DBMS Mini Project IPL Management DataBase

Submitted By:

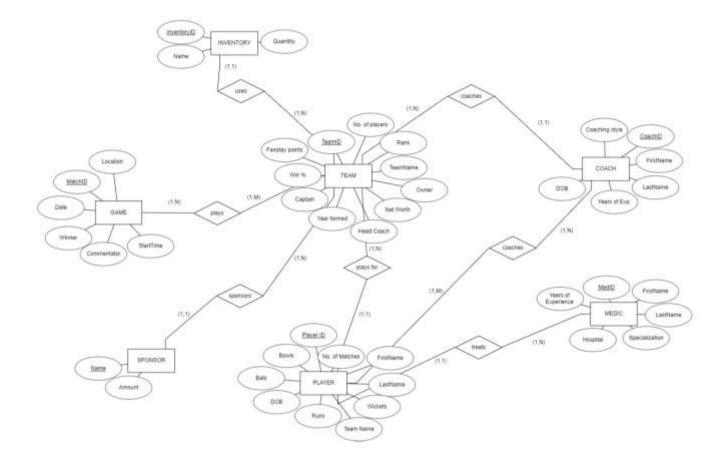
Rohan N PES1UG20CS351 V Semester Section F

Short Description and Scope of the Project

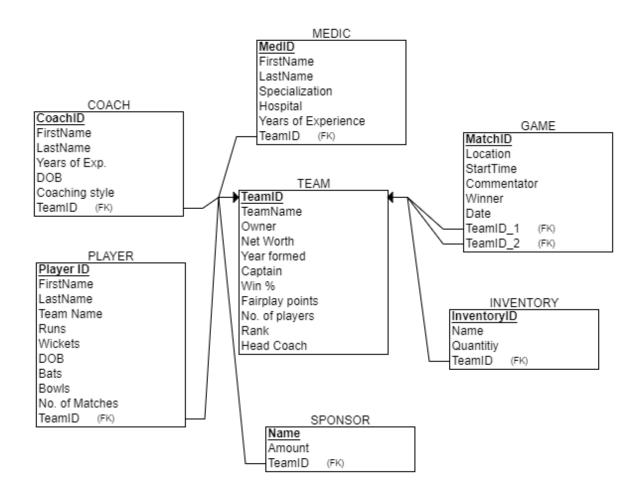
Have you have watched this really awesome movie called Moneyball? If you didn't, you definitely should because it points out the importance of statistics and structured data analysis, and this alone made a down-falling team to win the American Baseball League. My project has a similar approach towards sports management (particularly IPL).

In my project you can Add player, View the Team Statistics, Add the coach and much more.

ER Diagram



Relational Schema



DDL statements - Building the database

```
CREATE TABLE TEAM

(

TeamID INT NOT NULL,

TeamName VARCHAR(255) NOT NULL,

Owner VARCHAR(255) NOT NULL,

Net_Worth INT NOT NULL,

Year_formed INT NOT NULL,

Captain VARCHAR(255) NOT NULL,

Win_percent INT NOT NULL,

Fairplay_points INT NOT NULL,

No_of_players INT NOT NULL,

Table_Rank INT NOT NULL,

Head_coach VARCHAR(255) NOT NULL

PRIMARY KEY (TeamID)

);
```

```
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CREATE TABLE TEAM ( TeamID INT NOT NULL, TeamName VARCHAR(255) NOT NULL, Owner VARCHAR(255) NOT NULL, Net_North INT NOT NULL, Vear_foread INT NOT NULL, Captain VARCHAR(255) NOT NULL, Min_percent INT NOT NULL, Pairplay_points INT NOT NULL, No_of_players INT NOT NULL, Table_Rank INT NOT NULL, PRIMARY REV (TeamID) );

[Edit Notice | [Edit | ] Cleafe PHP code ]
```

```
CREATE TABLE GAME

(
    MatchID INT NOT NULL,
    Location VARCHAR(255) NOT NULL,
    StartTime TIME NOT NULL,
    Commentator VARCHAR(255) NOT NULL,
    Winner VARCHAR(255) NOT NULL,
    Date DATE NOT NULL,
    TeamID_1 INT NOT NULL,
    TeamID_2 INT NOT NULL,
    PRIMARY KEY (MatchID),
    FOREIGN KEY (TeamID_1) REFERENCES TEAM(TeamID)

FOREIGN KEY (TeamID_2) REFERENCES TEAM(TeamID)
);
```

```
WMySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

CREATE TABLE GAME ( Matchid INT NOT NULL, location VARCHAR(255) NOT NULL, StartTime TIME NOT NULL, Commentator VARCHAR(255) NOT NULL, Minner VARCHAR(255) NOT NULL, Date DATE NOT NULL, TeamID_1 INT NOT NULL, TeamID_2 INT NOT NULL, PRIMARY REV (Matchid), FOREIGN REV (TeamID_1) REFERENCES TEAM(TeamID) );

[Edit Nino [] Edit] [ Quality PHP code ].
```

```
CREATE TABLE PLAYER

(

PlayerID INT NOT NULL,

FirstName VARCHAR(255) NOT NULL,

LastName VARCHAR(255),

Team_Name VARCHAR(255) NOT NULL,

Runs INT NOT NULL,

Wickets INT NOT NULL,

DOB DATE NOT NULL,

Bats VARCHAR(255) NOT NULL,

Bowls VARCHAR(255) NOT NULL,

No_of_Matches INT NOT NULL,

TeamID INT NOT NULL,

PRIMARY KEY (PlayerID),

FOREIGN KEY (TeamID) REFERENCES TEAM(TeamID)

);
```

```
→ MySQL roturned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

CREATE TABLE PLAYER | PlayerIO INT NOT NULL, Pirithage VARCHAR(255) NOT NULL, Lesthage VARCHAR(255), Test_Name VARCHAR(255) NOT NULL, Runs INT NOT NULL, Mickets INT NOT NULL, DOB DATE NOT NULL, Basts VARCHAR(255) NOT NULL, Bowls VARCHAR(255) NOT NULL, No_of_Natches INT NOT NULL, TestID INT NOT NULL, PRIMAY KEY (PlayerID), FOREIGN KEY (TestID) REFERENCES TEAM(TestID) | 1

[Edit Without [[Edit 1] Counter PHP code ]
```

```
CREATE TABLE COACH

(
    CoachID INT NOT NULL,
    FirstName VARCHAR(255) NOT NULL,
    LastName VARCHAR(255),
    Years_of_Exp INT NOT NULL,
    DOB DATE NOT NULL,
    Coaching_style VARCHAR(255) NOT NULL,
    TeamID INT NOT NULL,
    PRIMARY KEY (CoachID),
    FOREIGN KEY (TeamID) REFERENCES TEAM(TeamID)
);
```

```
WySQL returned an empty result set (i.e. zero rows) (Query took 0.0004 seconds.)

CREATE TABLE COACH ( CoechID INT NOT NULL, Firsthame VARCHAR(ISS) NOT NULL, Lasthame VARCHAR(ISS), Years_of_Exp INT NOT NULL, DOB DATE NOT NULL, Coeching_style VARCHAR(ISS) NOT NULL, PRIMARY KEY (CoechID), FOREIGN KEY (TeemID) REFERENCES TEAM(TeemID) );

[Edit internal [Edit ] [ Counte PHP code ]
```

```
CREATE TABLE MEDIC
  MedID INT NOT NULL,
  FirstName VARCHAR(255) NOT NULL,
  LastName VARCHAR(255),
  Specialization VARCHAR(255) NOT NULL,
  Hospital VARCHAR(255) NOT NULL,
  Years_of_Exp INT,
  TeamID INT NOT NULL,
  PRIMARY KEY (MedID),
  FOREIGN KEY (TeamID) REFERENCES TEAM(TeamID)
  MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)
 CREATE TABLE HEDIC ( ModID INT NOT NULL, FirstName VARCHAR(255) NOT NULL, LastName VARCHAR(255), Specialization VARCHAR(255) NOT NULL, Hospital
 WARDHAR(255) NOT MULL, Years_of_Exp INT, TeamID INT NOT NULL, PRIMARY KEY (MedID), FOREIGN KEY (TeamID) REFERENCES TEAM(TeamID) );
[ Edit Inline ] [ Edit ] [ Create PHP code ]
CREATE TABLE INVENTORY
  Name INT NOT NULL,
  Quantity INT NOT NULL,
  InventoryID INT NOT NULL,
  TeamID INT NOT NULL,
  PRIMARY KEY (InventoryID),
  FOREIGN KEY (TeamID) REFERENCES TEAM(TeamID)
 MySQL returned an empty result set (i.e. zero rows). (Query took 0.0006 seconds.)
 CREATE TABLE INVENTORY | Name INT NOT NULL, Quantity INT NOT MULL, InventoryID INT NOT NULL, TeamID INT NOT NULL, PRIPARY KEY (InventoryID), FOREIGN KEY
 (TeamID) REFERENCES TEAM(TeamID) ||
[Ear mine ][Edit ] [Create PHP code ]
CREATE TABLE SPONSOR
  Amount INT NOT NULL,
  Name INT NOT NULL,
  TeamID INT NOT NULL,
  PRIMARY KEY (Name),
  FOREIGN KEY (TeamID) REFERENCES TEAM(TeamID)
```

```
WMYSQL returned an empty result set (Le. Zero rows), (Query book 0.0006 seconds.)

CREATE TABLE SPONSOR ( Amount INT NOT NULL, Name INT NOT NULL, TeamID INT NOT NULL, PRIMARY KEY (Name), FOREIGN KEY (TeamID) REFERENCES TEAM(TeamID) );
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```

Populating the Database

1) Loading and excel sheet

```
# 20 rows smarted (Query book 0.0172 seconds.)

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```

2) Loading a .sql file

3) Inserting manually though SQL command line

```
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```

Join Queries

1) Display all players of TeamID=1

SELECT P.FirstName, P.Bats, P.Bowls, P.No_of_Matches FROM player AS P
NATURAL JOIN team AS T WHERE P.TeamID=1;



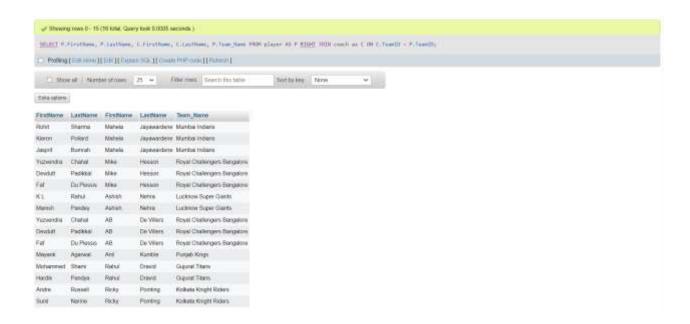
2) Display the medics and coaches of the same TeamID.

```
SELECT M.TeamID, M.LastName, M.Specialization , C.LastName, C.Coaching_style FROM medic as M
INNER JOIN coach as C
ON M.TeamID = C.TeamID;
```



3) Display the players and coaches of the same team.

```
SELECT P.FirstName, P.LastName, C.FirstName, C.LastName, P.Team_Name
FROM player AS P
RIGHT JOIN coach as C
ON C.TeamID = P.TeamID;
```



4) Display the sponsors of a team.

SELECT S.Name, T.TeamName FROM sponsor AS S LEFT JOIN team AS T ON S.TeamID = T.TeamID;



Aggregate Functions

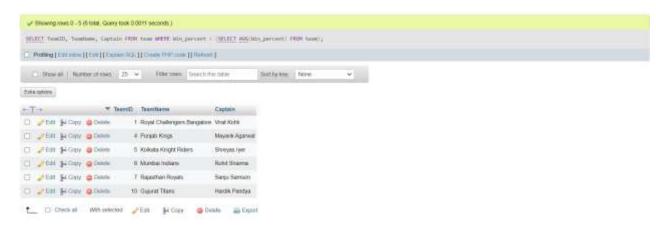
1) Select the maximum, minimum and the average Runs of a player

SELECT MAX(Runs), MIN(Runs), AVG(Runs) FROM player;



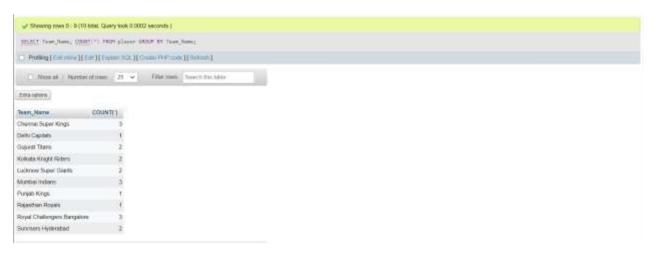
2) Select those teams who's win percentage is above the average win percentage

SELECT TeamID, TeamName, Captain FROM team WHERE Win_percent > (SELECT AVG(Win_percent) FROM team);



3) Display the number of players in a given Team

SELECT Team_Name, COUNT(*) FROM player GROUP BY Team_Name;



4) Display the average amount sponsored by a sponsorer

SELECT TeamID, AVG(Amount) FROM sponsor GROUP BY TeamID;



Set Operations

1) Join the players and coaches of team Royal Challengers Bangalore

```
SELECT P.FirstName , P.LastName FROM player as P
WHERE P.Team_Name= "Royal Challengers Bangalore"
UNION
SELECT C.FirstName, C.LastName FROM coach as C
WHERE C.TeamID= 1;
```



2) Display the team name who has no medic assigned

SELECT TeamName FROM team as T
WHERE NOT EXISTS (SELECT MedID FROM medic as M WHERE M.TeamID= T.TeamID);



3) Display the teams who have net worth above 500 and investment above 200

```
SELECT TeamID FROM team
WHERE Net_Worth > 500
INTERSECT
SELECT TeamID FROM sponsor
WHERE Amount > 200;
```



4) Display the Left-Handed batsman of a team of given teamID

```
SELECT FirstName, LastName, Team_Name FROM player
WHERE Bats= 'Left-Handed'
INTERSECT
SELECT FirstName, LastName, Team_Name FROM player
WHERE TeamID=5;
```



Functions and Procedures

Function to calculate the total wins of a given Team Name

```
DELIMITER $$
CREATE FUNCTION total_wins(Team_Name varchar(255))
RETURNS INT
DETERMINISTIC
BEGIN
DECLARE win int;
SELECT COUNT(*) INTO win FROM game
WHERE Team_Name= Winner;
RETURN win;
END $$
DELIMITER;
```



SELECT TeamID, TeamName, total_wins(TeamName) FROM team;



Procedure to increase the No_of_wickets taken by a player by one when called

```
DELIMITER $$

CREATE PROCEDURE howzaat(IN player_id INT(11))

BEGIN

UPDATE player SET Wickets= Wickets+1 WHERE player_id= PlayerID;

END $$

DELIMITER;

WMMSQL noturned at amply result out (i.e. zero rows), (Campy tack 0.0047 seconds)

CREATE MOCEDURE independ (Int player_id INT(12)) tesum UPDATE player_id= Player_id= Player_id= Player_ID; END;

[Edit Index [[Edit I] Channel Meth code;]
```



Triggers and Cursors

A Trigger to increase the number of players in team table when a player is added into the player table.

```
DELIMITER $$
CREATE TRIGGER player_plus_one
AFTER INSERT
ON player FOR EACH ROW
BEGIN
UPDATE team
SET No_of_players= No_of_players+1
WHERE new.TeamID = team.TeamID;
END $$
DELIMITER;
```

```
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    (Surples (Local (Tribet)))
```

```
INSERT INTO player VALUES (69, 'Virat', 'Kohli', 'Royal Challengers
Bnagalore',2700,20,'1985-09-13','Left-Handed', 'Right-arm fast',61, 1);
```

Player table:



Team table:



A cursor that helps in addition of a player in to the Senior_Player table if his date of birth is less than 1985-12-31

```
CREATE TABLE SENIOR_PLAYER

(
    PlayerID INT NOT NULL,
    FirstName VARCHAR(255) NOT NULL,
    LastName VARCHAR(255),
    Team_Name VARCHAR(255),
    Runs INT NOT NULL,
    Wickets INT NOT NULL,
    DOB DATE NOT NULL,
    Bats VARCHAR(255) NOT NULL,
    Bowls VARCHAR(255) NOT NULL,
    No_of_Matches INT NOT NULL,
    TeamID INT NOT NULL,
    PRIMARY KEY (PlayerID),
    FOREIGN KEY (TeamID) REFERENCES TEAM(TeamID)
);
```

```
DELIMITER $$
CREATE PROCEDURE insert_senior_players(pid INT(11))
BEGIN
DECLARE done INT default 0;
DECLARE player_id INT;
DECLARE fName VARCHAR(255);
DECLARE 1Name VARCHAR(255);
DECLARE team name var VARCHAR(255);
DECLARE runs_var INT;
DECLARE wickets var INT;
DECLARE d_o_b DATE;
DECLARE bat_style VARCHAR(255);
DECLARE bowl style VARCHAR(255);
DECLARE no_of_matches_var INT;
DECLARE team id INT;
DECLARE cur CURSOR FOR SELECT
PlayerID, FirstName, LastName, Team_Name, Runs, Wickets, DOB, Bats, Bowls,
No of Matches, TeamID
FROM player WHERE PlayerID=pid;
DECLARE CONTINUE HANDLER FOR NOT FOUND SET done=1;
OPEN cur;
FETCH cur INTO player id, fName, lName, team name var, runs var, wickets var,
d_o_b, bat_style, bowl_style, no_of_matches_var, team_id;
INSERT INTO SENIOR_PLAYER VALUES(player_id, fName, lName,team_name_var,
runs_var, wickets_var, d_o_b, bat_style, bowl_style, no_of_matches_var,team_id);
CLOSE cur;
END$$
```

```
DELIMITER $$
CREATE TRIGGER boomer_players_detector
AFTER INSERT
ON player FOR EACH ROW
BEGIN

IF (new.DOB < '1985-12-31')
THEN CALL insert_senior_players(new.PlayerID);
END IF;
END S$

DELIMITLER;

D
```

Senior_player table:

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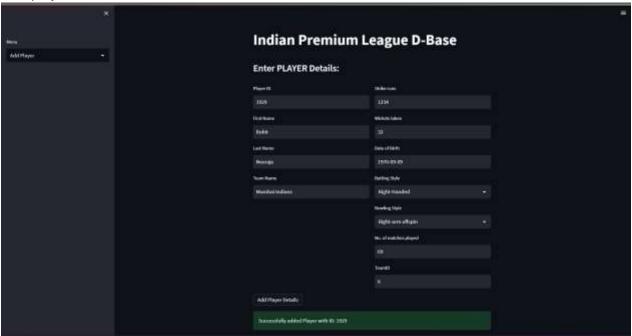
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+T+	₩ Play	erID FirstNam	e LastName	Team_Name	Runs	Wickets	DOB	Bats	Bowls	No_of_Matches	TeamID
☐ # Edit % Cop	py 😄 Delete	99 Shane	Warne	Rajasthan Royals	3000	100	1969-12-24	Right-Handed	Right-arm off spin	136	7.

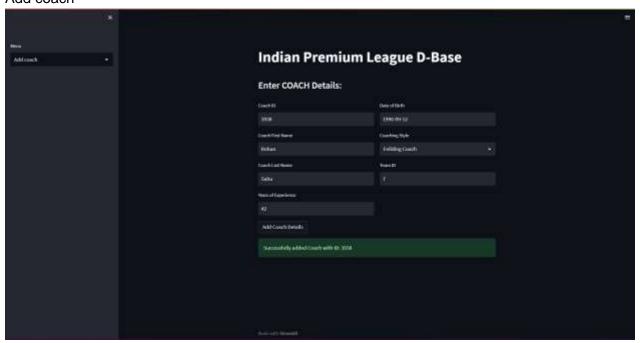
(2005) 19332 Some player person SCOR (2005) in player US SAS 563 (2) (see 30) (100 (4), 100

Developing a Frontend

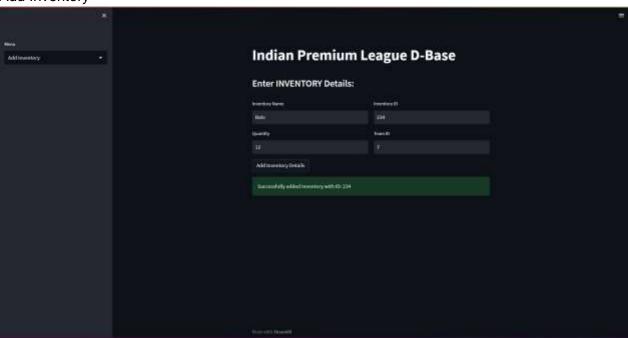
Add player



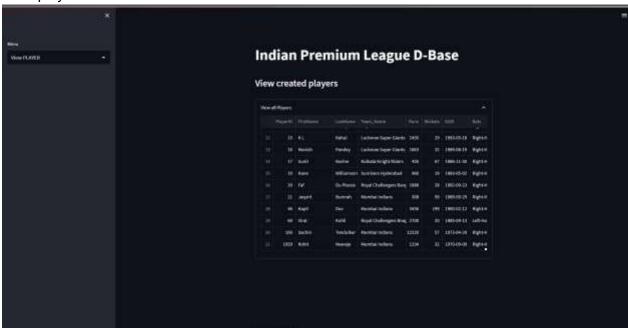
Add coach



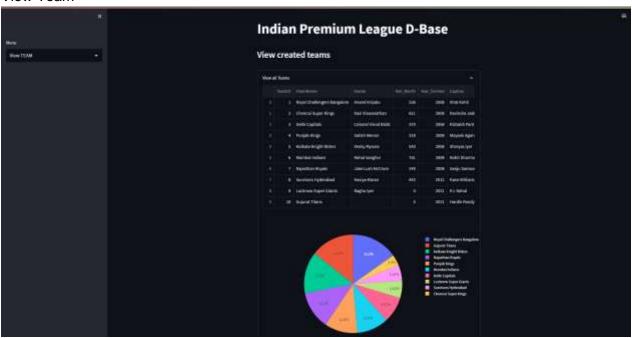
Add Inventory



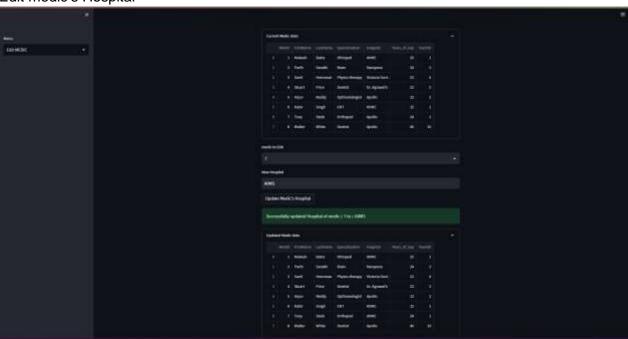
View players



View Team



Edit medic's Hospital



Remove players

