DBMS - MINI PROJECT

FOOTBALL TEAM MANAGEMENT SYSTEM

Submitted By:

Name: Rohit Sulake

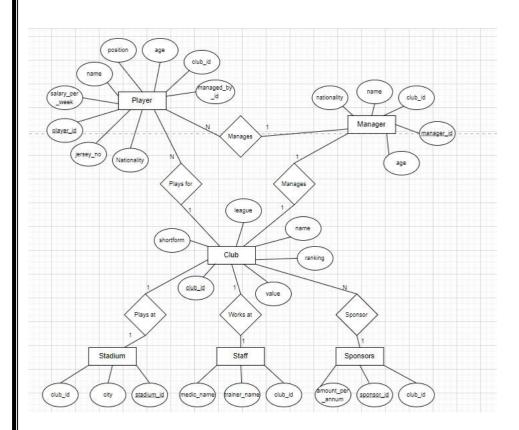
ABSTRACT:

The purpose of this project is to provide the user a simple way to manage teams that play in different leagues and a simple way to get information related to the players and the club they play for. It contains information about the club such as its current estimated value, the league it plays in and the ranking of the club in the league.

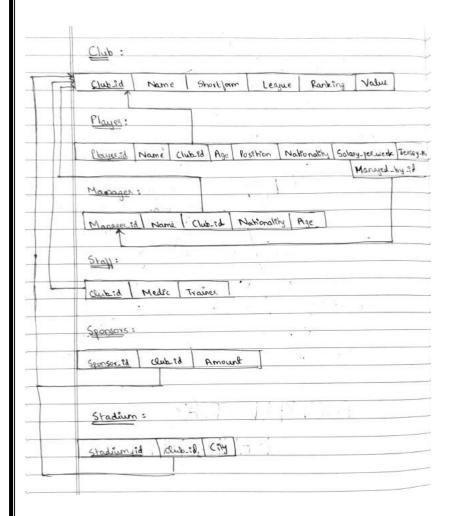
It also has the details of the mangers and the players and the salaries of each player and the position they play in. We also have information about the staff such as the medic and the trainer of the team. We see the sponsors related to this club and how much money they sponsor and the stadiums of each club.

We included an extra feature of the contract between a player and a club and we look into the transfer of players to different clubs under different scenarios relating to the expiration of the contract.

ER Diagram



Relational Schema



DDL statements - Building the database

Creating the database:

create DATABASE if not exists football_team_management;

```
MariaDB [(none)]> create database football_team_management
-> ;
Query OK, 1 row affected (0.017 sec)
```

Using the created database:

use football_team_management;

```
MariaDB [(none)]> use football_team_management;
Database changed
MariaDB [football_team_management]> _
```

CREATING TABLES:

-> age int,

->);

```
MariaDB [football_team_management]> create table club(
    -> club id int,
    -> name varchar(30),
    -> shortform char(5),
    -> league varchar(15),
    -> ranking int,
    -> value int,
    -> primary key(club_id)
    -> );
Query OK, 0 rows affected (0.092 sec)
MariaDB [football_team_management]> create table manager(
    -> manager_id int,
    -> name varchar(30),
    -> club id int,
```

-> foreign key(club_id) references club(club_id)

-> nationality varchar(20),

-> primary key(manager_id),

Query OK, 0 rows affected (0.045 sec)

```
MariaDB [football_team_management]> create table player(
    -> player_id int,
    -> name varchar(30),
    -> club_id int,
   -> age int,
    -> position char(5),
    -> nationality varchar(20),
    -> salary_per_week int,
    -> jersey_no int,
    -> managed_by_id int,
    -> primary key(player_id),
    -> foreign key(club_id) references club(club_id),
    -> foreign key(managed by id) references manager(manager id)
    -> );
Query OK, 0 rows affected (0.047 sec)
```

```
MariaDB [football team management]> create table staff(
    -> club_id int,
    -> medic_name varchar(30),
    -> trainer_name varchar(30),
    -> foreign key(club_id) references club(club_id)
    -> );
Query OK, 0 rows affected (0.046 sec)
```

```
MariaDB [football_team_management]> create table sponsors(
    -> sponsor id int,
    -> club_id int,
   -> amount_per_annum int,
    -> primary key(sponsor_id),
    -> foreign key(club_id) references club(club_id)
    -> );
Query OK, 0 rows affected (0.041 sec)
MariaDB [football_team_management]> create table stadium(
    -> stadium_id int,
    -> name varchar(30),
    -> club_id int,
    -> city varchar(20),
    -> primary key(stadium_id),
    -> foreign key(club_id) references club(club_id)
   -> );
Query OK, 0 rows affected (0.044 sec)
```

Using show tables command after creating tables:

Populating the Database:

Populating the table club:

Populating the table player:

MariaDB [football_team_management]> insert into player(player_id,name,club_id,age,position,nationality,salary_per_week,jersey_no,managed_by_id) values (007,"Cristiano Ronal to",001,37,"LWF","Portugal",50000,7,100);
puery OK, 1 row affected (0.006 sec)

MariaDB [football_team_management]> insert into player(player_id,name,club_id,age,position,nationality,salary_per_week,jersey_no,managed_by_id) values (010,"Lionel Messi",0 02,34,"RWF","Argentina",50000,10,101); Query OK, 1 row affected (0.004 sec)

MariaDB [football_team_management]> select * from player;

player_id	name	club_id	age	position	nationality	salary_per_week	jersey_no	managed_by_id
7	Cristiano Ronaldo	1	37	LWF	Portugal	50000	7	100
10	Lionel Messi	2	34	RWF	Argentina	50000	10	101

2 rows in set (0.001 sec)

Populating the table player using load data command:

MariaDB [football_team_management]> LOAD DATA INFILE "C:\\Users\\rohit\\Desktop\\PES UG\\Fifth Sem\\DBMS\\players.csv" INTO TABLE player
-> COLUMNS TERMINATED BY ','
-> OPTIONALLY ENCLOSED BY ""
-> ESCAPED BY ""

- LINES TERMINATED BY "\n"
- IGNORE 1 LINES
- -> (player_id,name,club_id,age,position,nationality,salary_per_week,jersey_no,managed_by_id); Query OK, 13 rows affected, 13 warnings (0.008 sec) Records: 13 Deleted: 0 Skipped: 0 Warnings: 13

MariaDB [football_team_management]> select * from player;

player_id	name	club_id	age	position	nationality	salary_per_week	jersey_no	managed_by_id
1	Luka Modric	1	36	CMF	Croatia	40000	10	100
2	Xavi	2	39	CMF	Spain	40000	10	101
3	Neymar Jr	2	32	LWF	Brazil	40000	11	101
4	Kevin De Bruyne	3	32	AMF	Belgium	40000	14	102
5	Karim Benzema	1	34	CF	France	40000	9	100
6	Toni Kroos	1	35	CMF	Germany	40000	8	100
7	Cristiano Ronaldo	1	37	LWF	Portugal	50000	7	100
8	Kaka	1	38	AMF	Brazil	40000	8	100
9	Sergio Busquets	2	36	DMF	Spain	40000	9	101
10	Lionel Messi	2	34	RWF	Argentina	50000	10	101
11	Andres Iniesta	2	39	CMF	Spain	40000	11	101
12	Sergio Ramos	1	34	СВ	Spain	40000	4	100
13	Eden Hazard	3	31	LWF	Belgium	30000	10	102
14	Fernando Torres	3	39	CF	Spain	30000	9	102
15	Didier Drogba	3	39	CF	Ivory Coast	30000	9	102

. 15 rows in set (0.001 sec)

Tools Used:

Backend: MariaDB

Frontend: STREAMLIT

JOIN QUERIES:

1) Display the list of managers and the players that they manage

```
MariaDB [football_team_management]> SELECT manager.name,player.name FROM manager LEFT JOIN player ON manager.club_id=player.club_id;
 name
                  name
 Carlo Ancelotti
                   Luka Modric
 Carlo Ancelotti
                   Karim Benzema
 Carlo Ancelotti
                   Toni Kroos
 Carlo Ancelotti
                   Cristiano Ronaldo
 Carlo Ancelotti
                   Kaka
 Carlo Ancelotti
                   Sergio Ramos
 Pep Guardiola
                   Xavi
 Pep Guardiola
                   Neymar Jr
                   Sergio Busquets
 Pep Guardiola
 Pep Guardiola
                   Lionel Messi
 Pep Guardiola
                   Andres Iniesta
                   Kevin De Bruyne
 Jose Mourinho
 Jose Mourinho
                   Eden Hazard
 Jose Mourinho
                   Fernando Torres
                   Didier Drogba
 Jose Mourinho
 Alex Ferguson
                   NULL
 Arsene Wenger
                   NULL
 Jurgen Klopp
                  NULL
18 rows in set (0.028 sec)
```

2) Select managers and the players they manage who belong to the same country as them

3) Display team name, manager name and the player names of all clubs in ascending order of club name

```
dariaDB [football_team_management]> SELECT club.name,manager.name,player.name FROM ((club INNER JOIN manager ON club.club_id=manager.club_id) INNER JOIN player ON club.club_id=player.club_id) order by club.name;
  name
                                   name
                                                                            Iname
                                      Jose Mourinho
Jose Mourinho
Jose Mourinho
Jose Mourinho
Pep Guardiola
Pep Guardiola
Pep Guardiola
Pep Guardiola
Pep Guardiola
Carlo Ancelotti
                                                                                 Didier Drogba
                                                                                Eden Hazard
Kevin De Bruyne
Fernando Torres
Lionel Messi
Andres Iniesta
  Chelsea
  Chelsea
Chelsea
   FC Barcelona
  FC Barcelona
FC Barcelona
FC Barcelona
                                                                                Xavi
Sergio Busquets
  FC Barcelona
Real Madrid FC
Real Madrid FC
  Real Madrid FC |
Real Madrid FC |
Real Madrid FC |
Real Madrid FC |
                                                                                 Kaka
Toni Kroos
Cristiano Ronaldo
Karim Benzema
            Madrid FC
                                       Carlo Ancelotti
                                                                                Sergio Ramos
15 rows in set (0.007 sec)
```

4) Show details of club, the club manager, and the stadium they play in

AGGREGATE FUNCTIONS:

1) Calculate the number of players playing for each club

2) Select the maximum value of a club

```
MariaDB [football_team_management]> select max(value) from club;
+-----+
| max(value) |
+-----+
| 10000000 |
+-----+
1 row in set (0.001 sec)
```

3) Select the minimum of the sum of a club's value and the money they receive from sponsors

4) Select sum of the salary of players from club with club id=2

```
MariaDB [football_team_management]> select club.club_id,sum(player.salary_per_week) from club,player where club.club_id=player.club_id and club.club_id=2;

| club_id | sum(player.salary_per_week) |

| 2 | 210000 |

1 row in set (0.005 sec)
```

SET OPERATIONS:

1) Select the club and the manager of the club only if the age of the manager is less than 60 using set operation

2) Select the id and names of players who are above 30 years old and play in La Liga league

```
MariaDB [football_team_management]> (select p.player_id,p.name,cl.league from player as p join club as cl where p.club_id=cl.club_id and p.age>30)
   -> (select p.player_id,p.name,cl.league from player as p join club as cl where p.club_id=cl.club_id and cl.league="La Liga");
 player id | name
                                league
             Luka Modric
                                  La Liga
         2
             Xavi
                                  La Liga
             Neymar Jr
Karim Benzema
                                 La Liga
                                 La Liga
             Cristiano Ronaldo
                                 La Liga
             Kaka
                                 La Liga
                                 La Liga
         9
             Sergio Busquets
             Lionel Messi
                                 La Liga
        10
             Andres Iniesta
                                  La Liga
        12
             Sergio Ramos
                                  La Liga
10 rows in set (0.001 sec)
```

3) Select the club id, value, and the amount they receive from sponsors if amount they receive from sponsors is above 150000 or the club id is equal to 1 without duplicates

4) Select the club id, value, and the amount they receive from sponsors if amount they receive from sponsors is above 150000 or the club id is equal to 1. (This is different from union as union all even includes duplicates as seen below)

FUNCTION:

Here, we have designed a function that randomly assigns a contract end year for a player with a range from 2023 to 2028. We use the rand() function to randomize the years chosen. We store this in a separate column in player under the name contract end.

```
MariaDB [football_team_management]> DELIMITER //
MariaDB [football_team_management]> CREATE FUNCTION contract_end_year_final(player_id int)
    -> RETURNS INT DETERMINISTIC
    -> BEGIN
    -> DECLARE contract_end int;
    -> SET contract_end=RAND()*(2028-2022)+2022;
    -> RETURN contract_end;
    -> END
    -> //
Query OK, 0 rows affected (0.009 sec)
```

```
|ariaDB [football_team_management]> update player set contract_end=contract_end_year_final(player_id
Query OK, 15 rows affected (0.006 sec)
    matched: 15 Changed: 15 Warnings: 0
MariaDB [football_team_management]> select * from player;
 player_id | name
                               | club_id | age | position | nationality | salary_per_week | jersey_no | managed_by_id | contract_end |
         1 | Luka Modric
                                                 CMF
                                                                                      40000
                                                              Croatia
                                                                                                                     100
                                                                                                                                   2022
         2
             Xavi
                                              39
                                                  CMF
                                                                                                      10
                                                                                                                     101
                                                                                                                                   2023
                                                              Spain
             Neymar Jr
                                                 LWF
                                                              Brazil
                                                                                                                     101
                                                                                                                                   2024
             Kevin De Bruyne
                                                  AMF
                                                              Belgium
                                                                                      40000
                                                                                                      14
                                                                                                                     101
                                                                                                                                   2024
             Karim Benzema
                                              34
                                                                                      40000
                                                                                                                                   2024
                                                              France
             Toni Kroos
                                                 CMF
                                                              Germany
                                                                                      40000
                                                                                                                     100
                                                                                                                                   2022
             Cristiano Ronaldo
                                              37
                                                 LWF
                                                              Portugal
                                                                                      50000
                                                                                                                     100
                                                                                                                                   2023
                                                 AME
         8
             Kaka
                                        1
                                              38
                                                              Brazil
                                                                                      40000
                                                                                                      8
                                                                                                                     100
                                                                                                                                   2024
         9
             Sergio Busquets
                                              36
                                                 I DMF
                                                              Spain
                                                                                      40000
                                                                                                      9
                                                                                                                     101
                                                                                                                                   2024
             Lionel Messi
                                                              Argentina
        10
                                        2
                                              34
                                                  RWF
                                                                                      50000
                                                                                                     10
                                                                                                                     101
                                                                                                                                   2027
        11
                                        2
                                                   CMF
             Andres Iniesta
                                              39
                                                              Spain
                                                                                                      11
                                                                                                                     101
                                                                                                                                   2024
             Sergio Ramos
         12
                                                 СВ
                                                              Spain
                                                                                                                     100
                                                                                                                                   2027
         13
             Eden Hazard
                                                              Belgium
                                                                                                                     102
                                                                                                                                   2024
                                                                                                                                   2028
         14
              Fernando Torres
                                              39
                                                   CF
                                                              Spain
                                                                                                                     102
         15 İ
             Didier Drogba
                                              39
                                                  CF
                                                              Ivory Coast
                                                                                      30000
                                                                                                                     102
                                                                                                                                   2028
15 rows in set (0.000 sec)
```

PROCEDURE:

Here, we have implemented a procedure which gives us the number of years left from a specific year that will be given as input by the user. This can be used to strategize the transfers a club is interested to make.

TRIGGER:

Trigger to be called when the user tries to update the player details. We do not let the update of a player's club id happen until his contract comes to an end. So we use the trigger to decide if the update of player id is possible (if contract_end not greater than 2022) else we display the message that the contract has not yet been terminated.

```
MariaDB [football_team_management]> DELIMITER $$
MariaDB [football_team_management]> CREATE TRIGGER NO_TRANSFER
    -> BEFORE UPDATE ON player
    -> FOR EACH ROW
    -> BEGIN
    -> IF NEW.club_id!=OLD.club_id and OLD.contract_end>2022 THEN
    -> SIGNAL SQLSTATE VALUE '45000' SET MESSAGE_TEXT="CONTRACT NOT YET TERMINATED!";
    -> END IF
    -> ;
    -> END$$
Query OK, 0 rows affected (0.046 sec)
```

```
MariaDB [football_team_management]> DELIMITER;
MariaDB [football_team_management]> update player set club_id=3 where player_id=6;
Query OK, 1 row affected (0.020 sec)
Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [football_team_management]> update player set club_id=3 where player_id=3;
ERROR 1644 (45000): CONTRACT NOT YET TERMINATED!
MariaDB [football_team_management]> update player set age=28 where player_id=6;
Query OK, 1 row affected (0.003 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

CURSOR:

The cursor implemented here is to update a player's salary based on the change in ranking of the team after a season. We increase their salary if the club ranking gets better else we decrease it.

```
MariaDB [football_team_management]> delimiter $$
MariaDB [football_team_management]> create procedure salary_change2(in club_id1 int,in old_ranking int,in new_ranking int)
   -> begin
    -> declare r int;
   -> declare finish int default 0;
   -> declare cur cursor for select salary_per_week from player where club_id1=club_id;
   -> declare continue handler for not found set finish=1;
   -> a:loop
   -> fetch cur into r;
   -> if finish!=1 then
   -> if old_ranking>new_ranking then
   -> update player set salary_per_week=r*1.1 where club_id1=club_id;
-> elseif old_ranking<new_ranking then
   -> update player set salary_per_week=r div 1.1 where club_id1=club_id;
    -> end if;
    -> end if;
    -> if finish=1 then
    -> leave a;
   -> end if;
    -> end loop a;
   -> end$$
Query OK, 0 rows affected (0.011 sec)
MariaDB [football_team_management]> delimiter ;
```

layer_id	name	club_id	age	position	nationality	salary_per_week	jersey_no	managed_by_id	contract_en
1	Luka Modric	 1	 36	+ CMF	+ Croatia	+ 33000	10	100	202
2	Xavi	2	39	CMF	Spain	33000	10	101	202
3	Neymar Jr	2	32	LWF	Brazil	33000	11	101	202
4	Kevin De Bruyne	3	32	AMF	Belgium	39930	14	101	202
5	Karim Benzema	1	34	CF	France	33000	9	100	202
6	Toni Kroos	3	28	CMF	Germany	39930	8	100	202
7	Cristiano Ronaldo	1	37	LWF	Portugal	33000	7	100	202
8	Kaka	1	38	AMF	Brazil	33000	8	100	202
9	Sergio Busquets	2	36	DMF	Spain	33000	9	101	202
10	Lionel Messi	2	34	RWF	Argentina	33000	10	101	202
11	Andres Iniesta	2	39	CMF	Spain	33000	11	101	202
12	Sergio Ramos	1	34	СВ	Spain	33000	4	100	202
13	Eden Hazard	3	31	LWF	Belgium	39930	10	102	202
14	Fernando Torres	3	39	CF	Spain	39930	9	102	202
15	Didier Drogba	3	39	CF	Ivory Coast	39930	9	102	202

.ayer_id	name	club_id	age	position	nationality	salary_per_week	jersey_no	managed_by_id	contract_end
1	Luka Modric	1	36	CMF	Croatia	33000	10	100	2022
2	Xavi	2	39	CMF	Spain	33000	10	101	2023
3	Neymar Jr	2	32	LWF	Brazil	33000	11	101	2024
4	Kevin De Bruyne	3	32	AMF	Belgium	43923	14	101	2024
5	Karim Benzema	1	34	CF	France	33000	9	100	2024
6	Toni Kroos	3	28	CMF	Germany	43923	8	100	2022
7	Cristiano Ronaldo	1	37	LWF	Portugal	33000	7	100	2023
8	Kaka	1	38	AMF	Brazil	33000	8	100	2024
9	Sergio Busquets	2	36	DMF	Spain	33000	9	101	2024
10	Lionel Messi	2	34	RWF	Argentina	33000	10	101	2022
11	Andres Iniesta	2	39	CMF	Spain	33000	11	101	2024
12	Sergio Ramos	1	34	СВ	Spain	33000	4	100	2027
13	Eden Hazard	3	31	LWF	Belgium	43923	10	102	2024
14	Fernando Torres	3	39	CF	Spain	43923	9	102	2028
15	Didier Drogba	3	39	CF	Ivory Coast	43923	9	102	2028

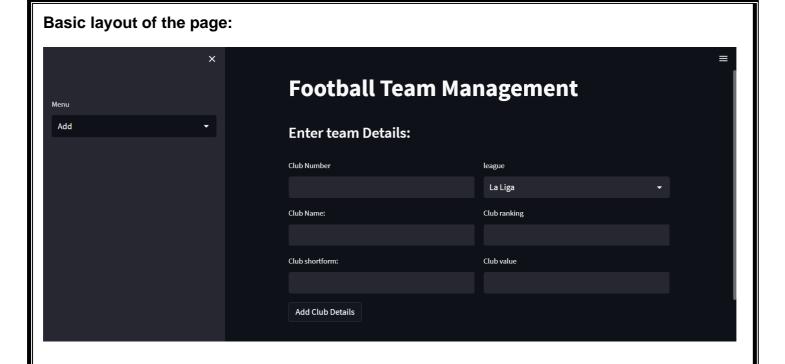
FRONT END:

C:\Users\rohit\Desktop\PES UG\Fifth Sem\DBMS\mini project>streamlit run app.py

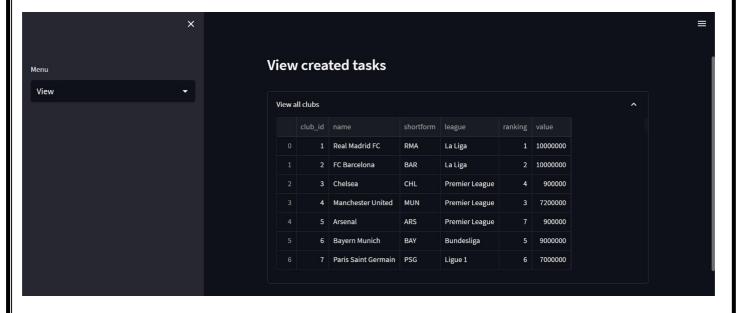
You can now view your Streamlit app in your browser.

Local URL: http://localhost:8501

Network URL: http://192.168.1.45:8501

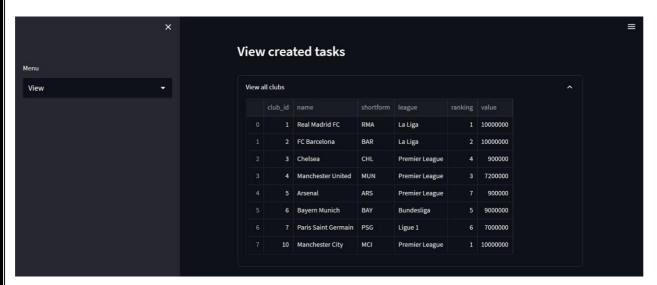


Initial values present:

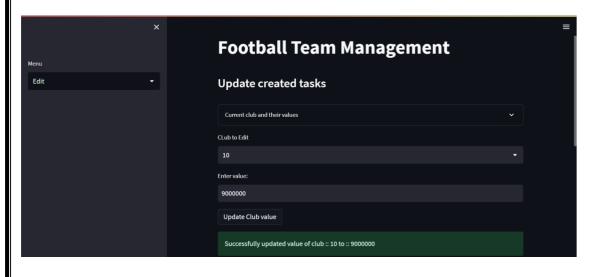


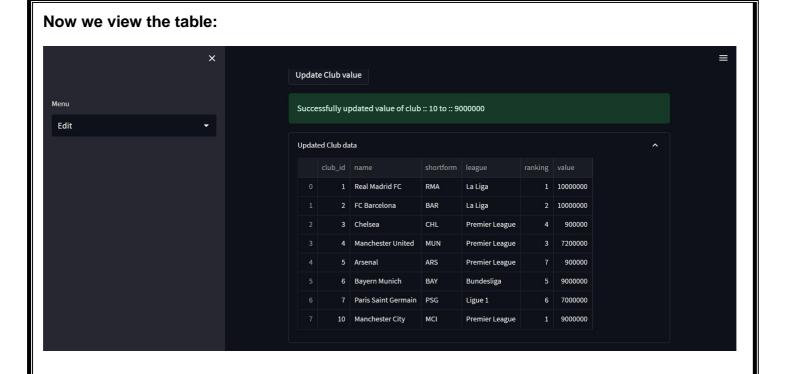
Add Find the state of the state

And if we view our table now

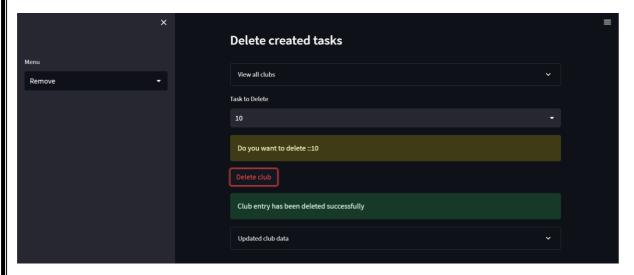


Edit table:





Deleting:



Now we view the table

