Relational Schema:

basket\_user = (user\_id, user\_email, user\_password, user\_admin)

player\_info = (player\_id, player\_name, player\_position, team\_name)

player\_stat = (player\_id, player\_name, player\_points, rebounds, assists, steals)

Foreign key (player\_id) references player\_info (player\_id)

player\_injury = (player\_id, player\_name, injury\_name)

Foreign key(player\_id) references player\_info(player\_id)

team = (team\_id, team\_name, division\_name)

team\_ stat = (team\_id, team\_name, division\_name, team\_points, rebounds, assists, steals)

Foreign key ( team\_id) references team(team\_id)

team\_coach = (team\_id, team\_name, coach\_name)

Foreign key (team\_id) references team(team\_id)

division = (division\_id, divison\_name)

attendance = (division\_id, division\_name, number of attendee)

Foreign key (division\_id) references division(division\_id)

referee = (division\_id, division\_name, referee\_id, referee\_name)

Foreign key (division\_id) references divison(division\_id)

champions = (division\_id, division\_name, division\_champion, final\_champion)

Foreign key (division\_id) references division(division\_\_id)

**SQL commands:**

Special command (VIEW command)

**CREATE VIEW USERS\_VIEW AS**

**SELECT user\_id, user\_email, user\_admin**

**FROM basket\_user;**

basket\_user = (user\_id, user\_email, user\_password, user\_admin)

Input: (‘abc’, ‘abc@abc.com’, ‘abc’, true)

Output:

[<’abc’, ‘abc@abc.com’ , true> ]

Other commands (inserts, selects, and deletes)

Insert commands:

I.

**SELECT user\_admin**

**FROM basket\_user**

**WHERE user\_id = ‘abc’;**

basket\_user = (user\_id, user\_email, user\_password, user\_admin)

Input: (‘abc’, ‘abc@abc.com’, ‘abc’, true)

Output : <true>

II.

**SELECT player\_id**

**FROM player\_info;**

Input:

player\_info = (player\_id, player\_name, player\_position, team\_name)

player\_info contains two sample entries: (‘PL0001’, ‘Johnson’, ‘SG’, ’Team A’) and (‘PL0002’, ‘John’, ‘SF’ , ‘Team A’)

Output:

[<‘PL0001’>, <‘PL0002’>]

III.

**SELECT player\_id**

**FROM player\_stat;**

Input:

player\_stat = (player\_id, player\_name, player\_points, rebounds, assists, steals)

sample input: (‘PL0001’, ‘Johnson’, ’19,2’, ‘5.6’, ‘4.3’, ‘0.7’)

Output: [<‘PL0001’>]

IV.

**SELECT player\_id**

**FROM player\_injury;**

Input:

player\_injury = (player\_id, player\_name, injury\_name)

sample input: (‘PL0001’, “Johnson’, ‘No’)

Output: [<‘PL0001’>]

V.

**SELECT team\_id**

**FROM team;**

Input:

team = (team\_id, team\_name, division\_name)

sample input: (‘T001’,’Team A’, ‘Group A’)

Output:

[<’T001’>]

VI.

**SELECT team\_id**

**FROM team\_coach;**

Input:

team\_coach = (team\_id, team\_name, coach\_name)

sample input: (‘T001’,’Team A’, ‘Jackson’)

Output:

[<’T001’>]

VII.

**SELECT team\_id FROM team\_stat;**

Input:

team\_ stat = (team\_id, team\_name, division\_name, team\_points, rebounds, assists, steals)

sample input: (‘T001’,’Team A’, ‘Group A’, ‘570’, ‘145’, ‘120’,’54’)

Output:

[<’T001’>]

VIII.

**SELECT division\_id FROM division;**

Input:

division = (division\_id, division\_name)

sample input: (‘D001’, ‘Group A’)

Output:

[<’D001’>]

VIV.

**SELECT division\_id FROM attendance;**

Input:

attendance = (division\_id, division\_name, number of attendee)

sample input: (‘D001’, ‘Group A’, ’12,300’)

Output:

[<’D001’>]

X.

**SELECT division\_id FROM referee;**

Input:

referee = (division\_id, division\_name, referee\_id, referee\_name)

sample input: (‘D001’, ‘Group A’, ’R001’, ‘Liam’)

Output:

[<’D001’>]

XI.

**SELECT referee\_id FROM referee;**

Input:

referee = (division\_id, division\_name, referee\_id, referee\_name)

sample input: (‘D001’, ‘Group A’, ’R001’, ‘Liam’)

Output:

[<’R001’>]

XII.

**SELECT division\_id FROM champions;**

Input:

champions = (division\_id, division\_name, division\_champion, final\_champion)

sample input: (‘D001’, ‘Group A’, ‘T001’ , ‘No’)

Output:

[‘D001’]

XIII.

**SELECT player\_info.player\_name, team\_name, player\_info.player\_id, player\_position,**

**player\_points, rebounds, assists, steals**

**from player\_info**

**full join player\_stat on player\_info.player\_name = player\_stat.player\_name**

**where player\_info.player\_name LIKE %J%;**

Input:

player\_info = (player\_id, player\_name, player\_position, team\_name)

input entry: (‘PL0001’, ‘Johnson’, ‘SG’, ’Team A’)

player\_stat (player\_id, player\_name, player\_points, rebounds, assists, steals)

input entry: (‘PL0001’, ‘Johnson’, ’19,2’, ‘5.6’, ‘4.3’, ‘0.7’)

Output:

[<‘Johnson’, ’Team A’, ‘PL0001’, ‘SG’, ’19,2’, ‘5.6’, ‘4.3’, ‘0.7’>]

XIV.

**SELECT team.team\_name, team.team\_id, team.division\_name, coach\_name, team\_points,**

**rebounds, assists, steals**

**from team**

**full join team\_stat on team.team\_name = team\_stat.team\_name**

**full join team\_coach on team.team\_name = team\_coach.team\_name**

**where team.team\_name LIKE %T%**

Input:

team (team\_id, team\_name, division\_name)

Input entry: (‘PL0001’, ‘Johnson’, ‘SG’, ’Team A’)

team\_stat (team\_id, team\_name, division\_name, team\_points, rebounds, assists, steals)

Input entry: (‘T001’,’Team A’, ‘Group A’, ‘570’, ‘145’, ‘120’,’54’)

team\_coach = (team\_id, team\_name, coach\_name)

Input entry: (‘T001’,’Team A’, ‘Jackson’)

Output:

[<’Team A’, ‘T001’ , ‘Group A’, ‘Jackson’, ‘570’, ‘145’, ‘120’,’54’>]

**Insert and delete commands:**

I.

Input: basket\_user(user\_id, user\_email,user\_password, user\_admin)

input entry: (‘bbc’, ‘bbc@bbc.com’, ‘abc’)

**INSERT INTO basket\_user (user\_id, user\_email,user\_password) VALUES (‘bbc’, ‘bbc@bbc.com’, ‘abc’);**

Output for insert command:

[<’bbc’, ‘bbc@bbc.com’, ‘abc’, True>], we set the last attribute, user\_admin, to be true by default

II.

Input: player\_info = (player\_id, player\_name, player\_position, team\_name)

input entry: (‘PL0001’, ‘Johnson’, ‘SG’, ’Team A’)

**INSERT INTO player\_info (player\_id, player\_name, player\_position, team\_name) VALUES (‘PL0001’, ‘Johnson’, ‘SG’, ’Team A’);**

Output:

[<‘PL0001’, ‘Johnson’, ‘SG’, ’Team A’>]

**DELETE from player\_info where player\_id = ‘PL0001’;**

Output for delete command:

[]

III.

Input: player\_stat (player\_id, player\_name, player\_points, rebounds, assists, steals)

input entry: (‘PL0001’, ‘Johnson’, ’19,2’, ‘5.6’, ‘4.3’, ‘0.7’)

**INSERT INTO player\_stat (player\_id, player\_name, player\_points, rebounds, assists, steals) VALUES (‘PL0001’, ‘Johnson’, ’19,2’, ‘5.6’, ‘4.3’, ‘0.7’)**

Output:

[<‘PL0001’, ‘Johnson’, ’19,2’, ‘5.6’, ‘4.3’, ‘0.7’>]

**DELETE from player\_stat where player\_id = ‘PL0001’;**

Output for delete command:

[]

IV.

Input: team (team\_id, team\_name, division\_name)

Input entry: (‘PL0001’, ‘Johnson’, ‘SG’, ’Team A’)

**INSERT INTO team (team\_id, team\_name, division\_name) VALUES (‘T001’,’Team A’, ‘Jackson’);**

Output:

[<‘T001’,’Team A’, ‘Jackson’>]

**DELETE from team where team\_id = ‘T001’;**

Output for delete command:

[]

V.

Input: team\_stat (team\_id, team\_name, division\_name, team\_points, rebounds, assists, steals)

Input entry: (‘T001’,’Team A’, ‘Group A’, ‘570’, ‘145’, ‘120’,’54’)

**INSERT INTO team\_stat (team\_id, team\_name, division\_name, team\_points, rebounds, assists, steals) VALUES (‘T001’,’Team A’, ‘Group A’, ‘570’, ‘145’, ‘120’,’54’)**

Output:

[<‘T001’,’Team A’, ‘Group A’, ‘570’, ‘145’, ‘120’,’54’>]

**DELETE from team\_stat where team\_id= ‘T001’;**

Output for delete command:

[]

VI.

Input: player\_injury = (player\_id, player\_name, injury\_name)

Input entry: (‘PL0001’, ‘Johnson’, ‘No’)

**INSERT INTO player\_injury (player\_id, player\_name, injury\_name) VALUES (‘PL0001’, ‘Johnson’, ‘No’)**

Output:

[<‘PL0001’, “Johnson’, ‘No’>]

**DELETE from player\_injury where player\_id= ‘PL0001’;**

Output for delete command:

[]

VII.

Input: team\_coach = (team\_id, team\_name, coach\_name)

sample input: (‘T001’,’Team A’, ‘Jackson’)

**INSERT INTO team\_coach (team\_id, team\_name, coach\_name) VALUES (‘T001’,’Team A’, ‘Jackson’)**

Output:

[<‘T001’,’Team A’, ‘Jackson’>]

**DELETE from team\_coach where team\_id= ‘T001’;**

Output for delete command:

[]

VIII.

Input: division (division\_id, division\_name)

Sample input: (‘D001’,’Group A’)

**INSERT INTO division (division\_id, division\_name) VALUES (‘D001’,’Group A’);**

Output:

[<‘D001’,’Group A’ >]

**DELETE from division where division \_id= ‘D001’;**

Output for delete command:

[]

VIV:

Input: attendance (division\_id, division\_name, number\_of\_attendee)

Sample input: (‘D001’, ‘Group A’, ’12,300’)

**INSERT INTO attendance (division\_id, division\_name, number\_of\_attendee) VALUES (‘D001’, ‘Group A’, ’12,300’);**

Output:

[<‘D001’,’Group A’, ’12,300’ >]

**DELETE from attendance where division \_id= ‘D001’;**

Output for delete command:

[]

X.

Input: referee = (division\_id, division\_name, referee\_id, referee\_name)

sample input: (‘D001’, ‘Group A’, ’R001’, ‘Liam’)

**INSERT INTO referee (division\_id, division\_name, referee\_id, referee\_name) VALUES (‘D001’, ‘Group A’, ’R001’, ‘Liam’)**

Output:

[<‘D001’, ‘Group A’, ’R001’, ‘Liam’>]

**DELETE from referee where division \_id= ‘D001’;**

Output for delete command:

[]

XI.

Input: champions = (division\_id, division\_name, division\_champion, final\_champion)

sample input: (‘D001’, ‘Group A’, ‘T001’ , ‘No’)

**INSERT INTO champions (division\_id, division\_name, division\_champion, final\_champion) VALUES (‘D001’, ‘Group A’, ‘T001’ , ‘No’**)

Output:

[<‘D001’, ‘Group A’, ‘T001’ , ‘No’>]

**DELETE from champion where division \_id= ‘D001’;**

Output for delete command:

[]