table cus

(cnonumber(4) primary key,

cnamevarchar(20),

streetvarchar(10),

cityvarchar(10)

);

Insert into cusvalues(201,’alok’,’XYZ road’,’Mumbai’);

Insert into cusvalues(202,’ram’,’PQR road’,’Pune’);

Insert into cusvalues(203,’geeta’,’Ring road’,’Pimpri’);

Insert into cusvalues(204,’raju’,’NPM road’,’Mumbai’);

Insert into cusvalues(205,’sham’,’ASD road’,’Chimchwad’);

Create table ac

(accnonumber(4) references account(accno),

cnonumber(4) references cus(cno)

);

Insert into ac values(101,201);

Insert into ac values(104,204);

Insert into ac values(102,202);

Insert into ac values(103,203);

Insert into ac values(105,205);

Insert into ac values(101,202);

Insert into ac values(101,204);

Insert into ac values(106,204);

**Create a Database in 3NF & write queries for following.**

·        Display customer details with balance between  100000 and 200000.

Select ac.cno,cname,street,city,bal from account,cus,ac

Where ac.cno=cus.cno and

account.ano=ac.ano and

bal between 1000000 and 2000000;

·        Display customers having more than two accounts in Chinchwad branch.

Select cname,count(account.ano) from account,cus,ac

Where bname=’Chinchwad’ and

ac.cno=cus.cno and

account.ano=ac.ano group by cname,bname

having count(account.ano)>=2;

·        Delete account whose balance is below the balance <500.

Delete from

(select \* from account inner join ac on account.accno=ac.accno where balance<500);

·        Select names of all Customers whose street name include the substring “road” and whose city is ‘Mumbai’.

Select cname,street from cus

Where city=’Mumbai’ and street like '%road%';

Find number of depositor for each branch.

Select cname,count(\*)  from account,cus,ac

Where ac.cno=cus.cno and

account.ano=ac.ano group by cname;

Slip 14

**Consider the following Entities and Relationships**[30 Marks]

**Branch** (bname ,bcity ,assets)

**Loan** (loan\_no, amount)

Relation between Branch and Loan is **One to Many**.

**Constraint:** Primary key, amount and assets should be > 0.

**Branch** (bname ,bcity ,assets)

**Loan** (loan\_no, amount)

Create table branch

(bnonumber(4) primary key,

bnamevarchar(10),

bcityvarchar(10),

asetsnumber(10) constraints aschk check(asets>0)

);

Insert into branch values(101,’DYP’,’Mumbai’,20000);

Insert into branch values(201,’BOI’,’Pune’,23430);

Insert into branch values(301,’BOB’,’Nashik’,34200);

Insert into branch values(401,’SBI’,’Mumbai’,435210);

Insert into branch values(501,’BOM’,’Pune’,453420);

Create table loan1

(lnonumber(4) primary key,

amount number(10) constraints achk check(amount>0),

bnonumber(4) references branch(bno)

);

Insert into loan1 values(301,2341,101);

Insert into loan1 values(302,3341,201);

Insert into loan1 values(303,2312,301);

Insert into loan1 values(304,2123,401);

Insert into loan1 values(305,900,501);

Insert into loan1 values(306,500,501);

**Create a Database in 3NF & write queries for following.**

·        Display total loan amount given by DYP branch.

Select amount,bname from branch, loan1

Where branch.bno=loan1.bno and

bname=’DYP’;

·        Find total number of loans given by each branch.

Select bname,count(\*) from branch, loan1

Where branch.bno=loan1.bno group by bname;

·        Find the name of  branch that have maximum assets located in Mumbai.

Select bname,bcity from branch, loan1

Where branch.bno=loan1.bno and

asets=(select max(asets) from branch where

bcity=’Mumbai’);

·        Display loan details in descending order of their amount.

 select loan1.bno,bname,bcity,asets,amount from branch,loan1

 where branch.bno=loan1.bno order by amountdesc;

·        Display all branches located in Mumbai, Pune and Nasik.

select bname,bcity from branch,loan1

 where branch.bno=loan1.bno and

bcity in ('Mumbai','Pune','Nashik');

**Slip15**

**Consider the following Entities and**

**Relationships**

**Employee (eno, ename, deptname, salary)**

**Project (pno, name, budget)**

**Relation between Employee and Project is Many to Many.**

**Constraint: Primary key, salary should be > 0.**

**Solution:-**

**Create a Database in 3NF & write queries for following.**

**+List the name of employee and department having salary >**

**50000.**

**SQL>select ename ,dname from Employee where salary >50000;**

**+List names of all employees who works with ‘Ramesh’ on same**

**project.**

**SQL> select ename ,pname from Employee,project ,ep where**

**employee.eno=ep.eno and project.pno=ep.pno and**

**ename=’Ramesh’;;**

**-Find the names of employees who are working on project having**

**budget greater than 30000.**

**SQL>select ename ,pname,budget from Employee,project ,ep**

**where employee.eno=ep.eno and project.pno=ep.pno and**

**budget>300000;**

**List name of department that have at least two projects under**

**them.**

**SQL>select dname,pname from Employee,project ,ep where**

**employee.eno=ep.eno and project.pno=ep.pno group by**

**dname,pname having count(project.pname)>2;**

**-Updatebudget of a project done by employees of Computer**

**Department by 15%.**

**SQL>**

**Slip16**

**Consider the following Entities and**

**Relationships**

**Branch (bno, bname, bcity, assets)**

**Account (acc\_no ,balance)**

**Relation between Branch and Account is One**

**to Many.**

**Constraint: Primary key, balance and assets**

**should be > 0.**

**Solution:-**

**Create a Database in 3NF & write queries for**

**following.**

**\*Find the maximum account balance of**

**each branch.**

**SQL>Select max(balance),bname from**

**branches,accounts where**

**branches.bno=accounts.bno group by bname;**

**\*Find branches where average account**

**balance is more than 30000.**

**SQL>Select avg(balance) from**

**branches,accounts where**

**branches.bno=accounts.bno and balance**

**>30000;**

**\*Find names of all branches that have**

**assets value greater than that of each**

**branch in ‘pune’.**

**SQL>Select max(assets),bname from**

**branches,accounts where**

**branches.bno=accounts.bno and bcity=’pune’**

**group by bname;**

**\*Decrease 3% balance on account whose**

**balance is greater than 100000.**

**SQL> Update accounts set balance=balance-**

**balance\*0.03 where balance >3000;**

**\*Display details of branchwhose city**

**starts from ‘A’.**

**SQL>select \* from branches where bcity like**

**Slip17**

**Consider the following Entities and**

**Relationships**

**Donor (donor\_no, donor\_name, city)**

**Blood\_Donation(bid,blood\_group,quantity,date\_of\_collection)**

**Relation between Donor and Blood\_Donation is One to Many.**

**Constraint: Primary key, blood\_group should not be null.**

**Solution:-**

**Create a Database in 3NF & write queries for following.**

**\*Display total blood quantity collected on 25th December**

**2013.**

**SQL>Select sum(quantity)from Blood\_Donation where**

**date\_of\_collection='25-12-2013';**

**\*Display total blood donated by each donor.**

**SQL>select donor\_name,sum(quantity) from**

**Blood\_Donation,Donor where**

**Blood\_Donation.donor\_no=Donor.donor\_no group by**

**donor\_name;**

**\*Display Donor details having blood group 'A+tve'.**

**SQL>Select donor\_name,city from Donor, Blood\_Donation**

**where Donor .donor\_no= Blood\_Donation .donor \_no and**

**blood\_group= 'A+VE’;**

**\*Display the donor who has donated blood more than two**

**times.**

**SQL>Select donor\_name from Donor, Blood\_Donation where**

**Donor.donor\_no=Blood\_Donation.donor\_no and**

**Blood\_Donation. donor\_no>=2;**

**SQL>Select donor\_name from Donor, Blood\_Donation where**

**Donor.donor\_no=Blood\_Donation.donor\_no and**

**Blood\_Donation. donor\_no>2;**

**\*Displaythe donor information with blood group whose**

**city name contains “sh” in it.**

**SQL>Select donor\_name,city,blood\_group from**

**Donor,Blood\_Donation where**

**Donor.donor\_no=Blood\_Donation.donor\_no and city like**

**"%Msh%';**

**Slip18**

**Consider the following Entities and**

**Relationships**

**Bus (bus\_no, capacity, depot\_no)**

**Route (rout\_no, source, destination, no\_of\_stations)**

**Relation between Bus and Route is Many to One.**

**Constraint: Primary key.**

**Solution:-**

**Create a Database in 3NF & write queries for following.**

**-Find out the route details on which buses whose capacity is 20**

**runs.**

**SQL>Select \* from Bus,Route where Bus. route\_no=Route.**

**rout\_no and capacity =20;**

**-Display number of stations from 'Chinchwad' to ‘ Katraj’.**

**SQL> Select no\_of\_stations from Route where source='**

**Chinchwad ' and destination=' Katraj ';**

**Display the route on which more than 3 buses runs.**

**SQL> Select Route.rout\_no,source, destination from Bus,Route**

**where Route.rout\_no=Bus.rout\_no group by Route.rout\_no,source,**

**destination having count (Bus.rout\_no)>3;**

**-Display number of buses of route ‘Swargate’ to ‘Hadapsar’.**

**SQL>select count(bus\_no)from Bus,Route where**

**Route.rout\_no=Bus.rout\_no and**

**source=' Swargate ' and destination=' Hadapsar ';**

**-Findthe bust having maximum capacity from ‘Nigadi’ to**

**‘Kothrud'..**

**SQL>Select bus\_no,capacity from Bus,Route where**

**Route.rout\_no=Bus.rout\_no**

**and source='Nigadi’ and destination='Kothrud' group by**

**bus\_no,capacity**

**having capacity=(select max(capacity)) from Bus,Route;**

**Slip19**

**Consider the following Entities and**

**Relationships**

**Person (driver\_id, driver\_name, address)**

**Car (license\_no, model, year)**

**Relation between Person and Car is Many to Many with date and**

**time as**

**descriptive attribute.Constraint: Primary key.**

**Solution:-**

**Create a Database in 3NF & write queries for following.**

**+Display details of all persons who are driving ‘Alto’ car.**

**SQL>Select dname from person,car ,pc where person.did=pc.did**

**and car.Ino=pc.Ino and model='alto’;**

**Count the number of cars driven by each driver.**

**SQL>Select count(model),dname from person,car ,pc where**

**person.did=pe.did and car.Ino=pc.Ino group by dname;**

**Display car details manufactured before year 2000.**

**SQL> Select \* from car where year<2000;**

**«In which day ‘Mr. Ram’ drives maximum number of cars.**

**SQL>select count(car.model),dates,dname from person,car ,pc**

**where person.did=pc.did and car.Ino=pc.Ino and dname='ram’**

**group by dates,dname;**

**Display total number of persons who drives car in each year.**

**SQL>Select count(person.did),year,dname from person,car,pc**

**where person.did=pc.did and car.Ino=pc.Ino group by year,dname;**

**Slip20**

**Consider the following Entities and**

**Relationships**

**Person (pno, person\_name, birthdate, income)**

**Area (area\_name, area\_type)**

**Relation between Person and area is Many to One.**

**Constraint: Primary key, income should be > 0, area\_type should be**

**rural or urban.**

**Solution:-**

**Create a Database in 3NF & write queries for following.**

**-Display persons having income less than 1 lakhs in PCMC Area.**

**SQL> select pname from persons,area where persons.ano=**

**area.ano and aname='pcmc’**

**and income <100000;**

**-Display population of each area.**

**SQL>select population,aname from persons, area where persons.**

**ano= area. ano group by aname,population;**

**Display persons details from ‘Urban’ area.**

**SQL> select pname from persons,area where person.s ano= area.**

**ano and atype='urban’;**

**Display the details of area having population greater than that of**

**in Pune.**

**SQL>select max(population),aname from area where**

**aname='pune’ group by aname;**

**‘Display details of person from each area having minimum**

**income.**

**SQL> select pname,birthdate,income from persons where**

**income=(select min(income) from persons);**