HACKATHON MANAGEMENT SYSTEM

Introduction :

It is a database for a portal for hackathons that makes it easy for organisations to conduct hackathons and individuals to take part in hackathons. In this system, organizations will be able to host hackathons and manage it to some extent and users can register and search for other users and form teams for hackathons. Organizations will also be able to find and invite appropriate sponsors, judges, speakers and centre for a hackathon. The system is developed using Oracle as our database management system.

Data Requirements

1.Hackathon

This entity includes details about the hackathon. It contains attributes like hackathon id, hackathon name, hackathon description(rules, eligibility criteria and prizes), important start and end dates, eligible team size (minimum and maximum number of members), number of rounds in hackathon, centre id for centers where hackathon will be held, organisation representative's email who is conducting the hackathon, sponsors(email) of the hackathon and invited judges and speakers' emails.

Each hackathon has a unique hack id.

We have not taken names as unique so that the same organisation can hold the event next time with the same name.

2.Participant

This entity includes details about the users who are registered in our HackPortal and will be participating in hackathons. It contains their name, email, mobile number, their domain or field of work, where they are from(college, school or company) and the team id of the team in which they are.

Each user is identified by their email which is unique.

3.Team

This entity includes details about the team comprised of users. This contains team id, team name, project details (name, description and its github link), number of members in team and the hackathon id in which the team is participating in.

Team ID will be used to distinguish one team from others.

4.Sponsor

This entity includes details about sponsors of the hackathons and the prizes they will be giving to the top performers. It includes sponsor name, email and details of prizes they will be distributing (prize type and prize name), to whom they later distributed the prize to (team id) and in which hackathon it was distributed (hack id).

Each sponsor individual or organisation will be distinguished through their email.

5.Judge

This entity includes the details of the judges who will be grading the teams and their projects. This contains the judge's name, their email, their mobile number, their profession, some description about them (like their work) and the team id of the teams they will be judging plus the hackathon id.

Each judge is uniquely identified by their email id.

6.Organiser

This entity includes the hackathon organiser details like their name, their email and their mobile number and other information.

Each organizer is uniquely identified by their email id.

7.Speaker

This entity includes the invited speakers details which contain their name, their email, mobile number and the organisation

they belong to and some description about them and their work.

Each speaker is uniquely identified by their email id.

8.Center

This entity includes the centre ID , centre name and the address to centre.

Each center is uniquely identified by their center id.

9.Prize

This entity includes the prize ID , prize name and the description about each prize.

Each prize is uniquely identified by their prize id.

Functional Requirements

1.Data Creation

a.Create Participant Profile : Participants can create their profile with information like name,email,phone number, domain, college name and their selected team.

b.Create Organizer Profile: Organizers can create their organization profile with details like name,email,info and mobile number.

c.Add Hackathon Details: Organizers can create hackathon with details like hackathon id,name,description,start and end date, min and max team size, number of rounds to be conducted in hackathon.

d.Create Team : Participants can form a team with details like team id,team name, project they are making for a particular hackathon and hackathon ids of the hackathons they are participating in.

e.Allocate judges for the hackathon : Organizers can add a judge's information for the hackathon.

f.Allocate speakers for the hackathon : Organizers can add speaker's information for the hackathon.

g.Allocate sponsors for the hackathon : Organizers can add sponsor's information for the hackathon.

h.Allocate centre for the hackathon : Organizers can add centre's information for the hackathon.

i.Add prize information for the hackathon : Organizers can add information of various prizes from a sponsor for the hackathon.

j.Add prize winners for the hackathon : Organizers can add information of various prizes from a sponsor for the hackathon.

2.Data Modification

a.Update Participant Profile : Participants can update their profile information like name,email,phone number, domain, college name and their selected team.

b.Update Organizer Profile: Organizers can update their organization profile details like name,email,info and mobile number.

c.Update Hackathon Details: Organizers can update hackathon details like hackathon id,name,description,start and end date, min and max team size, number of rounds to be conducted in hackathon.

d.Update Team : Participants can update team details like team id,team name, project they are making for a particular hackathon and hackathon ids of the hackathons they are participating in.

e.Update judges for the hackathon : Organizers can update the judge's information for the hackathon.

f.Update speakers for the hackathon : Organizers can update the speaker's information for the hackathon.

g.Update sponsors for the hackathon : Organizers can update the sponsor's information for the hackathon.

h.Update centre for the hackathon : Organizers can update the centre's information for the hackathon.

i.Update prize information for the hackathon : Organizers can update information of various prizes from a sponsor for the hackathon.

j.System can update the description of hackathon to "To be announced" if the description given is NULL.

k.System can update the name of the teams to "No name" if any two teams have the same name.

3.Data Retrieval:

a.View User Profile: Participants can view their profile information.

b.View Organizer Profile: Organizers can view their profile information.

c.View Hackathons: Participants and teams can search a list of hackathons during a particular time period and view information about each hackathon which is conducted by a particular organization.

d.View Team Details: All the team members can view team details like the hackathons in which they are participating and the projects they have made for each hack.

e.View participants of a team: Everyone can view the members of a particular team.

f.View winners of a hackathon: Everyone can see the names of the winning team of a particular hack.

g.View judges, speakers and sponsors of a hackathon: Everyone can see the list of judges, speakers and sponsors of a particular hack.

h.View list of teams for a particular hackathon: Everyone can see the list of the teams participating in a hackathon.

i.View centre details of a hackathon: Everyone can see the details of the centre for a hackathon.

j.Retrieve name of the hackathon with maximum duration,

k.System can show names of the users which are not part of any team.

4.Data Deletion

a.Delete Participant Profile : Participants can delete their profile.

b.Delete Organizer Profile: Organizers can delete their organization's profile.

c.Delete Hackathon: Organizers can delete a hackathon where the number of participating teams is equal to 1.

d.Delete Team : Participants can delete their team.

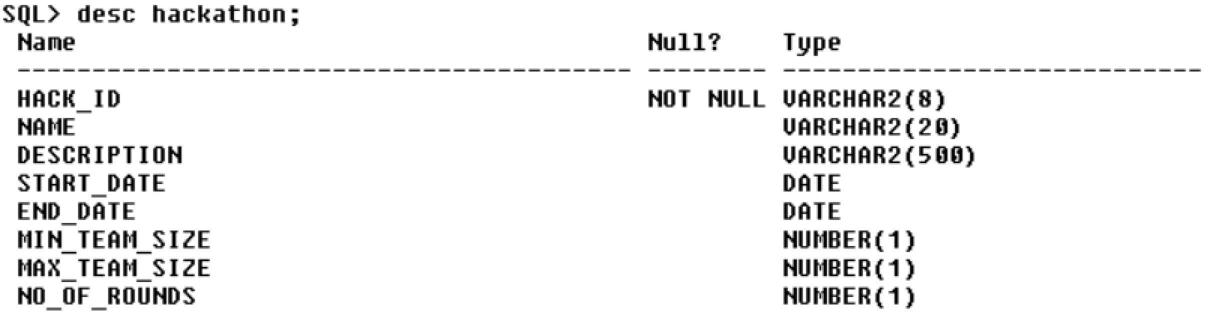
e.System automatically removes teams from a hackathon that violates the number of participants rule for the hackathon.

Table creation

1)Table hackathon

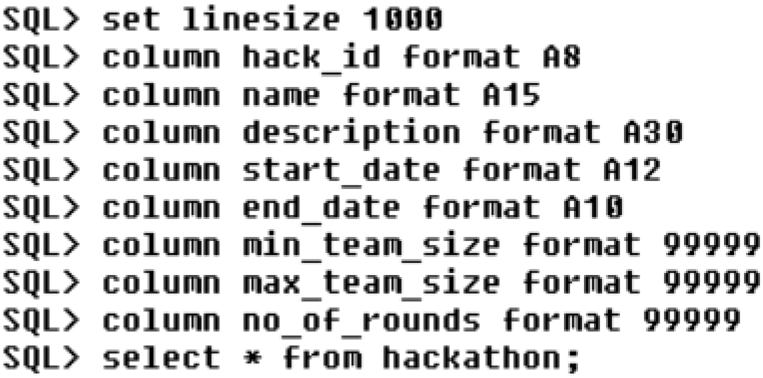
```
CREATE TABLE hackathon(
   hack_id VARCHAR(8),
   name VARCHAR(20),
   description VARCHAR(500),
   start_date DATE,
   end_date DATE,
   min_team_size NUMBER(1),
   max_team_size NUMBER(1),
   no_of_rounds NUMBER(1),
   CONSTRAINT PK_hackathon PRIMARY KEY(hack_id)
);
```

Output :



```
SQL> desc hackathon;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 HACK_ID                                   NOT NULL VARCHAR2(8)
 NAME                                               VARCHAR2(20)
 DESCRIPTION                                        VARCHAR2(500)
 START_DATE                                         DATE
 END_DATE                                           DATE
 MIN_TEAM_SIZE                                      NUMBER(1)
 MAX_TEAM_SIZE                                      NUMBER(1)
 NO_OF_ROUNDS                                       NUMBER(1)
```

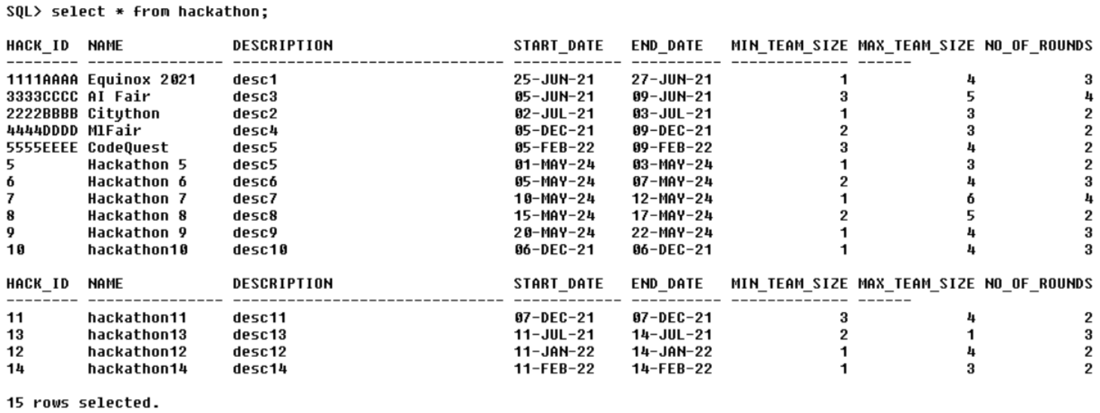
Inserting records



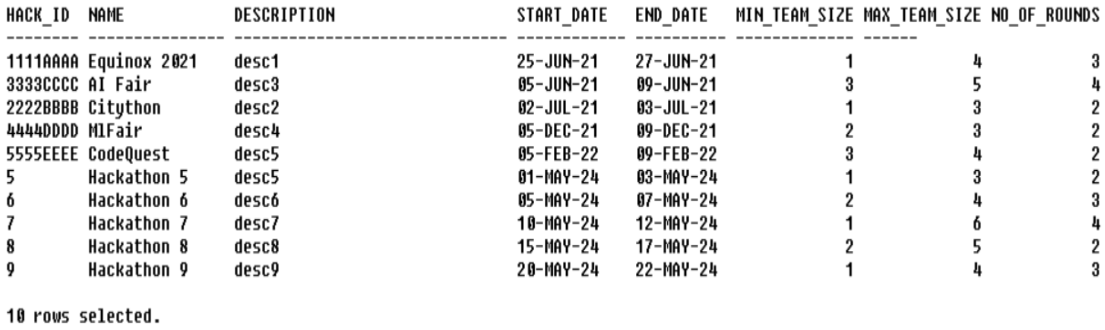
```
SQL> set linesize 1000
SQL> column hack_id format A8
SQL> column name format A15
SQL> column description format A30
SQL> column start_date format A12
SQL> column end_date format A10
SQL> column min_team_size format 99999
SQL> column max_team_size format 99999
SQL> column no_of_rounds format 99999
SQL> select * from hackathon;
```

```
insert into hackathon values('1111AAAA','Equinox 2021','desc1',to_date('2021-06-25','yyyy-mm-dd'), to_date('2021-06-27','yyyy-mm-dd'), 1,4,3);

INSERT INTO hackathon VALUES ( '3333CCCC', 'AI Fair','desc3', TO_DATE('2021-06-5','YYYY-MM-DD'), TO_DATE('2021-06-9','YYYY-MM-DD'),3,  5,  4 );

INSERT INTO hackathon VALUES ('2222BBBB','Citython', 'desc2',TO_DATE('2021-07-2','YYYY-MM-DD'),TO_DATE('2021-07-3','YYYY-MM-DD'),1,3,2);

 INSERT INTO hackathon VALUES ( '4444DDDD', 'MlFair','desc4',  TO_DATE('2021-12-5','YYYY-MM-DD'),TO_DATE('2021-12-9','YYYY-MM-DD'),  2,3,2);

 INSERT INTO hackathon VALUES (  '5555EEEE','CodeQuest','desc5',TO_DATE('2022-02-5','YYYY-MM-DD'), TO_DATE('2022-02-9','YYYY-MM-DD'),  3,4, 2);

 INSERT INTO hackathon VALUES(5, 'Hackathon 5', 'desc5', to_date('2024-05-01','yyyy-mm-dd'), to_date('2024-05-03','yyyy-mm-dd'), 1, 3, 2);

INSERT INTO hackathon  VALUES (6, 'Hackathon 6', 'desc6', to_date('2024-05-05','yyyy-mm-dd'), to_date('2024-05-07','yyyy-mm-dd'), 2,4,3);

SQL> INSERT INTO hackathon VALUES(7, 'Hackathon 7', 'desc7', to_date('2024-05-10','yyyy-mm-dd'), to_date('2024-05-12','yyyy-mm-dd'), 1, 6, 4);

INSERT INTO hackathon VALUES(8, 'Hackathon 8', 'desc8', to_date('2024-05-15','yyyy-mm-dd'), to_date('2024-05-17','yyyy-mm-dd'), 2, 5, 2);

INSERT INTO hackathon VALUES(9, 'Hackathon 9', 'desc9',to_date('2024-05-20','yyyy-mm-dd'), to_date('2024-05-22','yyyy-mm-dd'), 1, 4, 3);

INSERT INTO hackathon VALUES ( '10', 'hackathon10','desc10',  TO_DATE('2021-12-6','YYYY-MM-DD'),TO_DATE('2021-12-6','YYYY-MM-DD'),  1,4,3);

INSERT INTO hackathon VALUES ( '11', 'hackathon11','desc11',  TO_DATE('2021-12-7','YYYY-MM-DD'),TO_DATE('2021-12-7','YYYY-MM-DD'),  3,4,2);

INSERT INTO hackathon VALUES ( '13', 'hackathon13','desc13',  TO_DATE('2021-7-11','YYYY-MM-DD'),TO_DATE('2021-7-14','YYYY-MM-DD'),  2,1,3);

INSERT INTO hackathon VALUES ( '12', 'hackathon12','desc12',  TO_DATE('2022-1-11','YYYY-MM-DD'),TO_DATE('2022-1-14','YYYY-MM-DD'),  1,4,2);

INSERT INTO hackathon VALUES ( '14', 'hackathon14','desc14',  TO_DATE('2022-2-11','YYYY-MM-DD'),TO_DATE('2022-2-14','YYYY-MM-DD'),  1,3,2);
```

Output:



```
SQL> select * from hackathon;

HACK_ID  NAME            DESCRIPTION                    START_DATE   END_DATE   MIN_TEAM_SIZE MAX_TEAM_SIZE NO_OF_ROUNDS
-------- --------------- ------------------------------ ------------ ---------- ------------- ------
1111AAAA Equinox 2021    desc1                          25-JUN-21    27-JUN-21              1             4            3
3333CCCC AI Fair         desc3                          05-JUN-21    09-JUN-21              3             5            4
2222BBBB Citython        desc2                          02-JUL-21    03-JUL-21              1             3            2
4444DDDD MlFair          desc4                          05-DEC-21    09-DEC-21              2             3            2
5555EEEE CodeQuest       desc5                          05-FEB-22    09-FEB-22              3             4            2
5        Hackathon 5     desc5                          01-MAY-24    03-MAY-24              1             3            2
6        Hackathon 6     desc6                          05-MAY-24    07-MAY-24              2             4            3
7        Hackathon 7     desc7                          10-MAY-24    12-MAY-24              1             6            4
8        Hackathon 8     desc8                          15-MAY-24    17-MAY-24              2             5            2
9        Hackathon 9     desc9                          20-MAY-24    22-MAY-24              1             4            3
10       hackathon10     desc10                         06-DEC-21    06-DEC-21              1             4            3

HACK_ID  NAME            DESCRIPTION                    START_DATE   END_DATE   MIN_TEAM_SIZE MAX_TEAM_SIZE NO_OF_ROUNDS
-------- --------------- ------------------------------ ------------ ---------- ------------- ------
11       hackathon11     desc11                         07-DEC-21    07-DEC-21              3             4            2
13       hackathon13     desc13                         11-JUL-21    14-JUL-21              2             1            3
12       hackathon12     desc12                         11-JAN-22    14-JAN-22              1             4            2
14       hackathon14     desc14                         11-FEB-22    14-FEB-22              1             3            2

15 rows selected.
```

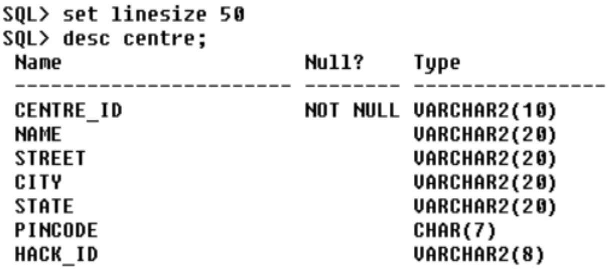


```
HACK_ID  NAME            DESCRIPTION                    START_DATE   END_DATE   MIN_TEAM_SIZE MAX_TEAM_SIZE NO_OF_ROUNDS
-------- --------------- ------------------------------ ------------ ---------- ------------- ------
1111AAAA Equinox 2021    desc1                          25-JUN-21    27-JUN-21              1             4            3
3333CCCC AI Fair         desc3                          05-JUN-21    09-JUN-21              3             5            4
2222BBBB Citython        desc2                          02-JUL-21    03-JUL-21              1             3            2
4444DDDD MlFair          desc4                          05-DEC-21    09-DEC-21              2             3            2
5555EEEE CodeQuest       desc5                          05-FEB-22    09-FEB-22              3             4            2
5        Hackathon 5     desc5                          01-MAY-24    03-MAY-24              1             3            2
6        Hackathon 6     desc6                          05-MAY-24    07-MAY-24              2             4            3
7        Hackathon 7     desc7                          10-MAY-24    12-MAY-24              1             6            4
8        Hackathon 8     desc8                          15-MAY-24    17-MAY-24              2             5            2
9        Hackathon 9     desc9                          20-MAY-24    22-MAY-24              1             4            3

10 rows selected.
```

2)Table centre:

```
CREATE TABLE CENTRE(
   centre_id VARCHAR(4),
   name VARCHAR(20),
   street VARCHAR(20),
   city VARCHAR(20),
   state VARCHAR(20),
   pincode CHAR(7),
   hack_id VARCHAR(8),
   CONSTRAINT PK_centre_id PRIMARY KEY(centre_id),
   CONSTRAINT hack_FK FOREIGN KEY(hack_id) REFERENCES hackathon(hack_id)
);
```

Output:



```
SQL> set linesize 50
SQL> desc centre;
 Name                    Null?    Type
 ----------------------- -------- ----------------
 CENTRE_ID               NOT NULL VARCHAR2(10)
 NAME                             VARCHAR2(20)
 STREET                           VARCHAR2(20)
 CITY                             VARCHAR2(20)
 STATE                            VARCHAR2(20)
 PINCODE                          CHAR(7)
 HACK_ID                          VARCHAR2(8)
```

Inserting records

insert into centre values('11AA','Ana auditorium','VIT','Vellore','TamilNadu',632014,'1111AAAA');

insert into centre values('22BB','ST. George College', 'Nehru Enclave','Agra','UtterPradesh',282001,'2222BBBB');

insert into centre values('33CC','Computer centre','IIT delhi','Delhi','Delhi',110020,'3333CCCC');

insert into centre values('44DD','Central centre','Main street','central','state4',123654,'4444DDDD');

insert into centre values('55EE','West centre','West street','city5','state5',456987,'5555EEEE');

insert into centre values('5f','South centre','south street','city6','state6',563254,'5');

insert into centre values('6g','East centre','east street','city7','state7',563285,'6');

insert into centre values('7g','centre10','street','city8','state8',853285,'7');

insert into centre values('8g','centre8','street8','city8','state8',565245,'8');

insert into centre values('9g','centre9','street9','city9','state9',563285,'9');

insert into centre values('10f','centre10','street10','city10','state10',564585,'10');

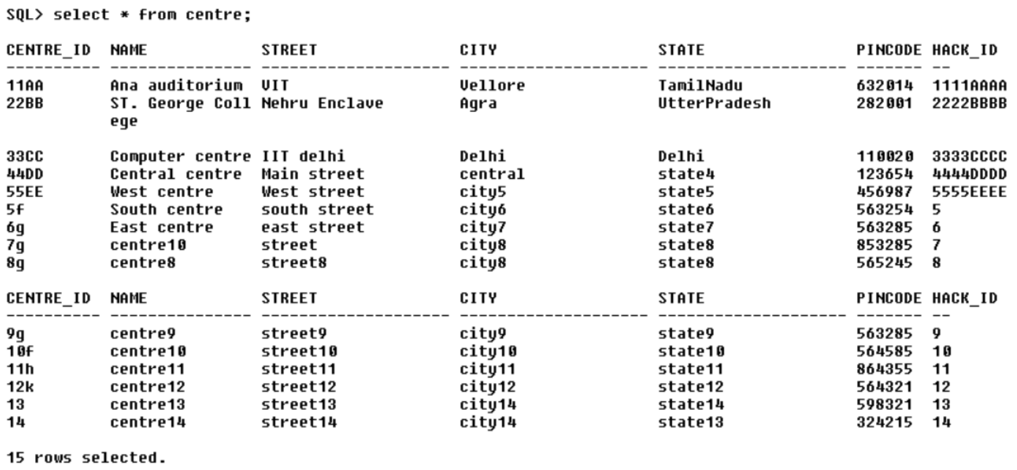
insert into centre values('11h','centre11','street11','city11','state11',864355,'11');

insert into centre values('12k','centre12','street12','city12','state12',564321,'12');

insert into centre values('13','centre13','street13','city14','state14',598321,'13');

insert into centre values('14','centre14','street14','city14','state13',324215,'14');

output :

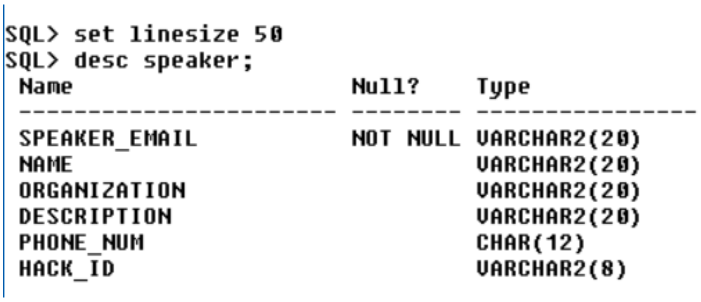


```
SQL> select * from centre;

CENTRE_ID  NAME            STREET               CITY                 STATE                PINCODE HACK_ID
---------- --------------- -------------------- -------------------- -------------------- ------- --
11AA       Ana auditorium  VIT                  Vellore              TamilNadu            632014  1111AAAA
22BB       ST. George Coll Nehru Enclave        Agra                 UtterPradesh         282001  2222BBBB
           ege

33CC       Computer centre IIT delhi            Delhi                Delhi                110020  3333CCCC
44DD       Central centre  Main street          central              state4               123654  4444DDDD
55EE       West centre     West street          city5                state5               456987  5555EEEE
5f         South centre    south street         city6                state6               563254  5
6g         East centre     east street          city7                state7               563285  6
7g         centre10        street               city8                state8               853285  7
8g         centre8         street8              city8                state8               565245  8

CENTRE_ID  NAME            STREET               CITY                 STATE                PINCODE HACK_ID
---------- --------------- -------------------- -------------------- -------------------- ------- --
9g         centre9         street9              city9                state9               563285  9
10f        centre10        street10             city10               state10              564585  10
11h        centre11        street11             city11               state11              864355  11
12k        centre12        street12             city12               state12              564321  12
13         centre13        street13             city14               state14              598321  13
14         centre14        street14             city14               state13              324215  14

15 rows selected.
```

3) Table speaker

```
CREATE TABLE speaker(
   speaker_email VARCHAR(20),
   name VARCHAR(20),
   organization VARCHAR(20),
   description VARCHAR(100),
   phone_num CHAR(12),
   hack_id VARCHAR(8),
   CONSTRAINT PK_speaker PRIMARY KEY(speaker_email),
   CONSTRAINT hack_FK2 FOREIGN KEY(hack_id) REFERENCES hackathon(hack_id),
   CONSTRAINT chk_phone CHECK (LENGTH(phone_num)=12)
);
```

Output :

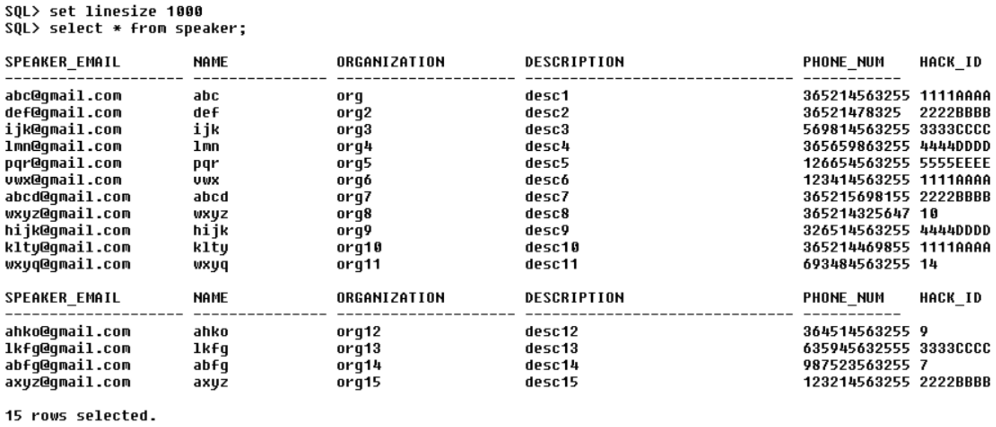


```
SQL> set linesize 50
SQL> desc speaker;
 Name                      Null?    Type
 ------------------------- -------- ----------------
 SPEAKER_EMAIL             NOT NULL VARCHAR2(20)
 NAME                               VARCHAR2(20)
 ORGANIZATION                       VARCHAR2(20)
 DESCRIPTION                        VARCHAR2(20)
 PHONE_NUM                          CHAR(12)
 HACK_ID                            VARCHAR2(8)
```

Inserting records

```
insert into  speaker values('abc@gmail.com','abc','org','desc1',365214563255,'1111AAAA');
insert into  speaker values('def@gmail.com','def','org2','desc2',36521478325,'2222BBBB');

insert into  speaker values('ijk@gmail.com','ijk','org3','desc3',569814563255,'3333CCCC');

insert into  speaker values('lmn@gmail.com','lmn','org4','desc4',365659863255,'4444DDDD');

insert into  speaker values('pqr@gmail.com','pqr','org5','desc5',126654563255,'5555EEEE');

insert into  speaker values('vwx@gmail.com','vwx','org6','desc6',123414563255,'1111AAAA');

insert into  speaker values('abcd@gmail.com','abcd','org7','desc7',365215698155,'2222BBBB');

insert into  speaker values('wxyz@gmail.com','wxyz','org8','desc8',365214325647,'10');

insert into  speaker values('hijk@gmail.com','hijk','org9','desc9',326514563255,'4444DDDD');

insert into  speaker values('klty@gmail.com','klty','org10','desc10',365214469855,'1111AAAA');

insert into  speaker values('wxyq@gmail.com','wxyq','org11','desc11',693484563255,'14');

insert into  speaker values('ahko@gmail.com','ahko','org12','desc12',364514563255,'9');

insert into  speaker values('lkfg@gmail.com','lkfg','org13','desc13',635945632555,'3333CCCC');

insert into  speaker values('abfg@gmail.com','abfg','org14','desc14',987523563255,'7');

insert into  speaker
values('axyz@gmail.com','axyz','org15','desc15',123214563255,'2222BBBB');
```

output :

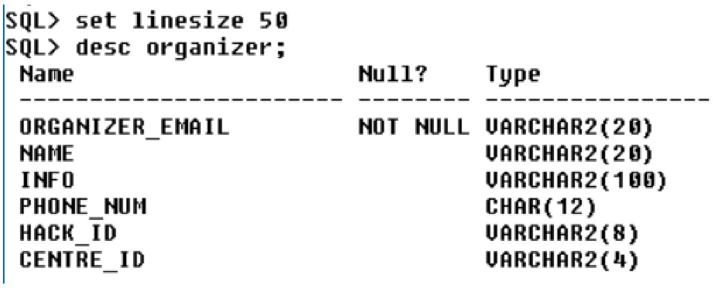


```
SQL> set linesize 1000
SQL> select * from speaker;

SPEAKER_EMAIL        NAME            ORGANIZATION         DESCRIPTION                    PHONE_NUM    HACK_ID
-------------------- --------------- -------------------- ------------------------------ -----------
abc@gmail.com        abc             org                  desc1                          365214563255 1111AAAA
def@gmail.com        def             org2                 desc2                          36521478325  2222BBBB
ijk@gmail.com        ijk             org3                 desc3                          569814563255 3333CCCC
lmn@gmail.com        lmn             org4                 desc4                          365659863255 4444DDDD
pqr@gmail.com        pqr             org5                 desc5                          126654563255 5555EEEE
vwx@gmail.com        vwx             org6                 desc6                          123414563255 1111AAAA
abcd@gmail.com       abcd            org7                 desc7                          365215698155 2222BBBB
wxyz@gmail.com       wxyz            org8                 desc8                          365214325647 10
hijk@gmail.com       hijk            org9                 desc9                          326514563255 4444DDDD
klty@gmail.com       klty            org10                desc10                         365214469855 1111AAAA
wxyq@gmail.com       wxyq            org11                desc11                         693484563255 14

SPEAKER_EMAIL        NAME            ORGANIZATION         DESCRIPTION                    PHONE_NUM    HACK_ID
-------------------- --------------- -------------------- ------------------------------ -----------
ahko@gmail.com       ahko            org12                desc12                         364514563255 9
lkfg@gmail.com       lkfg            org13                desc13                         635945632555 3333CCCC
abfg@gmail.com       abfg            org14                desc14                         987523563255 7
axyz@gmail.com       axyz            org15                desc15                         123214563255 2222BBBB

15 rows selected.
```

4)Table organizer

```
CREATE TABLE organizer(

   organizer_email VARCHAR(20),

   name VARCHAR(20),

   info VARCHAR(100),

   phone_num CHAR(12),
   hack_id VARCHAR(8),

   centre_id VARCHAR(4),

   CONSTRAINT PK_organizer PRIMARY KEY(organizer_email),

   CONSTRAINT hack_FK3 FOREIGN KEY(hack_id) REFERENCES hackathon(hack_id) ,

   CONSTRAINT centre_FK FOREIGN KEY(centre_id) REFERENCES centre(centre_id) ,

   CONSTRAINT chk_phone2 CHECK (LENGTH(phone_num)=12)

);
```

Output:



```
SQL> set linesize 50
SQL> desc organizer;
 Name                      Null?    Type
 ------------------------ -------- ----------------
 ORGANIZER_EMAIL           NOT NULL VARCHAR2(20)
 NAME                               VARCHAR2(20)
 INFO                               VARCHAR2(100)
 PHONE_NUM                          CHAR(12)
 HACK_ID                            VARCHAR2(8)
 CENTRE_ID                          VARCHAR2(4)
```

Inserting records:

```
INSERT INTO organizer
VALUES('abc@vit.ac.in','abc','info1','911234567894','1111AAAA','11AA');

INSERT INTO organizer
VALUES('abc@outlook.com','abc','info2','911234566594','3333CCCC','33CC');

INSERT INTO organizer
VALUES('yas@gmail.com','yas','info1','911256566594','2222BBBB','33CC');

INSERT INTO organizer
VALUES('abcd@vit.ac.in','abc','info4','912364567894','4444DDDD','44DD');

INSERT INTO organizer
VALUES('abcd@outlook.com','abcd','info5','913214566594','5555EEEE','33CC');

INSERT INTO organizer
VALUES('yess@gmail.com','yess','info6','119256566594','1111AAAA','11AA');

INSERT INTO organizer VALUES('efgh@vit.ac.in','efgh','info7','911234765894','10','10f');

INSERT INTO organizer
VALUES('shra@outlook.com','shra','info8','911235636594','4444DDDD','22BB');

INSERT INTO organizer
VALUES('paw@gmail.com','paw','info9','922256566594','2222BBBB','44DD');

INSERT INTO organizer
VALUES('ppp@vit.ac.in','ppp','info10','988234567894','3333CCCC','11AA');

INSERT INTO organizer VALUES('xyz@outlook.com','xyz','info11','911234569594','9','6g');
```

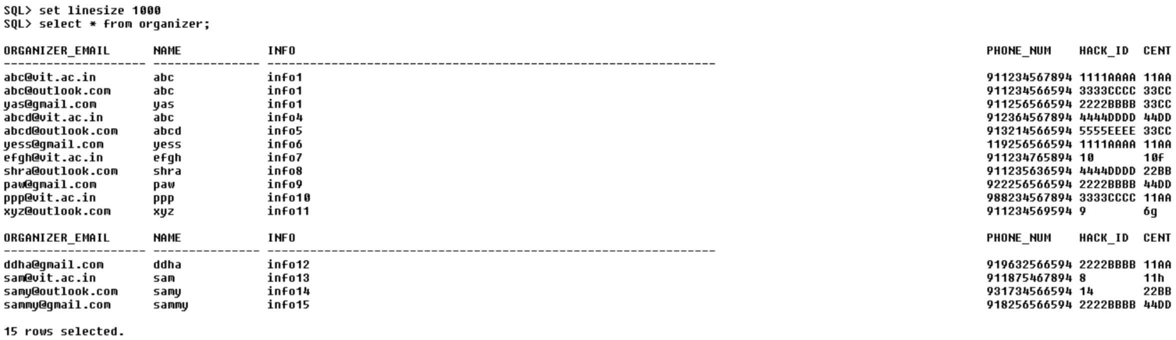
INSERT INTO organizer VALUES('ddha@gmail.com','ddha','info12','919632566594','2222BBBB','11AA');

INSERT INTO organizer VALUES('sam@vit.ac.in','sam','info13','911875467894','8','11h');

INSERT INTO organizer VALUES('samy@outlook.com','samy','info14','931734566594','14','22BB');

INSERT INTO organizer VALUES('sammy@gmail.com','sammy','info15','918256566594','2222BBBB','44DD');

Output:

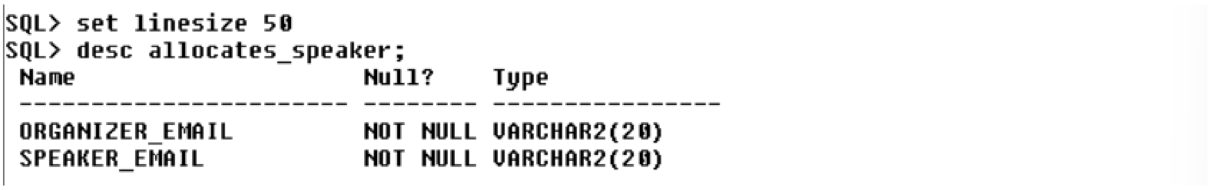


```
SQL> set linesize 1000
SQL> select * from organizer;

ORGANIZER_EMAIL      NAME            INFO                                                                    PHONE_NUM    HACK_ID  CENT
-------------------- --------------- ----------------------------------------------------------------
abc@vit.ac.in        abc             info1                                                                   911234567894 1111AAAA 11AA
abc@outlook.com      abc             info1                                                                   911234566594 3333CCCC 33CC
yas@gmail.com        yas             info1                                                                   911256566594 2222BBBB 33CC
abcd@vit.ac.in       abc             info4                                                                   912364567894 4444DDDD 44DD
abcd@outlook.com     abcd            info5                                                                   913214566594 5555EEEE 33CC
yess@gmail.com       yess            info6                                                                   119256566594 1111AAAA 11AA
efgh@vit.ac.in       efgh            info7                                                                   911234765894 10       10f
shra@outlook.com     shra            info8                                                                   911235636594 4444DDDD 22BB
paw@gmail.com        paw             info9                                                                   922256566594 2222BBBB 44DD
ppp@vit.ac.in        ppp             info10                                                                  988234567894 3333CCCC 11AA
xyz@outlook.com      xyz             info11                                                                  911234569594 9        6g

ORGANIZER_EMAIL      NAME            INFO                                                                    PHONE_NUM    HACK_ID  CENT
-------------------- --------------- ----------------------------------------------------------------
ddha@gmail.com       ddha            info12                                                                  919632566594 2222BBBB 11AA
sam@vit.ac.in        sam             info13                                                                  911875467894 8        11h
samy@outlook.com     samy            info14                                                                  931734566594 14       22BB
sammy@gmail.com      sammy           info15                                                                  918256566594 2222BBBB 44DD

15 rows selected.
```

5) Table allocate_speaker

```
CREATE TABLE allocates_speaker(
    organizer_email VARCHAR(20),
    speaker_email VARCHAR(20),
    CONSTRAINT PK_allocates_speaker PRIMARY KEY(organizer_email,speaker_email),
    CONSTRAINT org_FK FOREIGN KEY(organizer_email) REFERENCES organizer(organizer_email) ,
    CONSTRAINT speaker_FK FOREIGN KEY(speaker_email) REFERENCES speaker(speaker_email)
);
```

Output;

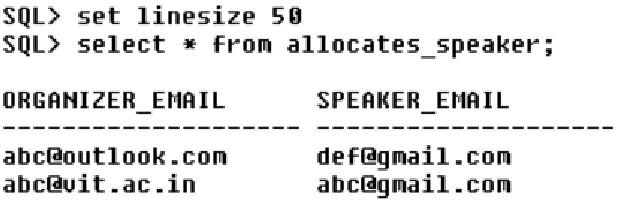


```
SQL> set linesize 50
SQL> desc allocates_speaker;
 Name                      Null?    Type
 ------------------------- -------- ----------------
 ORGANIZER_EMAIL           NOT NULL VARCHAR2(20)
 SPEAKER_EMAIL             NOT NULL VARCHAR2(20)
```

Inserting values:

```
INSERT INTO allocates_speaker VALUES(
 'abc@vit.ac.in',
 'abc@gmail.com');
INSERT INTO allocates_speaker VALUES(
 'abc@outlook.com',
 'def@gmail.com'
 );
```

Output:

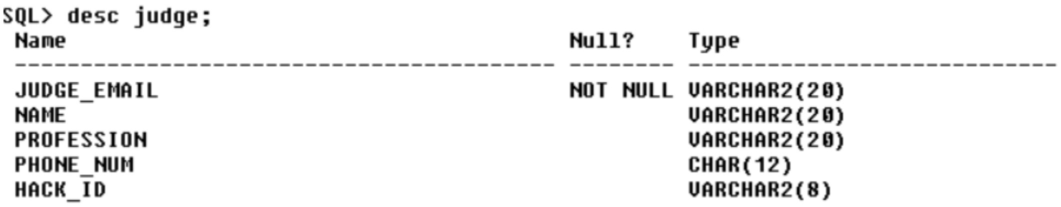


```
SQL> set linesize 50
SQL> select * from allocates_speaker;

ORGANIZER_EMAIL      SPEAKER_EMAIL
-------------------- --------------------
abc@outlook.com      def@gmail.com
abc@vit.ac.in        abc@gmail.com
```

6) Table judge

```
CREATE TABLE judge(
   judge_email VARCHAR(20),
   name VARCHAR(20),
   profession VARCHAR(20),
   phone_num CHAR(12),
   hack_id VARCHAR(8),
   CONSTRAINT PK_judge PRIMARY KEY(judge_email),
   CONSTRAINT hack_FK4 FOREIGN KEY(hack_id) REFERENCES hackathon(hack_id)
);
```

Output:



```
SQL> desc judge;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 JUDGE_EMAIL                               NOT NULL VARCHAR2(20)
 NAME                                               VARCHAR2(20)
 PROFESSION                                         VARCHAR2(20)
 PHONE_NUM                                          CHAR(12)
 HACK_ID                                            VARCHAR2(8)
```

Inserting records

INSERT INTO judge VALUES('judge1@gamil.com', 'Satyam Pachaoury', 'Senior Developer','911234567897','1111AAAA');

INSERT INTO judge VALUES('judge2@gamil.com','pea','ui/ux','911234567897','2222BBBB');

INSERT INTO judge VALUES('judge3@gamil.com','pratt','backend','563234567897','3333CCCC');

INSERT INTO judge VALUES('judge4@gamil.com','zing','frontend','563234553694','4444DDDD');

INSERT INTO judge VALUES('judge5@gamil.com','zigg','fullstack','556328553694','5555EEEE');

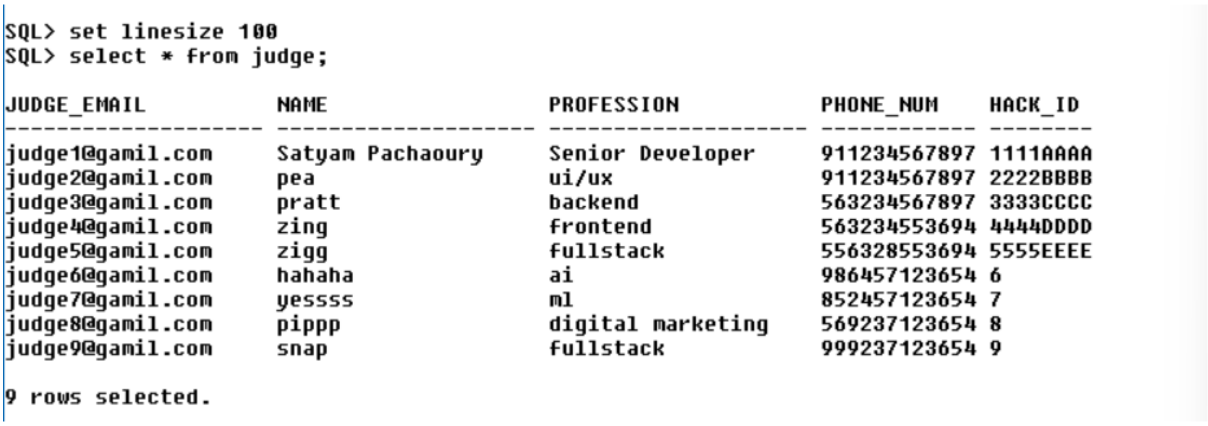
INSERT INTO judge VALUES('judge6@gamil.com','hahaha','ai','986457123654','6');

INSERT INTO judge VALUES('judge7@gamil.com','yessss','ml','852457123654','7');

INSERT INTO judge VALUES('judge8@gamil.com','pippp','digital marketing','569237123654','8');

INSERT INTO judge VALUES('judge9@gamil.com','snap','fullstack','999237123654','9');

Output:



```
SQL> set linesize 100
SQL> select * from judge;

JUDGE_EMAIL          NAME                 PROFESSION           PHONE_NUM    HACK_ID
-------------------- -------------------- -------------------- ------------ --------
judge1@gamil.com     Satyam Pachaoury     Senior Developer     911234567897 1111AAAA
judge2@gamil.com     pea                  ui/ux                911234567897 2222BBBB
judge3@gamil.com     pratt                backend              563234567897 3333CCCC
judge4@gamil.com     zing                 frontend             563234553694 4444DDDD
judge5@gamil.com     zigg                 fullstack            556328553694 5555EEEE
judge6@gamil.com     hahaha               ai                   986457123654 6
judge7@gamil.com     yessss               ml                   852457123654 7
judge8@gamil.com     pippp                digital marketing    569237123654 8
judge9@gamil.com     snap                 fullstack            999237123654 9

9 rows selected.
```

7) Table allocates_judge

CREATE TABLE allocates_judge(

organizer_email VARCHAR(20),

judge_email VARCHAR(20),

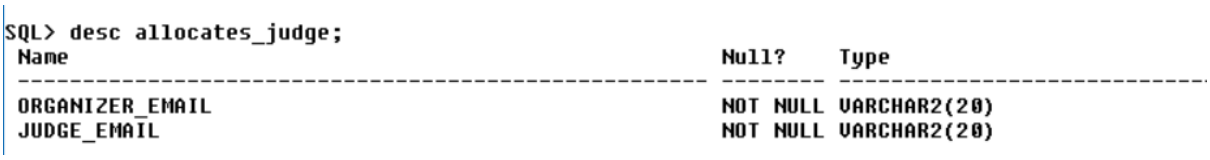
CONSTRAINT PK_allocates_judge PRIMARY KEY(organizer_email,judge_email),

CONSTRAINT org_FK2 FOREIGN KEY(organizer_email) REFERENCES organizer(organizer_email) ,

CONSTRAINT judge_FK FOREIGN KEY(judge_email) REFERENCES judge(judge_email)

);

Output:



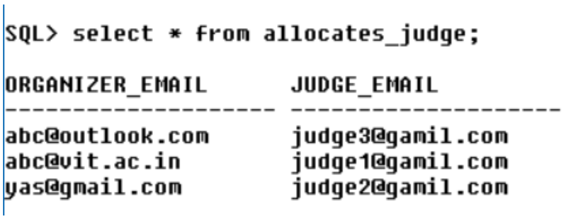
```
SQL> desc allocates_judge;
 Name                                                  Null?    Type
 ----------------------------------------------------- -------- ----------------------------
 ORGANIZER_EMAIL                                       NOT NULL VARCHAR2(20)
 JUDGE_EMAIL                                           NOT NULL VARCHAR2(20)
```

Inserting records

insert into allocates_judge values('abc@vit.ac.in','judge1@gamil.com');

insert into allocates_judge values('yas@gmail.com','judge2@gamil.com');

insert into allocates_judge values('abc@outlook.com','judge3@gamil.com');

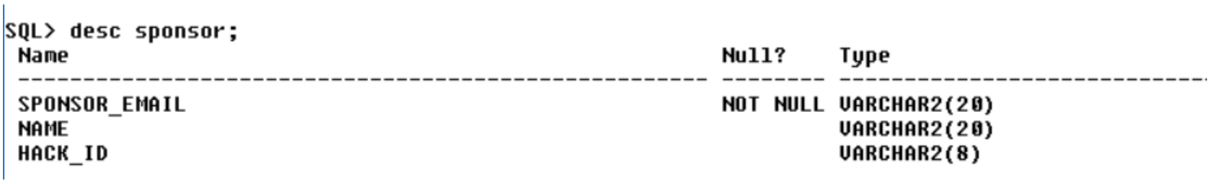


```
SQL> select * from allocates_judge;

ORGANIZER_EMAIL      JUDGE_EMAIL
-------------------- --------------------
abc@outlook.com      judge3@gamil.com
abc@vit.ac.in        judge1@gamil.com
yas@gmail.com        judge2@gamil.com
```

8) Table sponsor

```
CREATE TABLE sponsor(
   sponsor_email VARCHAR(20),
   name VARCHAR(20),
   hack_id VARCHAR(8),
   CONSTRAINT PK_sponsor PRIMARY KEY(sponsor_email),
   CONSTRAINT hack_FK5 FOREIGN KEY(hack_id) REFERENCES hackathon(hack_id)
);
```

Output:

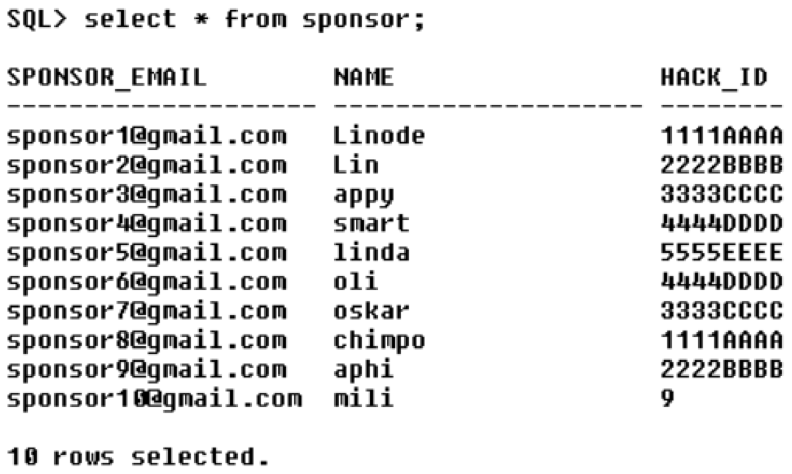


```
SQL> desc sponsor;
 Name                                                  Null?    Type
 ----------------------------------------------------- -------- ----------------------------
 SPONSOR_EMAIL                                         NOT NULL VARCHAR2(20)
 NAME                                                           VARCHAR2(20)
 HACK_ID                                                        VARCHAR2(8)
```

Inserting records

```
INSERT INTO sponsor VALUES(  'sponsor1@gmail.com', 'Linode', '1111AAAA');
INSERT INTO sponsor VALUES('sponsor2@gmail.com','Lin','2222BBBB');
INSERT INTO sponsor VALUES('sponsor3@gmail.com','appy','3333CCCC');
INSERT INTO sponsor VALUES('sponsor4@gmail.com','smart','4444DDDD');
INSERT INTO sponsor VALUES('sponsor5@gmail.com','linda','5555EEEE');
INSERT INTO sponsor VALUES('sponsor6@gmail.com','oli','4444DDDD');
INSERT INTO sponsor VALUES('sponsor7@gmail.com','oskar','3333CCCC');
INSERT INTO sponsor VALUES('sponsor8@gmail.com','chimpo','1111AAAA');
INSERT INTO sponsor VALUES('sponsor9@gmail.com','aphi','2222BBBB');
INSERT INTO sponsor VALUES('sponsor10@gmail.com','mili','9');
```

Output:

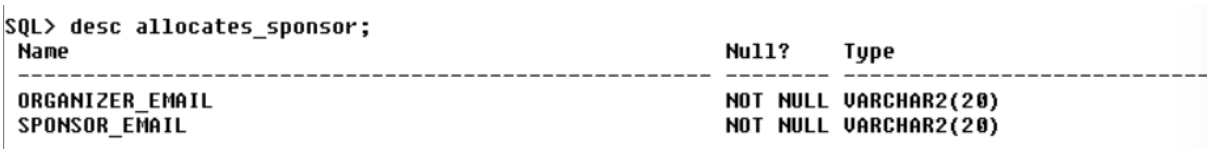


```
SQL> select * from sponsor;

SPONSOR_EMAIL        NAME                 HACK_ID
-------------------- -------------------- --------
sponsor1@gmail.com   Linode               1111AAAA
sponsor2@gmail.com   Lin                  2222BBBB
sponsor3@gmail.com   appy                 3333CCCC
sponsor4@gmail.com   smart                4444DDDD
sponsor5@gmail.com   linda                5555EEEE
sponsor6@gmail.com   oli                  4444DDDD
sponsor7@gmail.com   oskar                3333CCCC
sponsor8@gmail.com   chimpo               1111AAAA
sponsor9@gmail.com   aphi                 2222BBBB
sponsor10@gmail.com  mili                 9

10 rows selected.
```

9) Table allocates_sponsor

```
CREATE TABLE allocates_sponsor(
   organizer_email VARCHAR(20),
   sponsor_email VARCHAR(20),
   CONSTRAINT PK_allocates_sponsor PRIMARY KEY(organizer_email,sponsor_email),
   CONSTRAINT org_FK3 FOREIGN KEY(organizer_email) REFERENCES organizer(organizer_email) ,
   CONSTRAINT sponsor_FK2 FOREIGN KEY(sponsor_email) REFERENCES sponsor(sponsor_email)
);
```

Output:



```
SQL> desc allocates_sponsor;
 Name                                                  Null?    Type
 ----------------------------------------------------- -------- ----------------------------
 ORGANIZER_EMAIL                                       NOT NULL VARCHAR2(20)
 SPONSOR_EMAIL                                         NOT NULL VARCHAR2(20)
```

Inserting records

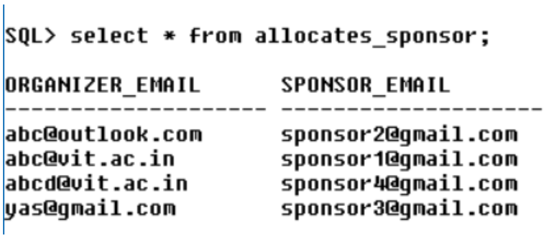
INSERT INTO allocates_sponsor VALUES('abc@vit.ac.in','sponsor1@gmail.com');

INSERT INTO allocates_sponsor VALUES('abc@outlook.com','sponsor2@gmail.com');

INSERT INTO allocates_sponsor VALUES('yas@gmail.com','sponsor3@gmail.com');

INSERT INTO allocates_sponsor VALUES('abcd@vit.ac.in','sponsor4@gmail.com');

Output:



```
SQL> select * from allocates_sponsor;

ORGANIZER_EMAIL      SPONSOR_EMAIL
-------------------- --------------------
abc@outlook.com      sponsor2@gmail.com
abc@vit.ac.in        sponsor1@gmail.com
abcd@vit.ac.in       sponsor4@gmail.com
yas@gmail.com        sponsor3@gmail.com
```

10) Table prize

CREATE TABLE prize(

   prize_id VARCHAR(8),

   prize_name VARCHAR(20),   prize_description VARCHAR(300),

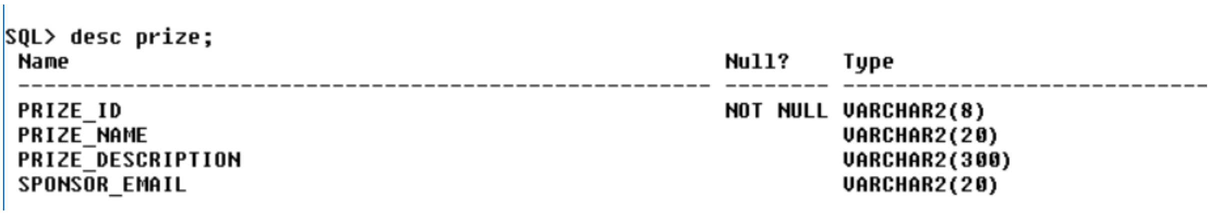
   sponsor_email VARCHAR(20),

   CONSTRAINT PK_prize PRIMARY KEY(prize_id),

   CONSTRAINT sponsor_FK FOREIGN KEY(sponsor_email) REFERENCES sponsor(sponsor_email)

);

Output:



```
SQL> desc prize;
 Name                                                  Null?    Type
 ----------------------------------------------------- -------- ----------------------------
 PRIZE_ID                                              NOT NULL VARCHAR2(8)
 PRIZE_NAME                                                     VARCHAR2(20)
 PRIZE_DESCRIPTION                                              VARCHAR2(300)
 SPONSOR_EMAIL                                                  VARCHAR2(20)
```

Inserting records

INSERT INTO prize VALUES('P1','1st Prize', '$250 and Mentorship','sponsor1@gmail.com');

INSERT INTO prize VALUES('P2','2st Prize','$150 and Mentorship','sponsor2@gmail.com');

INSERT INTO prize VALUES('P3','3st Prize','Azure 100 credits','sponsor3@gmail.com');

INSERT INTO prize VALUES('P4','1st Prize', '$250 and Mentorship','sponsor1@gmail.com');

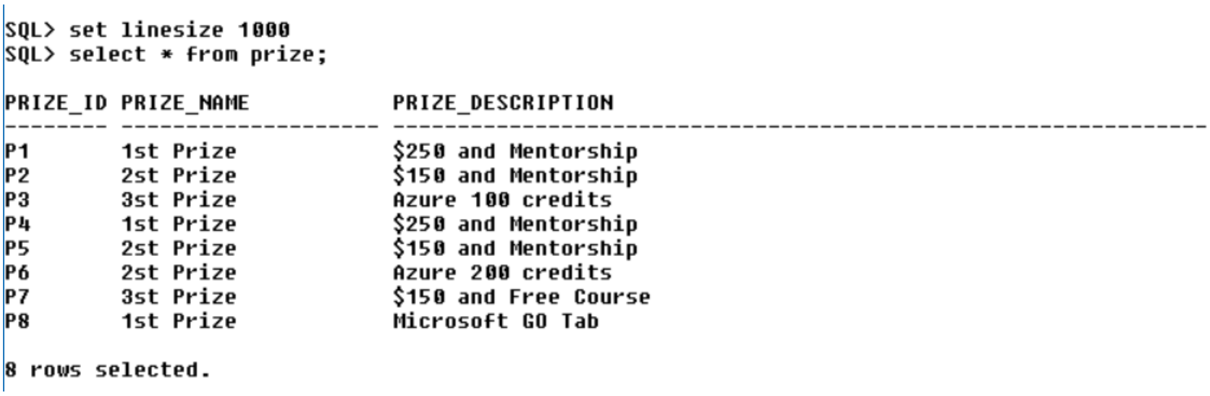
INSERT INTO prize VALUES('P5','2st Prize','$150 and Mentorship','sponsor5@gmail.com');

INSERT INTO prize VALUES('P6','2st Prize','Azure 200 credits','sponsor8@gmail.com');

INSERT INTO prize VALUES('P7','3st Prize',   '$150 and Free Course','sponsor2@gmail.com');

INSERT INTO prize VALUES('P8','1st Prize',   'Microsoft GO Tab','sponsor3@gmail.com');

Output:

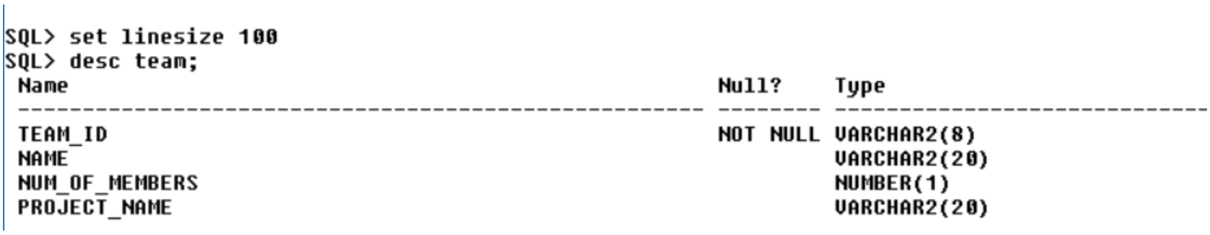


```
SQL> set linesize 1000
SQL> select * from prize;

PRIZE_ID PRIZE_NAME           PRIZE_DESCRIPTION
-------- -------------------- ---------------------------------------------------------------
P1       1st Prize            $250 and Mentorship
P2       2st Prize            $150 and Mentorship
P3       3st Prize            Azure 100 credits
P4       1st Prize            $250 and Mentorship
P5       2st Prize            $150 and Mentorship
P6       2st Prize            Azure 200 credits
P7       3st Prize            $150 and Free Course
P8       1st Prize            Microsoft GO Tab

8 rows selected.
```

11) Table team

```
CREATE TABLE team(
   team_id VARCHAR(8),
   name VARCHAR(20),
   num_of_members NUMBER(1),
   project_name VARCHAR(20),
   CONSTRAINT PK_team PRIMARY KEY(team_id)
);
```

Output:



```
SQL> set linesize 100
SQL> desc team;
 Name                                                  Null?    Type
 ----------------------------------------------------- -------- ------------------------------
 TEAM_ID                                               NOT NULL VARCHAR2(8)
 NAME                                                           VARCHAR2(20)
 NUM_OF_MEMBERS                                                 NUMBER(1)
 PROJECT_NAME                                                   VARCHAR2(20)
```

Inserting records

INSERT INTO team VALUES('T1','team1',3,'TraceIt');

INSERT INTO team VALUES('T','team2',1,'Food site');

INSERT INTO team VALUES('T3','team3',2,'AI dreams');

INSERT INTO team VALUES('T4','team4',4,'MLmachine');

INSERT INTO team VALUES('T5','team5',3,'blooddonate');

INSERT INTO team VALUES('T6','team6',1,'shubhyatra');

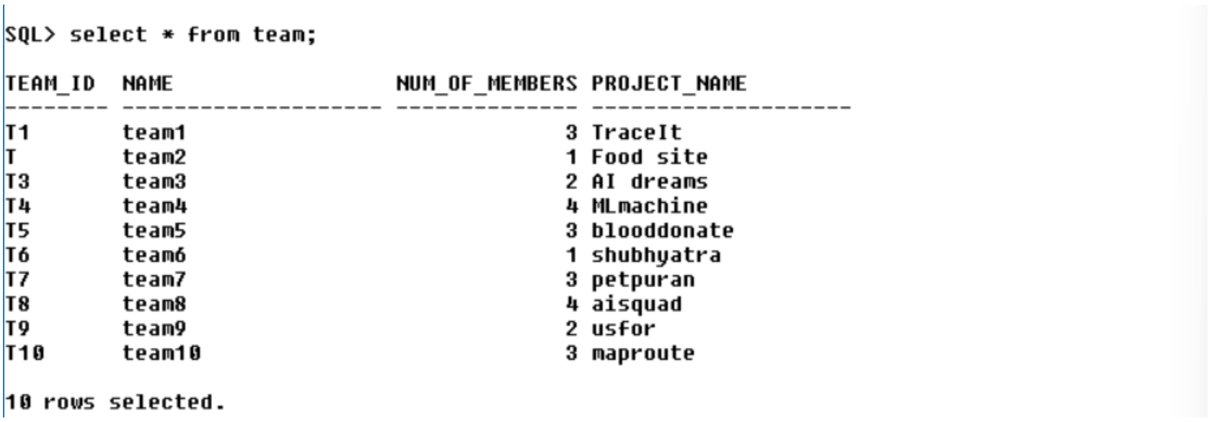
INSERT INTO team VALUES('T7','team7',3,'petpuran');

INSERT INTO team VALUES('T8','team8',4,'aisquad');

INSERT INTO team VALUES('T9','team9',2,'usfor');

INSERT INTO team VALUES('T10','team10',3,'maproute');

Output:

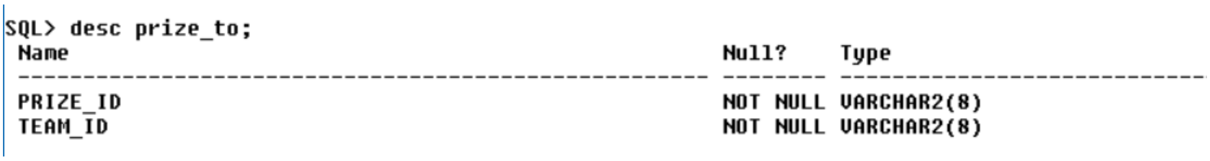


```
SQL> select * from team;

TEAM_ID  NAME                 NUM_OF_MEMBERS PROJECT_NAME
-------- -------------------- -------------- --------------------
T1       team1                             3 TraceIt
T        team2                             1 Food site
T3       team3                             2 AI dreams
T4       team4                             4 MLmachine
T5       team5                             3 blooddonate
T6       team6                             1 shubhyatra
T7       team7                             3 petpuran
T8       team8                             4 aisquad
T9       team9                             2 usfor
T10      team10                            3 maproute

10 rows selected.
```

12) Table prize_to

```
CREATE TABLE prize_to(
   prize_id VARCHAR(8),
   team_id VARCHAR(8),
   CONSTRAINT PK_prize-to PRIMARY KEY(prize_id,team_id),
   CONSTRAINT prize_FK FOREIGN KEY(prize_id) REFERENCES prize(prize_id),
   CONSTRAINT team_FK2 FOREIGN KEY(team_id) REFERENCES team(team_id)
);
```

Output:



```
SQL> desc prize_to;
 Name                                                  Null?    Type
 ----------------------------------------------------- -------- ----------------------------
 PRIZE_ID                                              NOT NULL VARCHAR2(8)
 TEAM_ID                                               NOT NULL VARCHAR2(8)
```

Inserting records

INSERT INTO prize_to VALUES('P1','T1');

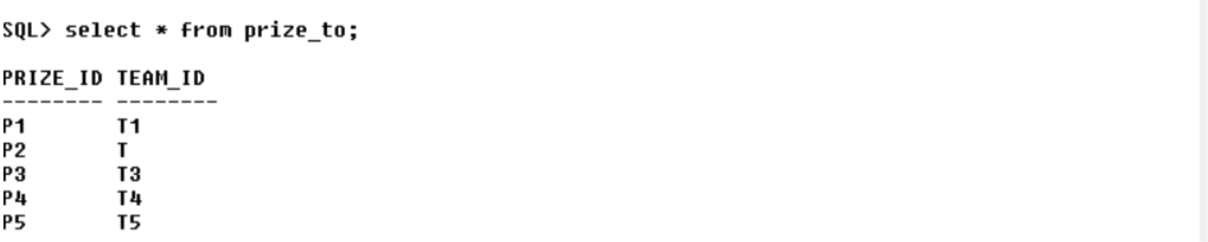
INSERT INTO prize_to VALUES('P2','T');

INSERT INTO prize_to VALUES('P3','T3');

INSERT INTO prize_to VALUES('P4','T4');

INSERT INTO prize_to VALUES('P5','T5');

Output:

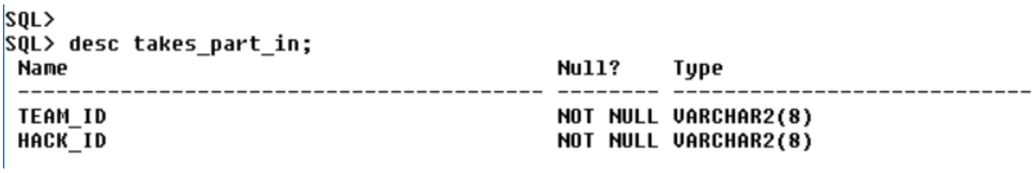


```
SQL> select * from prize_to;

PRIZE_ID TEAM_ID
-------- --------
P1       T1
P2       T
P3       T3
P4       T4
P5       T5
```

13) Table takes_part_in

```
CREATE TABLE takes_part_in(
   team_id VARCHAR(8),
   hack_id VARCHAR(8),
   CONSTRAINT PK_takes_part_in PRIMARY KEY(team_id,hack_id),
   CONSTRAINT team_FK FOREIGN KEY(team_id) REFERENCES team(team_id) ,
   CONSTRAINT hack_FK6 FOREIGN KEY(hack_id) REFERENCES hackathon(hack_id)
);
```

Output:



```
SQL>
SQL> desc takes_part_in;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 TEAM_ID                                   NOT NULL VARCHAR2(8)
 HACK_ID                                   NOT NULL VARCHAR2(8)
```

Inserting values

INSERT INTO takes_part_in VALUES('T1','1111AAAA');

INSERT INTO takes_part_in VALUES('T','2222BBBB');

INSERT INTO takes_part_in VALUES('T3','3333CCCC');

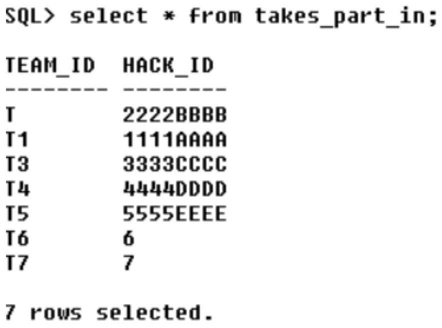
INSERT INTO takes_part_in VALUES('T4','4444DDDD');

INSERT INTO takes_part_in VALUES('T5','5555EEEE');

INSERT INTO takes_part_in VALUES('T6','6');

INSERT INTO takes_part_in VALUES('T7','7');

Output:



```
SQL> select * from takes_part_in;

TEAM_ID  HACK_ID
-------- --------
T        2222BBBB
T1       1111AAAA
T3       3333CCCC
T4       4444DDDD
T5       5555EEEE
T6       6
T7       7

7 rows selected.
```

14) Table judges_team

CREATE TABLE judges_team(

   judge_email VARCHAR(20),

   team_id VARCHAR(8),

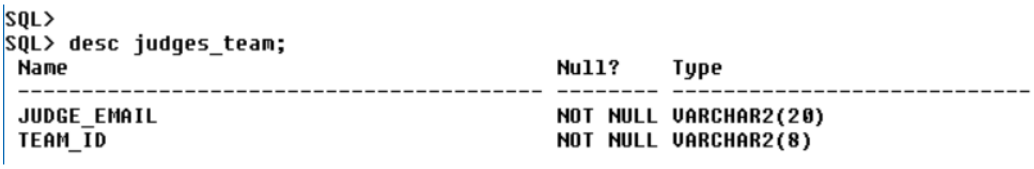
   CONSTRAINT PK_judges_team PRIMARY KEY(judge_email,team_id),

   CONSTRAINT judge_FK2 FOREIGN KEY(judge_email) REFERENCES judge(judge_email),

   CONSTRAINT team_FK3 FOREIGN KEY(team_id) REFERENCES team(team_id)

);

Output:



```
SQL>
SQL> desc judges_team;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 JUDGE_EMAIL                               NOT NULL VARCHAR2(20)
 TEAM_ID                                   NOT NULL VARCHAR2(8)
```

Inserting values

INSERT INTO judges_team VALUES('judge1@gamil.com','T1');

INSERT INTO judges_team VALUES('judge2@gamil.com','T');

INSERT INTO judges_team VALUES('judge3@gamil.com','T3');

INSERT INTO judges_team VALUES('judge4@gamil.com','T4');

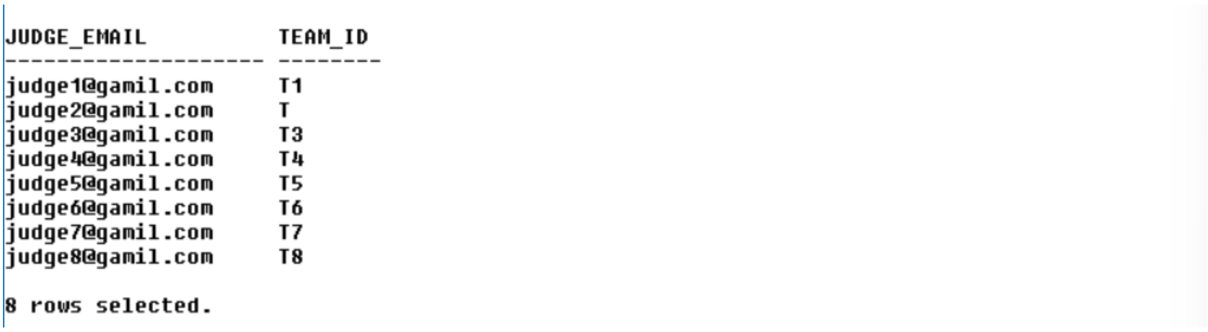
INSERT INTO judges_team VALUES('judge5@gamil.com','T5');

INSERT INTO judges_team VALUES('judge6@gamil.com','T6');

INSERT INTO judges_team VALUES('judge7@gamil.com','T7');

INSERT INTO judges_team VALUES('judge8@gamil.com','T8');

Output:

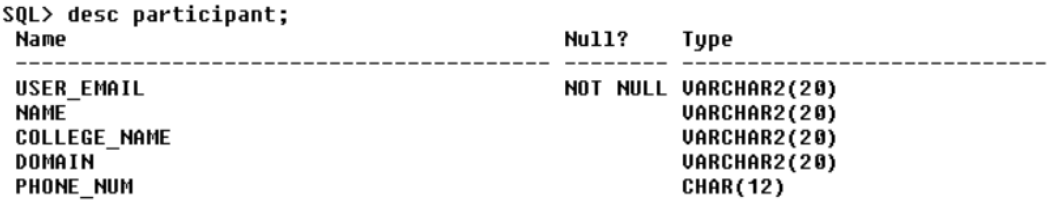


```
JUDGE_EMAIL          TEAM_ID
-------------------- --------
judge1@gamil.com     T1
judge2@gamil.com     T
judge3@gamil.com     T3
judge4@gamil.com     T4
judge5@gamil.com     T5
judge6@gamil.com     T6
judge7@gamil.com     T7
judge8@gamil.com     T8

8 rows selected.
```

15) Table participant

```
CREATE TABLE participant(
   user_email VARCHAR(20),
   name VARCHAR(20),
   college_name VARCHAR(20),
   domain VARCHAR(20),
   phone_num CHAR(12),
   CONSTRAINT PK_user PRIMARY KEY(user_email)
);
```

Output:

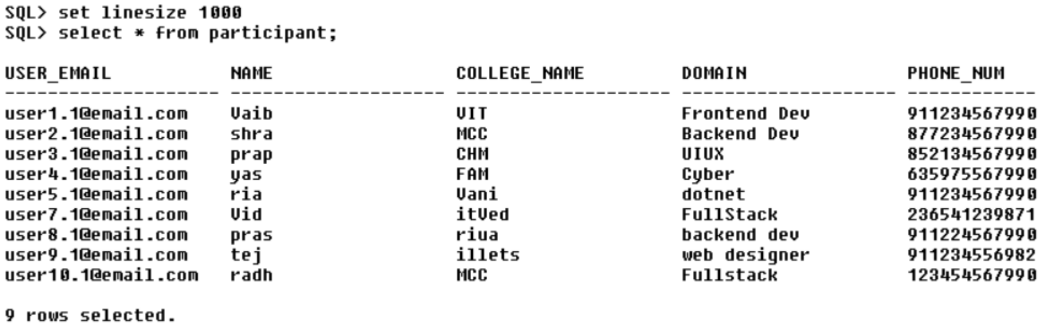


```
SQL> desc participant;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 USER_EMAIL                                NOT NULL VARCHAR2(20)
 NAME                                               VARCHAR2(20)
 COLLEGE_NAME                                       VARCHAR2(20)
 DOMAIN                                             VARCHAR2(20)
 PHONE_NUM                                          CHAR(12)
```

Inserting values

```
INSERT INTO participant VALUES('user1.1@email.com', 'Vaib','VIT', 'Frontend Dev', 911234567990 );

INSERT INTO participant VALUES('user2.1@email.com', 'shra','MCC', 'Backend Dev', 877234567990 );

INSERT INTO participant VALUES('user3.1@email.com', 'prap','CHM', 'UIUX', 852134567990 );

INSERT INTO participant VALUES('user4.1@email.com', 'yas','FAM', 'Cyber', 635975567990 );

INSERT INTO participant VALUES('user5.1@email.com', 'ria','Vani', 'dotnet', 911234567990 );

INSERT INTO participant VALUES('user6.1@email.com', 'sam','IIT', 'Frontend Dev', 9123644567555 );

INSERT INTO participant VALUES('user7.1@email.com', 'Vid','itVed', 'FullStack', 236541239871 );

INSERT INTO participant VALUES('user8.1@email.com', 'pras','riua', 'backend dev', 911224567990 );

INSERT INTO participant VALUES('user9.1@email.com', 'tej','illets', 'web designer', 911234556982 );

INSERT INTO participant VALUES('user10.1@email.com', 'radh','MCC', 'Fullstack', 123454567990 );
```

Output:



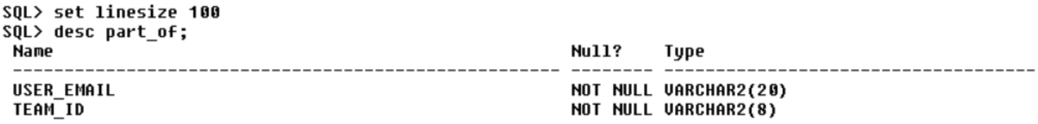
```
SQL> set linesize 1000
SQL> select * from participant;

USER_EMAIL           NAME                 COLLEGE_NAME         DOMAIN               PHONE_NUM
-------------------- -------------------- -------------------- -------------------- ------------
user1.1@email.com    Vaib                 VIT                  Frontend Dev         911234567990
user2.1@email.com    shra                 MCC                  Backend Dev          877234567990
user3.1@email.com    prap                 CHM                  UIUX                 852134567990
user4.1@email.com    yas                  FAM                  Cyber                635975567990
user5.1@email.com    ria                  Vani                 dotnet               911234567990
user7.1@email.com    Vid                  itVed                FullStack            236541239871
user8.1@email.com    pras                 riua                 backend dev          911224567990
user9.1@email.com    tej                  illets               web designer         911234556982
user10.1@email.com   radh                 MCC                  Fullstack            123454567990

9 rows selected.
```

16) Table part_of

```
CREATE TABLE part_of(

   user_email VARCHAR(20),

   team_id VARCHAR(8),

   CONSTRAINT PK_part_of PRIMARY KEY(user_email,team_id),

   CONSTRAINT team_FK4 FOREIGN KEY(team_id) REFERENCES team(team_id) ,

         CONSTRAINT FK_user FOREIGN KEY(user_email) REFERENCES participant(user_email)
```

);

Output:



```
SQL> set linesize 100
SQL> desc part_of;
 Name                                                  Null?    Type
 ----------------------------------------------------- -------- ------------------------------------
 USER_EMAIL                                            NOT NULL VARCHAR2(20)
 TEAM_ID                                               NOT NULL VARCHAR2(8)
```

Inserting values

INSERT INTO part_of VALUES('user1.1@email.com','T1');

INSERT INTO part_of VALUES('user2.1@email.com','T');

INSERT INTO part_of VALUES('user3.1@email.com','T3');

INSERT INTO part_of VALUES('user4.1@email.com','T4');

INSERT INTO part_of VALUES('user5.1@email.com','T5');

INSERT INTO part_of VALUES('user6.1@email.com','T1');

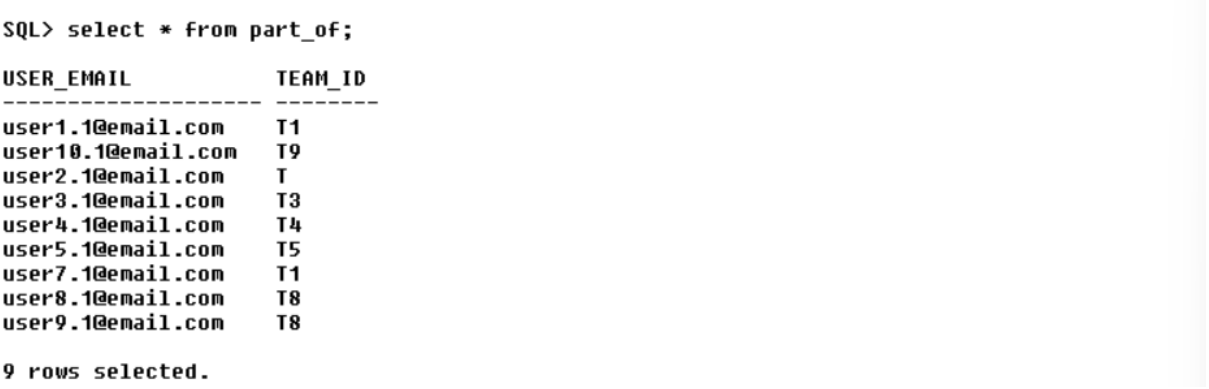
INSERT INTO part_of VALUES('user7.1@email.com','T1');

INSERT INTO part_of VALUES('user8.1@email.com','T8');

INSERT INTO part_of VALUES('user9.1@email.com','T8');

INSERT INTO part_of VALUES('user10.1@email.com','T9');

Output:

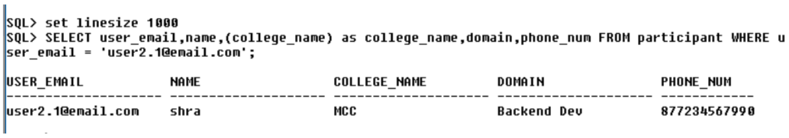


```
SQL> select * from part_of;

USER_EMAIL           TEAM_ID
-------------------- --------
user1.1@email.com    T1
user10.1@email.com   T9
user2.1@email.com    T
user3.1@email.com    T3
user4.1@email.com    T4
user5.1@email.com    T5
user7.1@email.com    T1
user8.1@email.com    T8
user9.1@email.com    T8

9 rows selected.
```

Q. Retrieving a participant profile

SELECT user_email,name,(college_name) as college_name,domain,phone_num FROM participant WHERE user_email = 'user2.1@email.com';

Output:

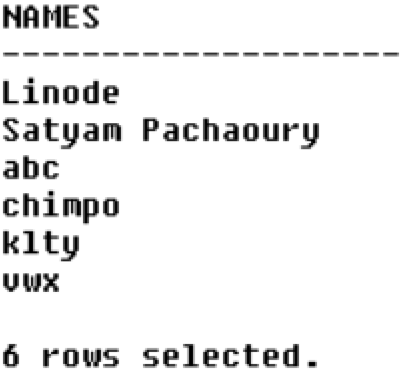


```
SQL> set linesize 1000
SQL> SELECT user_email,name,(college_name) as college_name,domain,phone_num FROM participant WHERE u
ser_email = 'user2.1@email.com';

USER_EMAIL           NAME                 COLLEGE_NAME         DOMAIN               PHONE_NUM
-------------------- -------------------- -------------------- -------------------- ------------
user2.1@email.com    shra                 MCC                  Backend Dev          877234567990
```

Q. Retrieve names of judges, speakers and sponsors for a particular hackathon

select name as names from sponsor where hack_id='1111AAAA' UNION (select name from judge where hack_id='1111AAAA' UNION select name from speaker where hack_id='1111AAAA');

output:



```
NAMES
--------------------
Linode
Satyam Pachaoury
abc
chimpo
klty
vwx

6 rows selected.
```

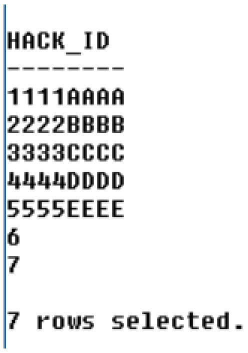
Q. Retrieving list of users who are part of a team

select * from participant where user_email in (select user_email from part_of where part_of.user_email = participant.user_email) order by name desc;

Q. Retrieving list of users who are part of a team

select hackathon.hack_id FROM hackathon LEFT JOIN takes_part_in ON hackathon.hack_id = takes_part_in.hack_id GROUP BY hackathon.hack_id HAVING count(takes_part_in.team_id) = 1;

output:

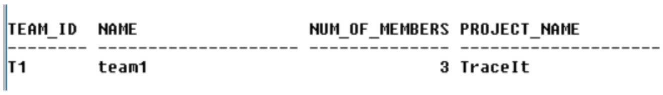


```
HACK_ID
--------
1111AAAA
2222BBBB
3333CCCC
4444DDDD
5555EEEE
6
7

7 rows selected.
```

Q. Retrieve all teams for a particular hack

select * from team where team_id in (Select team_id from takes_part_in where hack_id = '1111AAAA');

output:

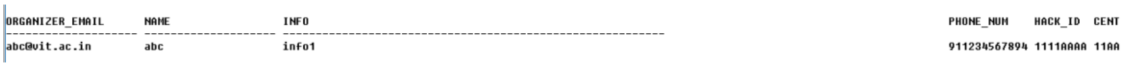


```
TEAM_ID  NAME                 NUM_OF_MEMBERS PROJECT_NAME
-------- -------------------- -------------- --------------------
T1       team1                             3 TraceIt
```

Q. Retrieve organizer profile

select * from organizer where organizer_email='abc@vit.ac.in';

output:



```
ORGANIZER_EMAIL      NAME                 INFO                                                                                     PHONE_NUM    HACK_ID  CENT
-------------------- -------------------- ------------------------------------------------------------
abc@vit.ac.in        abc                  info1                                                                                    911234567894 1111AAAA 11AA
```

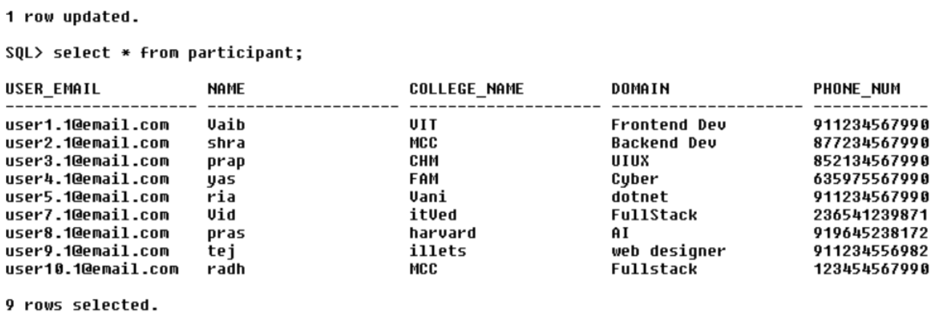
Q. Retrieving list of all participants and their corresponding team ids

Select participant.name,NVL(team.team_id,'no team') as team_id from participant FULL OUTER JOIN part_of ON participant.user_email = part_of.user_email FULL OUTER JOIN team ON team.team_id = part_of.team_id;

Q. Updating participant profile

Update participant set college_name='harvard',domain='AI',phone_num='919645238172' where user_email in (Select user_email from participant where user_email='user8.1@email.com');

Output:

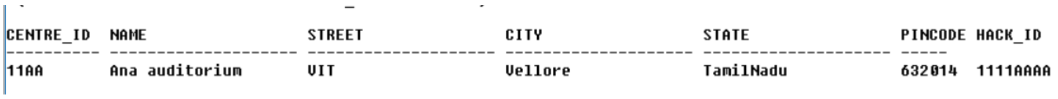


```
1 row updated.

SQL> select * from participant;

USER_EMAIL           NAME                 COLLEGE_NAME         DOMAIN               PHONE_NUM
-------------------- -------------------- -------------------- -------------------- ------------
user1.1@email.com    Vaib                 VIT                  Frontend Dev         911234567990
user2.1@email.com    shra                 MCC                  Backend Dev          877234567990
user3.1@email.com    prap                 CHM                  UIUX                 852134567990
user4.1@email.com    yas                  FAM                  Cyber                635975567990
user5.1@email.com    ria                  Vani                 dotnet               911234567990
user7.1@email.com    Vid                  itVed                FullStack            236541239871
user8.1@email.com    pras                 harvard              AI                   919645238172
user9.1@email.com    tej                  illets               web designer         911234556982
user10.1@email.com   radh                 MCC                  Fullstack            123454567990

9 rows selected.
```

Q. Retrieving centre details for a hackathon

select * from centre where hack_id='1111AAAA';

output:

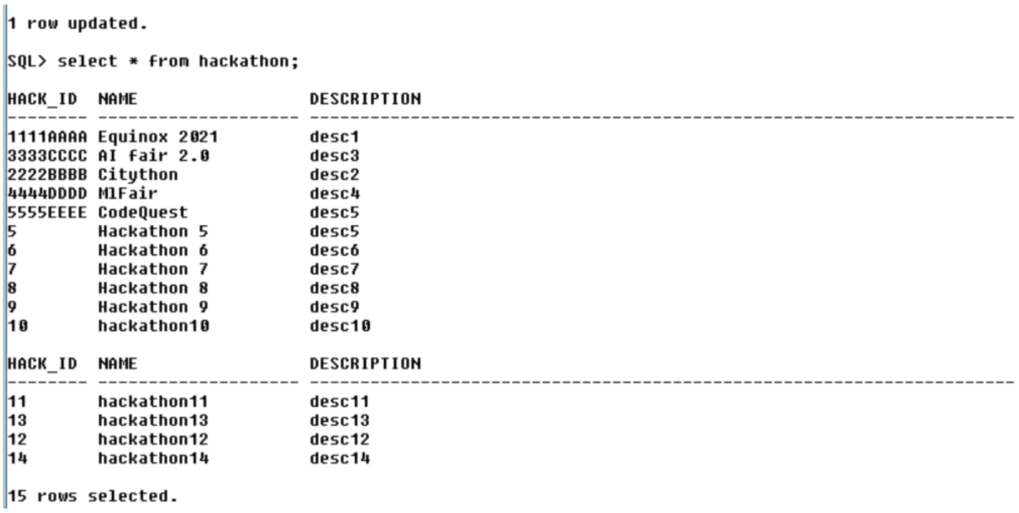


```
CENTRE_ID  NAME                 STREET               CITY                 STATE                PINCODE HACK_ID
---------- -------------------- -------------------- -------------------- -------------------- -----
11AA       Ana auditorium       VIT                  Vellore              TamilNadu            632014  1111AAAA
```

Q. update details of hackathon

Update hackathon set name='AI fair 2.0',min_team_size=4 where hack_id in (Select hack_id from hackathon where hack_id='3333CCCC');

Output:



```
1 row updated.

SQL> select * from hackathon;

HACK_ID  NAME                 DESCRIPTION
-------- -------------------- ----------------------------------------------------------------------
1111AAAA Equinox 2021         desc1
3333CCCC AI fair 2.0          desc3
2222BBBB Citython             desc2
4444DDDD MlFair               desc4
5555EEEE CodeQuest            desc5
5        Hackathon 5          desc5
6        Hackathon 6          desc6
7        Hackathon 7          desc7
8        Hackathon 8          desc8
9        Hackathon 9          desc9
10       hackathon10          desc10

HACK_ID  NAME                 DESCRIPTION
-------- -------------------- ----------------------------------------------------------------------
11       hackathon11          desc11
13       hackathon13          desc13
12       hackathon12          desc12
14       hackathon14          desc14

15 rows selected.
```

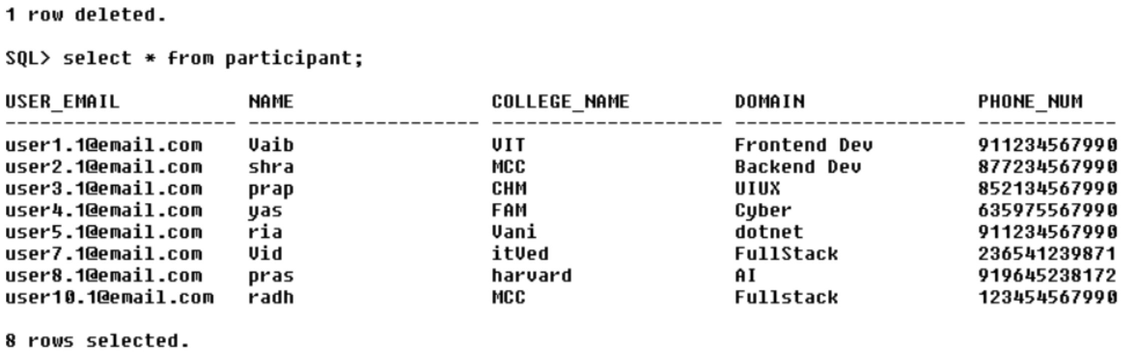
Q. delete team

delete from team where team_id in (Select team_id from team where team_id='T7');

Q. delete participant

delete from participant where user_email in (Select user_email from participant where user_email='user9.1@email.com');

output:



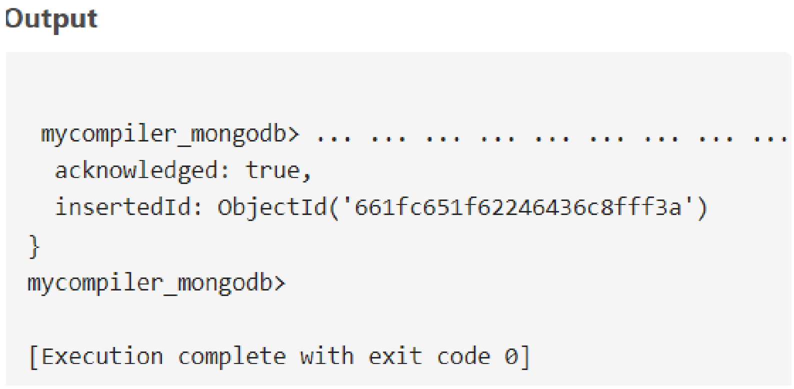
```
1 row deleted.

SQL> select * from participant;

USER_EMAIL           NAME                 COLLEGE_NAME         DOMAIN               PHONE_NUM
-------------------- -------------------- -------------------- -------------------- ------------
user1.1@email.com    Vaib                 VIT                  Frontend Dev         911234567990
user2.1@email.com    shra                 MCC                  Backend Dev          877234567990
user3.1@email.com    prap                 CHM                  UIUX                 852134567990
user4.1@email.com    yas                  FAM                  Cyber                635975567990
user5.1@email.com    ria                  Vani                 dotnet               911234567990
user7.1@email.com    Vid                  itVed                FullStack            236541239871
user8.1@email.com    pras                 harvard              AI                   919645238172
user10.1@email.com   radh                 MCC                  Fullstack            123454567990

8 rows selected.
```

NoSQL queries

Insert a new hackathon

```
db.hackathons.insertOne({
  "_id": ObjectId(),
  "name": "HackathonName",
  "description": "HackathonDescription",
  "startDate": ISODate("2024-04-17T00:00:00Z"),
  "endDate": ISODate("2024-04-18T00:00:00Z"),
  "minTeamSize": 1,
  "maxTeamSize": 5,
  "numRounds": 3
});
```

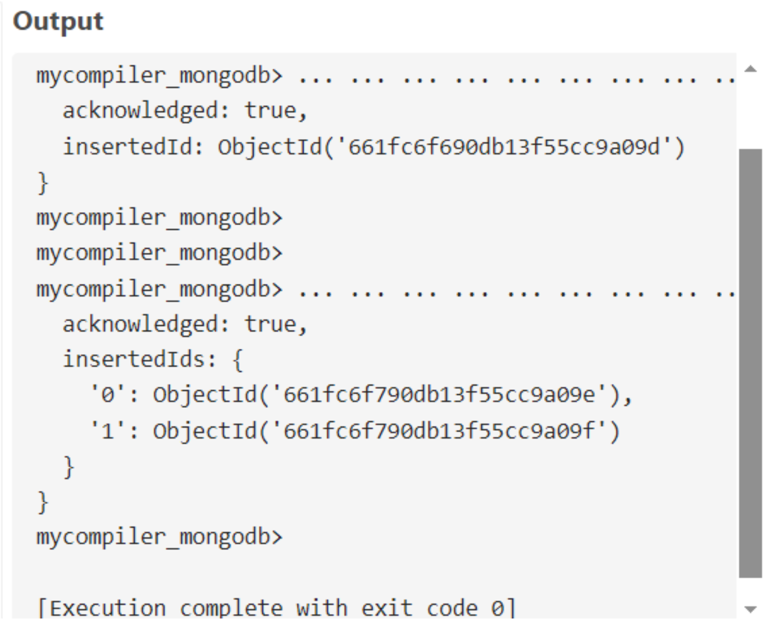
Output:



Output

```
 mycompiler_mongodb> ... ... ... ... ... ... ... ... ... {
  acknowledged: true,
  insertedId: ObjectId('661fc651f62246436c8fff3a')
}
mycompiler_mongodb>

[Execution complete with exit code 0]
```

```
// Insert a single record into the "hackathons" collection
db.hackathons.insertOne({
    "_id": ObjectId(),
    "name": "HackathonName",
    "description": "HackathonDescription",
    "startDate": ISODate("2024-04-17T00:00:00Z"),
    "endDate": ISODate("2024-04-18T00:00:00Z"),
    "minTeamSize": 1,
    "maxTeamSize": 5,
    "numRounds": 3
});
// Insert multiple records into the "hackathons" collection
db.hackathons.insertMany([
    {
        "_id": ObjectId(),
        "name": "HackathonName1",
        "description": "HackathonDescription1",
        "startDate": ISODate("2024-04-17T00:00:00Z"),
        "endDate": ISODate("2024-04-18T00:00:00Z"),
        "minTeamSize": 1,
        "maxTeamSize": 5,
        "numRounds": 3    },    {
        "_id": ObjectId(),
        "name": "HackathonName2",
        "description": "HackathonDescription2",
        "startDate": ISODate("2024-04-17T00:00:00Z"),
        "endDate": ISODate("2024-04-18T00:00:00Z"),
        "minTeamSize": 1,
        "maxTeamSize": 5,
        "numRounds": 3    }]);
```



Output

```
mycompiler_mongodb> ... ... ... ... ... ... ... ... ..
  acknowledged: true,
  insertedId: ObjectId('661fc6f690db13f55cc9a09d')
}
mycompiler_mongodb>
mycompiler_mongodb>
mycompiler_mongodb> ... ... ... ... ... ... ... ... ..
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('661fc6f790db13f55cc9a09e'),
    '1': ObjectId('661fc6f790db13f55cc9a09f')
  }
}
mycompiler_mongodb>

[Execution complete with exit code 0]
```

Q. retrieve hackathon between dates

```
db.hackathons.find({
  "startDate": { $gte: ISODate("2024-04-01T00:00:00Z") },
  "endDate": { $lte: ISODate("2024-04-30T00:00:00Z") }
});
```

Q. update details

```
db.hackathons.updateOne(
  { "_id": ObjectId("661fc6f690db13f55cc9a09d") },
  { $set: { "HackathonName": "NameHackathon", "HackathonDescription": "NewDescription" } }
);
```

Q.delete hackathon

```
db.hackathons.deleteOne({ "_id": ObjectId("661fc6f690db13f55cc9a09d ") });
```

Q. find hackathons with specific number of rounds.

```
db.hackathons.find({ "numRounds": 3 });
```

Q. retrieve hackthons that have not yet started

```
db.hackathons.find({ "startDate": { $gt: new Date() } });
```

Q. increase maximun team size of hackathon

```
db.hackathons.updateOne(
  { "_id": ObjectId("hackathon_id") },
  { $inc: { "maxTeamSize": 1 } }
);
```

Q. hackathon with specific team size

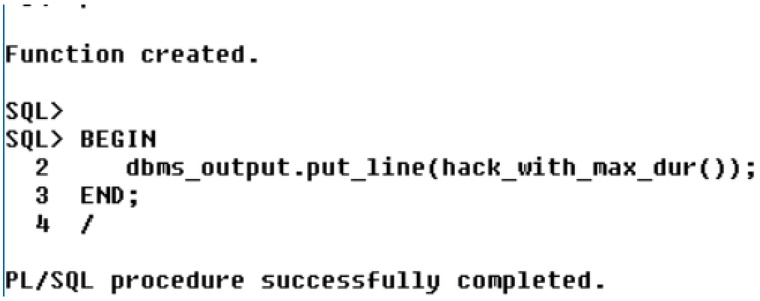
```
db.hackathons.find({ "minTeamSize": { $gte: 3 }, "maxTeamSize": { $lte: 5 } });
```

plsql functions

```
----register a participant for hackathon
CREATE OR REPLACE PROCEDURE register_participant(
  participant_id_value IN NUMBER,
  hackathon_id_value IN NUMBER,
  name_value IN VARCHAR2,
  email_value IN VARCHAR2
)
AS
BEGIN
  INSERT INTO participants (participant_id, hackathon_id, name, email)
  VALUES (participant_id_value, hackathon_id_value, name_value, email_value);
END;
/

---- create a new team for hackathon
CREATE OR REPLACE PROCEDURE create_team(
  team_id_value IN NUMBER,
  hackathon_id_value IN NUMBER,
  name_value IN VARCHAR2
)
AS
```

```
BEGIN
   INSERT INTO teams (team_id, hackathon_id, name)
   VALUES (team_id_value, hackathon_id_value, name_value);
END;
/

----retrieve all hackathons
CREATE OR REPLACE PROCEDURE get_all_hackathons
AS
BEGIN
   FOR hackathon IN (SELECT * FROM hackathons)
   LOOP
      DBMS_OUTPUT.PUT_LINE(hackathon.hackathon_id || ', ' || hackathon.name || ', ' ||
hackathon.description);
   END LOOP;
END;
/

----retrieve all teams for a hackathon
CREATE OR REPLACE PROCEDURE get_all_hackathons
AS
BEGIN
   FOR hackathon IN (SELECT * FROM hackathons)
   LOOP
      DBMS_OUTPUT.PUT_LINE(hackathon.hackathon_id || ', ' || hackathon.name || ', ' ||
hackathon.description);
   END LOOP;
END;
/

---- retrieve all participants in ateam
CREATE OR REPLACE PROCEDURE get_participants_in_team(
   team_id_value IN NUMBER
)
AS
BEGIN
   FOR participant IN (
      SELECT p.* FROM participants p
      JOIN team_participants tp ON p.participant_id = tp.participant_id
      WHERE tp.team_id = team_id_value
   )
   LOOP
      DBMS_OUTPUT.PUT_LINE(participant.participant_id || ', ' || participant.name || ', ' ||
participant.email);
   END LOOP;
END;
/

----retrieve name of hackathon with max duration
CREATE OR REPLACE FUNCTION hack_with_max_dur
RETURN VARCHAR
IS
cursor c_hack is SELECT name,start_date,end_date from hackathon;
hack_rec c_hack%ROWTYPE;
        max_d NUMBER := 0;
        hack_name VARCHAR(20):= 'none';
BEGIN
        open c_hack;
        fetch c_hack into hack_rec;
        while(c_hack%found) loop
                if (hack_rec.end_date-hack_rec.start_date)>max_d THEN
                        max_d := hack_rec.end_date-hack_rec.start_date;
                        hack_name := hack_rec.name;
                END IF;
```

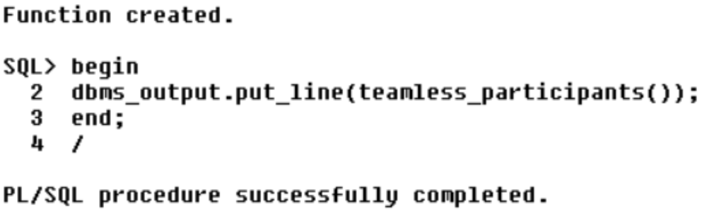
```
                    fetch c_hack into hack_rec;
            end loop;
            close c_hack;
            return hack_name;
END;
/BEGIN
  dbms_output.put_line(hack_with_max_dur());
END;
/
```



```
Function created.

SQL>
SQL> BEGIN
  2     dbms_output.put_line(hack_with_max_dur());
  3  END;
  4  /

PL/SQL procedure successfully completed.
```

```
----Function to return the number of users who are not part of any team
create or replace function teamless_participants
 return number
 IS
 --declaring cursor
 cursor teamless_list is select
 participant.user_email
 from participant left join part_of
 on participant.user_email=part_of.user_email
 group by
 participant.user_email
 having
 count(team_id)=0;
 --declaring variables
 email participant.user_email%type;
 counter number;
 begin
```

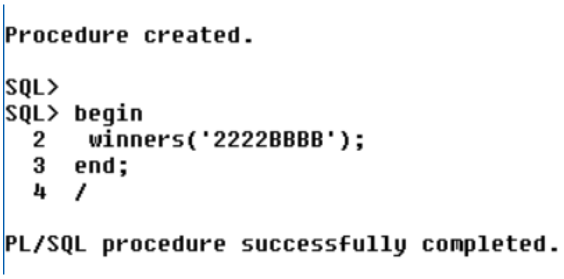
```
counter:=0;
open teamless_list;
loop
fetch teamless_list into email;
exit when teamless_list%NOTFOUND;
counter:=counter+1;
end loop;
close teamless_list;
--return total participants without team
return counter;
end;
/
begin
dbms_output.put_line(teamless_participants());
end;
/
```



```
Function created.

SQL> begin
     dbms_output.put_line(teamless_participants());
     end;
     /

PL/SQL procedure successfully completed.
```

Procedures:

```
------Retrieving names of winning teams of a particular hack
CREATE OR REPLACE PROCEDURE winners(hid VARCHAR)
        IS
        -- Declaring cursor
        CURSOR c_takes_part IS
                SELECT takes_part_in.hack_id, prize_to.prize_id, prize_to.team_id
                FROM takes_part_in INNER JOIN prize_to ON takes_part_in.team_id=prize_to.team_id WHERE hack_id=hid;
        v_takes_part c_takes_part%ROWTYPE;
        v_team_id team.team_id%TYPE;
        v_name team.name%TYPE;
BEGIN
        OPEN c_takes_part;
        FETCH c_takes_part INTO v_takes_part;
        WHILE(c_takes_part%FOUND) LOOP
                v_team_id := v_takes_part.team_id;
                SELECT team.name INTO v_name FROM team WHERE team.team_id=v_team_id;
                dbms_output.put_line('Winner of ' || hid || ': '|| v_name);
                FETCH c_takes_part INTO v_takes_part;
        END LOOP;
        CLOSE c_takes_part;
END;
/
begin
        winners('2222BBBB');
end;
/
```



```
Procedure created.

SQL>
SQL> begin
  2   winners('2222BBBB');
  3  end;
  4  /

PL/SQL procedure successfully completed.
```

```
----- Disqualifying teams from a hackathon that don’t have the specified team size
CREATE OR REPLACE PROCEDURE delete_team(
   hackathon_id IN VARCHAR )
IS
        cursor c_takes_part is select * from takes_part_in where hack_id=hackathon_id;
        takes_part_rec c_takes_part%ROWTYPE;
        team_rec team%ROWTYPE;
        team_id team.team_id%type;
        min_participants NUMBER := 0;
        max_participants NUMBER := 0;
BEGIN
        open c_takes_part;
        fetch c_takes_part into takes_part_rec;
        Select min_team_size,max_team_size INTO min_participants, max_participants from hackathon where hack_id=hackathon_id;
        while(c_takes_part%found) loop
                team_id := takes_part_rec.team_id;
                delete from team where team.team_id=team_id and (team.num_of_members<min_participants or team.num_of_members>max_participants);
                dbms_output.put_line('team deleted');
                fetch c_takes_part into takes_part_rec;


        end loop;
        close c_takes_part;
END;
/
BEGIN
  delete_team('2222BBBB');
END;
/
```

Object oriented queries

```
----create object types
CREATE TYPE hackathon_type AS OBJECT (
   hackathon_id NUMBER,
   name VARCHAR2(100),
   description VARCHAR2(255),
   start_date DATE,
   end_date DATE,
   min_team_size NUMBER,
   max_team_size NUMBER,
   num_rounds NUMBER
);

CREATE TYPE participant_type AS OBJECT (
   participant_id NUMBER,
   name VARCHAR2(100),
   email VARCHAR2(255)
);

CREATE TYPE team_type AS OBJECT (
   team_id NUMBER,
   name VARCHAR2(100)
);

----Query data using object types
DECLARE
   v_hackathon hackathon_type;
BEGIN
   SELECT hackathon_info INTO v_hackathon FROM hackathons WHERE hackathon_id = 1;
   DBMS_OUTPUT.PUT_LINE('Hackathon Name: ' || v_hackathon.name);
END;
/

----retrieve all participants for specific hackathon
DECLARE
   CURSOR participants_cur IS
      SELECT participant_info FROM participants p
      JOIN teams t ON p.participant_id = t.team_id
      WHERE t.hackathon_id = 1;
   v_participant participant_type;
BEGIN
```

```
  FOR participant_rec IN participants_cur LOOP
    v_participant := participant_rec.participant_info;
    DBMS_OUTPUT.PUT_LINE('Participant Name: ' || v_participant.name || ', Email: ' ||
v_participant.email);
  END LOOP;
END;
/

----retrieve all hackathons that participants has registered for
DECLARE
  CURSOR hackathons_cur IS
    SELECT h.hackathon_info FROM hackathons h
    JOIN teams t ON h.hackathon_id = t.hackathon_id
    JOIN participants p ON t.team_id = p.participant_id
    WHERE p.participant_id = 1; -- Participant ID
  v_hackathon hackathon_type;
BEGIN
  FOR hackathon_rec IN hackathons_cur LOOP
    v_hackathon := hackathon_rec.hackathon_info;
    DBMS_OUTPUT.PUT_LINE('Hackathon Name: ' || v_hackathon.name);
  END LOOP;
END;
/
```