Sports Tournament Management Database Design:

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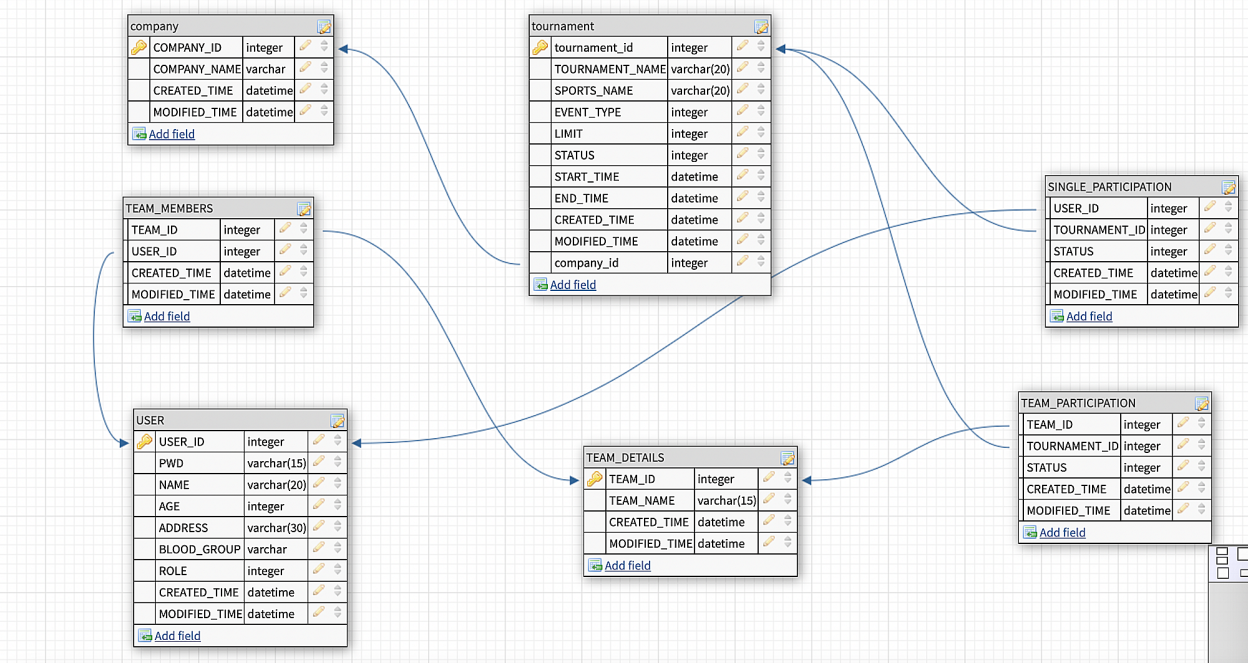
SPORTS TOURNAMENT DB SCHEMA :



CREATION OF DB CMD:

CREATE DATABASE DBNAME;

- CREATE TABLE Tournament(TOURNAMENT_ID INT PRIMARY KEY NOT NULL,TOURNAMENT_NAME CHAR(50) NOT NULL, SPORTS TEXT NOT NULL, NO_OF_TEAMS INT NOT NULL, EVENT_TYPE CHAR(50));

- CREATE TABLE team(team_id INT PRIMARY KEY NOT NULL,team_name CHAR(50) NOT NULL, no_of_people INT NOT NULL, TOURNAMENT_ID INT);

LIST OF OPERATIONS :

INSERT AND SELECTION CMDS:

```
raj                                                                                                                    Done
-------
            1 | Hackaton                                          | cricket  |           2 | team

            2 | Hackaton2                                         | football |           4 | team

(2 rows)

aravind-pt6089=# select * from team ;
 team_id |                    team_name                     | no_of_people | tournament_id
---------+--------------------------------------------------+--------------+---------------
       1 | raj_team                                         |            5 |             1
(1 row)

aravind-pt6089=# insert into team aravind-pt6089=#
aravind-pt6089=# insert into team (team_id , team_name , no_of_people , TOURNAMENT_ID) values (2,'ram_team',6,2 );
INSERT 0 1
aravind-pt6089=# select * from team ;
 team_id |                    team_name                     | no_of_people | tournament_id
---------+--------------------------------------------------+--------------+---------------
       1 | raj_team                                         |            5 |             1
       2 | ram_team                                         |            6 |             2
(2 rows)

aravind-pt6089=# select * from tournament ;
 tournament_id |                 tournament_name                  |  sports  | no_of_teams |                    event_type

---------------+--------------------------------------------------+----------+-------------+-------------------------------------------------
-------
            1 | Hackaton                                         | cricket  |           2 | team

            2 | Hackaton2                                        | football |           4 | team

(2 rows)

aravind-pt6089=# SELECT * FROM TEAM;
 team_id |                    team_name                     | no_of_people | tournament_id
---------+--------------------------------------------------+--------------+---------------
       1 | raj_team                                         |            5 |             1
       2 | ram_team                                         |            6 |             2
(2 rows)

aravind-pt6089=#
```

DB CMDS :

CREATE DATABASE SPORTS_TEAM;

```
 tournament_id |   tournament_name    |     sports_name      | no_of_teams | event_type |   status   |              start               |              ending
---------------+----------------------+----------------------+-------------+------------+------------+----------------------------------+----------------------------------
             1 | tac                  | cricket              |           2 | single     | start      | 2022-09-09 06:26:36.457764+05:30 | 2022-09-09 06:26:36.457764+05:30
             2 | twn                  | hockey               |           4 | team       | start      | 2022-09-09 06:26:36.459021+05:30 | 2022-09-09 06:26:36.459021+05:30
             3 | tou                  | football             |           4 | team       | start      | 2022-09-09 06:26:36.459446+05:30 | 2022-09-09 06:26:36.459446+05:30
(3 rows)

 team_id |      team_name       | no_of_people_allowed | sports_name
---------+----------------------+----------------------+-------------
       1 | raju                 | 4                    | cricket
       2 | ram                  | 5                    | cricket
       3 | ramu                 | 6                    | hockey
(3 rows)

 user_id | sports_name |             name             | age |           address            | blood_group |       pwd       | team_id
---------+-------------+------------------------------+-----+------------------------------+-------------+-----------------+---------
       1 | CRICKET     | VIRAT                        |  30 | MUMBAI                       | O+          | VIRAT123        |       1
       2 | FOOT BALL   | RONALDO                      |  31 | UK                           | B+          | RONALDO123      |       2
       3 | CRICKET     | DHONI                        |  35 | DELHI                        | A+          | DHONI123        |       1
(3 rows)

 s_id | tournament_id | user_id |            status
------+---------------+---------+-----------------------------------
    1 |             1 |       1 | WIN
    2 |             1 |       2 | WIN
    3 |             2 |       3 | LOSE
(3 rows)

 s_id | team_id | tournament_id |            status
------+---------+---------------+-----------------------------------
    2 |       1 |             3 | LOSE
    3 |       1 |             1 | WIN
(2 rows)

sports_tournament123=#
```

- CREATE TABLE team(team_id INT PRIMARY KEY NOT NULL,team_name CHAR(50) NOT NULL, no_of_people INT NOT NULL,SPORTS_NAME TEXT NOT NULL, TOURNAMENT_ID INT NOT NULL foreign key);
- insert into team (team_id , team_name , no_of_people , TOURNAMENT_ID) values (1,'raj_team',5,'cricket',1);
- select * from team ;

```
 tournament_id |   tournament_name    |     sports_name      | no_of_teams | event_type |   status   |             start             |             ending
---------------+----------------------+----------------------+-------------+------------+------------+-------------------------------+-------------------------------
             1 | tac                  | cricket              |           2 | single     | start      | 2022-09-09 06:26:36.457764+05:30 | 2022-09-09 06:26:36.457764+05:30
             2 | twn                  | hockey               |           4 | team       | start      | 2022-09-09 06:26:36.459021+05:30 | 2022-09-09 06:26:36.459021+05:30
             3 | tou                  | football             |           4 | team       | start      | 2022-09-09 06:26:36.459446+05:30 | 2022-09-09 06:26:36.459446+05:30
(3 rows)

 team_id |      team_name       | no_of_people_allowed | sports_name
---------+----------------------+----------------------+-------------
       1 | raju                 | 4                    | cricket
       2 | ram                  | 5                    | cricket
       3 | ramu                 | 6                    | hockey
(3 rows)

 user_id | sports_name |              name              | age |            address             | blood_group |       pwd       | team_id
---------+-------------+--------------------------------+-----+--------------------------------+-------------+-----------------+---------
       1 | CRICKET     | VIRAT                          |  30 | MUMBAI                         | O+          | VIRAT123        |       1
       2 | FOOT BALL   | RONALDO                        |  31 | UK                             | B+          | RONALDO123      |       2
       3 | CRICKET     | DHONI                          |  35 | DELHI                          | A+          | DHONI123        |       1
(3 rows)

 s_id | tournament_id | user_id |             status
------+---------------+---------+---------------------------------
    1 |             1 |       1 | WIN
    2 |             1 |       2 | WIN
    3 |             2 |       3 | LOSE
(3 rows)

 s_id | team_id | tournament_id |             status
------+---------+---------------+---------------------------------
    2 |       1 |             3 | LOSE
    3 |       1 |             1 | WIN
(2 rows)

sports_tournament123=#
```

- insert into tournament (TOURNAMENT_ID ,TOURNAMENT_NAME , SPORTS , NO_OF_TEAMS , EVENT_TYPE) VALUES(1,'Hackaton','cricket',2,'team');

- insert into tournament (TOURNAMENT_ID ,TOURNAMENT_NAME , SPORTS , NO_OF_TEAMS , EVENT_TYPE) VALUES(2,'Hackaton2','football',4,'team');

- select * from tournament;

- select * from team ;

- insert into team (team_id , team_name , no_of_people , TOURNAMENT_ID) values (2,'ram_team',6,'cricket',2);

- CREATE TABLE players(player_id INT PRIMARY KEY NOT NULL,sports_name CHAR(50) NOT NULL, player_name char(50) NOT NULL, age int NOT NULL, address CHAR(50), blood_group char(3) ,team_id INT foreign key NOT NULL);

- insert into players (player_id , sports_name ,player_name ,age,address,blood_group) values (1,'cricket','aravind',22,'address 123','A+',1);

- select * from players;

CREATED A TOURNAMENT TABLE :

- CREATE TABLE Tournament(TOURNAMENT_ID INT NOT NULL, TOURNAMENT_NAME CHAR(20) NOT NULL, SPORTS_NAME CHAR(10) NOT NULL, NO_OF_TEAMS INT NOT NULL, EVENT_TYPE CHAR(10) ,start_time time ,end_time time,PRIMARY KEY(TOURNAMENT_ID));

INSERTION CMD:

- insert into tournament (tournament_id,tournament_name,sports_name,no_of_teams,event_type) values (2,'hackaton','cricket',2,'team');

DELETE CMD :

- delete from tournament where tournament_id=1;

```
sports_team12'# \d
sports_team12'# '
sports_team12(# )
sports_team12-# ;
ERROR:  syntax error at or near "team"
LINE 1: ..._TEAMS,EVENT_TYPE  )VALUES(1,'Hackaton','cricket;,2,'team');
                                                          ^
sports_team12=# insert into tournament (TOURNAMENT_ID ,TOURNAMENT_NAME ,SPORTS_NAME ,NO_OF_TEAMS,EVENT_TYPE  )VALUES(1,'Hackaton','cricket,2,'team');
sports_team12'# '
sports_team12(# )
sports_team12-# ;
ERROR:  syntax error at or near "team"
LINE 1: ...F_TEAMS,EVENT_TYPE  )VALUES(1,'Hackaton','cricket,2,'team');
                                                          ^
sports_team12=# insert into tournament (TOURNAMENT_ID ,TOURNAMENT_NAME ,SPORTS_NAME ,NO_OF_TEAMS,EVENT_TYPE  )VALUES(1,'Hackaton','cricket,2);
sports_team12'# insert into tournament (TOURNAMENT_ID ,TOURNAMENT_NAME ,SPORTS_NAME ,NO_OF_TEAMS,EVENT_TYPE  )VALUES(1,'Hackaton','cricket',2);
sports_team12'# '
sports_team12(# )
sports_team12-# ;
ERROR:  syntax error at or near "Hackaton"
LINE 2: ... ,SPORTS_NAME ,NO_OF_TEAMS,EVENT_TYPE  )VALUES(1,'Hackaton',...
                                                          ^
sports_team12=# insert into tournament (tournament_id,tournament_name,sports_name,no_of_teams,event_type) values (1,'hackaton','cricket',2,'team');
ERROR:  duplicate key value violates unique constraint "tournament_pkey"
DETAIL:  Key (tournament_id)=(1) already exists.
sports_team12=# \d
              List of relations
 Schema |    Name    | Type  |     Owner
--------+------------+-------+---------------
 public | tournament | table | aravind-pt6089
(1 row)

sports_team12=# select * from tournament ;
 tournament_id |   tournament_name    | sports_name | no_of_teams | event_type
---------------+----------------------+-------------+-------------+------------
             1 | Hackaton             | cricket     |           2 | team');   +
               |                      |             |             |
(1 row)

sports_team12=# insert into tournament (tournament_id,tournament_name,sports_name,no_of_teams,event_type) values (2,'hackaton','cricket',2,'team');
INSERT 0 1
sports_team12=# select * from tournament ;
 tournament_id |   tournament_name    | sports_name | no_of_teams | event_type
---------------+----------------------+-------------+-------------+------------
             1 | Hackaton             | cricket     |           2 | team');   +
               |                      |             |             |
             2 | hackaton             | cricket     |           2 | team
(2 rows)

sports_team12=# delete from tournament where tournament_id=1;
DELETE 1
sports_team12=# select * from tournament ;
 tournament_id |   tournament_name    | sports_name | no_of_teams | event_type
---------------+----------------------+-------------+-------------+------------
             2 | hackaton             | cricket     |           2 | team
(1 row)

sports_team12=#
```

```
sports_team12=# select * from tournament ;
 tournament_id |   tournament_name    | sports_name | no_of_teams | event_type
---------------+----------------------+-------------+-------------+------------
             2 | hackaton             | cricket     |           2 | team
             1 | hackaton             | cricket     |           4 | team
             3 | hackaton             | hockey      |           4 | team
             4 | hackaton             | hockey      |           5 | team
(4 rows)

sports_team12=#
```

CREATED TEAM TABLE ;

```
CREATE TABLE
sports_team12=# \d team
          Table "public.team"
    Column     |     Type      | Modifiers
---------------+---------------+-----------
 team_id       | integer       | not null
 team_name     | character(50) | not null
 no_of_people  | integer       | not null
 sports_name   | text          | not null
 tournament_id | integer       | not null
Indexes:
    "team_pkey" PRIMARY KEY, btree (team_id)
Foreign-key constraints:
    "team_tournament_id_fkey" FOREIGN KEY (tournament_id) REFERENCES tournament(tournament_id)

sports_team12=# select * from team ;
 team_id | team_name | no_of_people | sports_name | tournament_id
---------+-----------+--------------+-------------+---------------
(0 rows)

sports_team12=#
```

FINAL UPDATED CODE :

DB NEW TEAM;

- CREATE TABLE team(team_id INT NOT NULL, team_name CHAR(50) NOT NULL, no_of_people INT NOT NULL,SPORTS_NAME TEXT NOT NULL, TOURNAMENT_ID INT NOT NULL ,PRIMARY KEY (team_id) , foreign key(TOURNAMENT_ID) references tournament(TOURNAMENT_ID));

- insert into team (team_id,team_name ,no_of_people,sports_name,tournament_id) values (1,'abc',5,'hockey',1);

- insert into team (team_id,team_name ,no_of_people,sports_name,tournament_id) values (2,'ab',2,'tennis',1);

- insert into team (team_id,team_name ,no_of_people,sports_name,tournament_id) values (3,'ab',5,'tennis',2);

- insert into team (team_id,team_name ,no_of_people,sports_name,tournament_id) values (2,'abcd',5,'hockey',2);

DB NEW PLAYERS;

- CREATE TABLE players(player_id INT NOT NULL,team_id INT NOT NULL,sports_name CHAR(20) NOT NULL, player_name char(20) NOT NULL, age int NOT NULL, address CHAR(25), blood_group char(3) ,primary key(player_id), foreign key(team_id) references team(team_id));

- insert into players (player_id,team_id,sports_name,player_name,age,address,blood_group) values (1,1,'cricket','ab',22,'ghj','A+');

- insert into players (player_id,team_id,sports_name,player_name,age,address,blood_group) values (2,2,'cricket','abc',12,'ghjfg','A+');

- insert into players (player_id,team_id,sports_name,player_name,age,address,blood_group) values (3,3,'hockey','afrc',23,'ghdfjfg','o+');

FINAL SPORTSDB.SQL FILE CODE AND RESULT:

SINGLE SQL FILE CODE :

- create database sports_tournament123;
- \c sports_tournament123;
- CREATE TABLE tournament(TOURNAMENT_ID INT NOT NULL, TOURNAMENT_NAME CHAR(20) NOT NULL, SPORTS_NAME CHAR(20) NOT NULL, NO_OF_TEAMS INT NOT NULL, EVENT_TYPE CHAR(10) ,STATUS CHAR(10) ,PRIMARY KEY(TOURNAMENT_ID));
- alter table tournament add column start TIMESTAMP WITH TIME ZONE DEFAULT CURRENT_TIMESTAMP;
- alter table tournament add column ending TIMESTAMP WITH TIME ZONE DEFAULT CURRENT_TIMESTAMP;
- CREATE TABLE TEAM(TEAM_ID INT NOT NULL, TEAM_NAME CHAR(20) NOT NULL, NO_OF_PEOPLE_ALLOWED CHAR(20) NOT NULL,SPORTS_NAME CHAR(10), PRIMARY KEY(TEAM_ID));
- CREATE TABLE USERS(USER_ID INT PRIMARY KEY NOT NULL,SPORTS_NAME CHAR(10) NOT NULL,NAME CHAR(30) NOT NULL,AGE INT NOT NULL,ADDRESS CHAR(30) NOT NULL,BLOOD_GROUP CHAR(3) NOT NULL,PWD CHAR(15) NOT NULL,TEAM_ID INT NOT NULL,FOREIGN KEY(TEAM_ID) REFERENCES TEAM(TEAM_ID));

- CREATE TABLE SINGLE_PLAYER(S_ID INT PRIMARY KEY NOT NULL,TOURNAMENT_ID INT NOT NULL,USER_ID INT NOT NULL,STATUS CHAR(30) NOT NULL,FOREIGN KEY(TOURNAMENT_ID) REFERENCES TOURNAMENT(TOURNAMENT_ID),FOREIGN KEY(USER_ID) REFERENCES USERS(USER_ID));

- CREATE TABLE TEAM_PLAYER(S_ID INT PRIMARY KEY NOT NULL,TEAM_ID INT NOT NULL,TOURNAMENT_ID INT NOT NULL ,STATUS CHAR(30) NOT NULL,FOREIGN KEY(TEAM_ID) REFERENCES TEAM(TEAM_ID),FOREIGN KEY(TOURNAMENT_ID) REFERENCES TOURNAMENT(TOURNAMENT_ID));

- INSERT INTO TEAM_PLAYER(S_ID,TEAM_ID,TOURNAMENT_ID,STATUS) VALUES(1,1,1,'WIN');

- insert into tournament (tournament_id ,tournament_name ,sports_name,no_of_teams,event_type,status,start,ending) values (1,'tac','cricket',2,'single','start',NOW(),NOW());

- insert into tournament (tournament_id ,tournament_name ,sports_name,no_of_teams,event_type,status,start,ending) values (2,'twn','hockey',4,'team','start',NOW(),NOW());

- insert into tournament (tournament_id ,tournament_name ,sports_name,no_of_teams,event_type,status,start,ending) values (3,'tou','football',4,'team','start',NOW(),NOW());

- insert into team (team_id,team_name,no_of_people_allowed,sports_name) values (1,'raju',4,'cricket');

- insert into team (team_id,team_name,no_of_people_allowed,sports_name) values (2,'ram',5,'cricket');

- insert into team (team_id,team_name,no_of_people_allowed,sports_name) values (3,'ramu',6,'hockey');

- INSERT INTO USERS(USER_ID,SPORTS_NAME,NAME,AGE,ADDRESS,BLOOD_GROUP,PWD,TEAM_ID) VALUES(1,'CRICKET','VIRAT',30,'MUMBAI','O+','VIRAT123',1);

- INSERT INTO USERS(USER_ID,SPORTS_NAME,NAME,AGE,ADDRESS,BLOOD_GROUP,PWD,TEAM_ID) VALUES(2,'FOOTBALL','RONALDO',31,'UK','B+','RONALDO123',2);

- INSERT INTO USERS(USER_ID,SPORTS_NAME,NAME,AGE,ADDRESS,BLOOD_GROUP,PWD,TEAM_ID) VALUES(3,'CRICKET','DHONI',35,'DELHI','A+','DHONI123',1);

- INSERT INTO
  SINGLE_PLAYER(S_ID,TOURNAMENT_ID,USER_ID,STATUS)
  VALUES(1,1,1,'WIN');

- INSERT INTO
  SINGLE_PLAYER(S_ID,TOURNAMENT_ID,USER_ID,STATUS)
  VALUES(2,1,2,'WIN');

- INSERT INTO
  SINGLE_PLAYER(S_ID,TOURNAMENT_ID,USER_ID,STATUS)
  VALUES(3,2,3,'LOSE');

- INSERT INTO
  TEAM_PLAYER(S_ID,TEAM_ID,TOURNAMENT_ID,STATUS)
  VALUES(2,1,3,'LOSE');

- INSERT INTO
  TEAM_PLAYER(S_ID,TEAM_ID,TOURNAMENT_ID,STATUS)
  VALUES(3,1,1,'WIN');

Selection Operation Of Tables

- SELECT * FROM TOURNAMENT;
- SELECT * FROM TEAM;
- SELECT * FROM USERS;
- SELECT * FROM SINGLE_PLAYER;
- SELECT * FROM TEAM_PLAYER;

```
aravind-pt6089:~ aravind-pt6089$ pwd
/Users/aravind-pt6089
aravind-pt6089:~ aravind-pt6089$ \i sportsdb.sql
-bash: i: command not found
aravind-pt6089:~ aravind-pt6089$ psql
psql (9.5.19)
Type "help" for help.

aravind-pt6089=# \i sportsdb.sql
CREATE DATABASE
You are now connected to database "sports_tournament123" as user "aravind-pt6089".
CREATE TABLE
ALTER TABLE
ALTER TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
CREATE TABLE
psql:sportsdb.sql:10: ERROR:  insert or update on table "team_player" violates foreign key constraint "team_player_team_id_fkey"
DETAIL:  Key (team_id)=(1) is not present in table "team".
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
INSERT 0 1
 tournament_id |   tournament_name    |     sports_name      | no_of_teams | event_type |   status   |              start               |              ending
---------------+----------------------+----------------------+-------------+------------+------------+----------------------------------+----------------------------------
             1 | tac                  | cricket              |           2 | single     | start      | 2022-09-09 06:26:36.457764+05:30 | 2022-09-09 06:26:36.457764+05:30
             2 | twn                  | hockey               |           4 | team       | start      | 2022-09-09 06:26:36.459021+05:30 | 2022-09-09 06:26:36.459021+05:30
             3 | tou                  | football             |           4 | team       | start      | 2022-09-09 06:26:36.459446+05:30 | 2022-09-09 06:26:36.459446+05:30
(3 rows)

 team_id |      team_name       | no_of_people_allowed | sports_name
---------+----------------------+----------------------+-------------
       1 | raju                 | 4                    | cricket
       2 | ram                  | 5                    | cricket
       3 | ramu                 | 6                    | hockey
(3 rows)

 user_id | sports_name |              name              | age |            address             | blood_group |       pwd       | team_id
---------+-------------+--------------------------------+-----+--------------------------------+-------------+-----------------+---------
       1 | CRICKET     | VIRAT                          |  30 | MUMBAI                         | O+          | VIRAT123        |       1
       2 | FOOT BALL   | RONALDO                        |  31 | UK                             | B+          | RONALDO123      |       2
       3 | CRICKET     | DHONI                          |  35 | DELHI                          | A+          | DHONI123        |       1
(3 rows)

 s_id | tournament_id | user_id |            status
------+---------------+---------+-----------------------------------
    1 |             1 |       1 | WIN
    2 |             1 |       2 | WIN
    3 |             2 |       3 | LOSE
(3 rows)

 s_id | team_id | tournament_id |            status
------+---------+---------------+-----------------------------------
    2 |       1 |             3 | LOSE
    3 |       1 |             1 | WIN
(2 rows)

sports_tournament123=#
```