Minor-Project DATABASE:

2. Create a relational database schema for a Minor-Project, described by the following relations.

STUDENT (Rollno: integer, Name: String, Sem: integer, Degree: String, Contact no: integer, Guide_No: integer)

GUIDE (Guide_name: String, Guide_No: integer, Guide_reserach_domain: String, Contat_No: integer, Email_Id: String)

PROJECT (Project_No: Integer, Project_title: String, Project_Area: String, Start_dt, date, Guide_No:integer)

GROUP (Group_Code:integer, Roll_No:integer)

PROJECT_GROUP (Group_Code:integer, Project_No: integer, no_of_students: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) Find the list of guide, who are guiding more than two student groups.

d) Find the list of project no, project name & name of guide, in domain of DataBase.

e) Update guide details of a roll no “110011”, new guide is “Ram Mohan‟ & id “112200‟.

f) Remove the Guide details, guide no is “112211” and assign guide no “133113” to all respective students project group.

g) Create a view as student_project details that lists student name, project name and guide name

SOLUTION:

creation of all the above relations

create table student1 (rollno vachar(10) primary key, name varchar(30) not null, semester char not null, degree varchar(5), contact_no char(10), guide_no int)

create table guide (guide_name varchar(20) not null, guide_no int, guide_research_domain varchar(30), contact_no char(10), email_id varchar(30))

create table project1 (project_no int primary key, project_title varchar(30) not null, project_domain varchar(20) not null, start_date date, guide_no int references guide(guide_no) on delete cascade)

create table group1 (group_code int, rollno varchar(10) references student1(rollno) on delete cascade)

create table project_group (group_code int, project_no int references project1(project_no) on delete cascade, number_of_students int)

insertion of tuples:

for table student1:

insert into student1 values('1nt14cs001','sameer','5','b.e','9876543210',11)

insert into student1 values('1nt14cs002','sushanth','5','b.e','9876543210',11)

insert into student1 values('1nt14cs003','joyce','5','b.e','999944455',12)

insert into student1 values('1nt14cs004','sanjay','5','b.e','9879879870',12)

insert into student1 values('1nt14cs005','rahim','5','b.e','9988776654',13)

insert into student1 values('1nt14cs006','ramkrishna','5','b.e','9876543333',13)

rollno	name	semester	degree	contact_no	guide_no
1nt14cs001	sameer	5	b.e	987654321011	
1nt14cs002	sushanth	5	b.e	987654321011	
1nt14cs003	joyce	5	b.e	999944455	12
1nt14cs004	sanjay	5	b.e	987987987012	
1nt14cs005	rahim	5	b.e	998877665413	
1nt14cs006	ramkrishna	5	b.e	987654333313	

for table guide:

insert into guide values('rama krishna', 11,'cloud compting security','9998887776','ramkrishnak@gmail.com')

insert into guide values('kavitha sooda', 12,'computer networks','9998880000','kavithasooda@gmail.com')

insert into guide values('nagraj s r', 13,'vanets','9990007776','nagraj@gmail.com')

guide_name	guide_no	guide_research_domain	contact_no	email_id
rama krishna	11	cloud compting security	9998887776	ramkrishnak@gmail.com
kavitha sooda	12	computer networks	9998880000	kavithasooda@gmail.com
nagraj s r	13	vanets	9990007776	nagraj@gmail.com

for table project1:
insert into project1 values(123,'enterprise cloud adoption','cloud computing','20-oct-2016',11);

insert into project1 values(124,'data analtyics in health care','big data','20-oct-2016',11);

insert into project1 values(125,'performance in vanets','cloud computing','20-oct-2016',13);

insert into project1 values(126,'cognitive networks','computer networks','20-oct-2016',12);

project_no	project_title	project_domain	start_date	guide_no
123	enterprise cloud adoption	cloud computing	20-oct-16	11
124	data analtyics in health care	big data	20-oct-16	11
125	performance in vanets	cloud computing	20-oct-16	13
126	cognitive networks	computer networks	20-oct-16	12

for table group1:

insert into group1 values(1,'1nt14cs001');

insert into group1 values(1,'1nt14cs002');

insert into group1 values(1,'1nt14cs003');

insert into group1 values(2,'1nt14cs004');

insert into group1 values(2,'1nt14cs005');

insert into group1 values(2,'1nt14cs006');

select * from group1;

group_code	rollno
1	1nt14cs001
1	1nt14cs002
1	1nt14cs003
2	1nt14cs004
2	1nt14cs005
2	1nt14cs006

for table project_group:

insert into project_group values(1,123,3)

insert into project_group values(1,124,3)

insert into project_group values(2,125,3)

insert into project_group values(2,126,3)

group_code	project_no	number_of_students
1	**123**	**3**
1	**124**	**3**
2	**125**	**3**
2	**126**	**3**

queriies:

c. find the list of guide, who are guiding more than two student groups.

```
select guide_name,count(*)
from guide g, project1 p
where g.guide_no=p.guide_no
group by guide_name
having count(*)>1
```

output:

guide_namecount(*)

afroz 2

d. find the list of project no, project name & name of guide, in domain of database.

```
select project_no, project_title, guide_name
from project1, guide
where project1.guide_no= guide.guide_no and
project1.project_domain='cloud computing'
```

output:

project_no	**project_title**	**guide_name**
123	enterprise cloud adoption	afroz
125	performance in vanets	nagraj s r

e. update guide details of a roll no "110011", new guide is "ram mohan" & id "112200".

```
update guide set guide_name='ram mohan'
where guide_no in ( select guide_no
                    from student
                    where rollno='110011')
```

guide_no cannot be updated because it is a primary key and the reason is below

note: oracle does not allow a foreign key constraint with "on update cascade".

firstly, delete all referential integrity constraints or disable the foreign key constraints, then update primary key.

before update:

guide_name	guide_no	guide_research_domain	contact_no	email_id
rama krishna	11	cloud compting security	9998887776	ramkrishnak@gmail.com
kavitha sooda	12	computer networks	9998880000	kavithasooda@gmail.com
nagraj s r	13	vanets	9990007776	nagraj@gmail.com

after update:

```
update guide set guide_name='sathish',guide_no=14
where guide_no in ( select guide_no
                    from student1
                    where rollno='1nt14cs001')
```

guide_name	guide_no	guide_research_domain	contact_no	email_id
sathish	14	cloud compting security	9998887776	ramkrishnak@gmail.com
kavitha sooda	12	computer networks	9998880000	kavithasooda@gmail.com
nagraj s r	13	vanets	9990007776	nagraj@gmail.com

f. remove the guide details, guide no is “12” and assign guide no “15” to all respective students project group.

first add constraint in student1 table

alter table student1 add foreign key (guide_no) references guide(guide_no) on delete cascade;

sql>delete from guide where guide_no=12

then insert new student record with guide_no 15

insert into student1 values('1nt14cs003','joyce','5','b.e','999944455',15)

insert into student1 values('1nt14cs004','sanjay','5','b.e','9879879870',15)

g. create a view as student_project details that lists student name, project name and guide name

```
sql>create view student_project as
select  name,guide_name,project_title
from student1,guide,project1
where project1.guide_no=guide.guide_no
```

view created