



# **KFUPM Soccer Tournament Database System (KSTDS) Phase 3**

<b>Team 31</b>	
<b>Name</b>	<b>KFUPM ID</b>
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**For:**  
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**ICS324**

# Requirements

## Tournament

- Name
- Number
- Starts and ends at predefined dates

**Player**

- Kfupm\_id
- Team number
- Name
- Date of birth
- Type (student, faculty, or staff)
- Email address
- One or more telephone numbers
- Department

A player can only be in one team in a tournament, but he can be in a different team in another tournament.

## Team

- Name
- Number
- Address
- Contact numbers
- Website
- Email address
- Main coach
- Manager
- Number of players

## Match

- Team 1
- Team 2
- Date
- Time
- Field decided before the start of the first match of the tournament
- The referees
- Team leaders of each match

The referees and the team leaders of each match are decided before the first match of the tournament.

### Goals scored by each team in a (match)

- Team 1
- Team 2
- match
- Time
- Scored goal number

**Red and the yellow cards given to each player at a (tournament) ()**

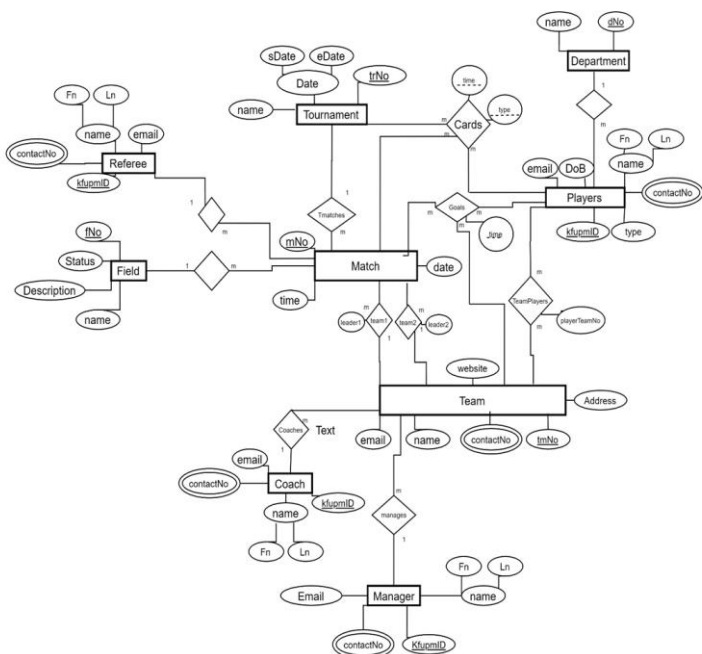
- Player (KFUPM\_ID)
- tournament
- Red card n
- Yellow cards n

(i.e. They will not apply across tournaments):

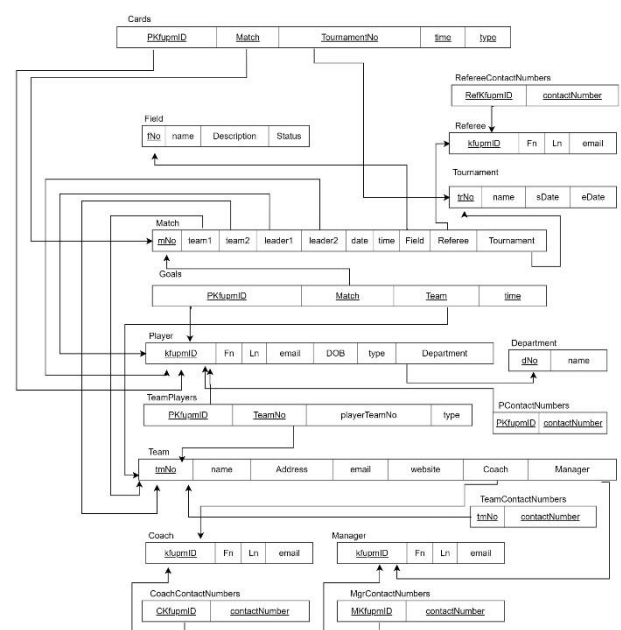
## Field

- Name
- Number
- Description
- Status (active, inactive)

# Conceptual Design



# Logical design



# Phase 2

## SQL statements for tables creation and insertion

```
CREATE TABLE IF NOT EXISTS `Tournament` (  
  `TorID` int(10) unsigned NOT NULL,  
  `Name` varchar(20) NOT NULL,  
  `Startdate` DATE NOT NULL,  
  `Enddate` DATE NOT NULL,  
  PRIMARY KEY (`TorID`)  
  ) DEFAULT CHARSET=utf8;  
  
INSERT INTO `Tournament`  
(`TorID`,`Name`,`Startdate`,`Enddate`) VALUES  
(  
  ('1234','FOOTBALL',date '2013-10-10',date '2013-10-15'),  
  ('4321','BASKETBALL',date '2013-11-10',date '2013-11-15'));
```

```
CREATE TABLE IF NOT EXISTS `Team` (  
  `TeamID` int(10) unsigned NOT NULL,  
  `Name` varchar(20) NOT NULL,  
  PRIMARY KEY (`TeamID`)  
  ) DEFAULT CHARSET=utf8;  
  
INSERT INTO `Team` (`TeamID`,`Name`) VALUES  
(  
  ('1','TEAM1'),  
  ('2','TEAM2'));
```

```
CREATE TABLE IF NOT EXISTS `Field` (  
  `FieldID` int(10) unsigned NOT NULL,  
  `Name` varchar(20) NOT NULL,  
  `Description` varchar(200),  
  PRIMARY KEY (`FieldID`)  
  ) DEFAULT CHARSET=utf8;
```

```
INSERT INTO `Field` VALUES  
(  
  ('1','Field1',NULL),  
  ('2','Field2',NULL),  
  ('3','Field3',NULL),  
  ('4','Field4',NULL));
```

```
CREATE TABLE IF NOT EXISTS `Match` (  
  `MatchID` int(10) unsigned NOT NULL,  
  `Team1ID` int(10) unsigned NOT NULL,  
  `Team2ID` int(10) unsigned NOT NULL,  
  `FieldID` int(10) unsigned NOT NULL,  
  `Date` DATE NOT NULL,  
  `Time` TIME NOT NULL,  
  `Team1Goals` int(2) unsigned NOT NULL,  
  `Team2Goals` int(2) unsigned NOT NULL,  
  `Comments` varchar(200),  
  PRIMARY KEY (`MatchID`),  
  FOREIGN KEY (Team1ID) REFERENCES Team(TeamID),  
  FOREIGN KEY (Team2ID) REFERENCES Team(TeamID),  
  FOREIGN KEY (FieldID) REFERENCES Field(FieldID)  
  ) DEFAULT CHARSET=utf8;
```

```
INSERT INTO `Match` VALUES  
(  
  ('1','1','2','1',date '2013-10-10',time '6:30:00','5','3',NULL),  
  ('2','2','1','1',date '2013-10-11',time '6:30:00','2','0',NULL));
```

```
CREATE TABLE IF NOT EXISTS `Category` (  
  `CatID` int(10) unsigned NOT NULL,  
  `Name` varchar(15) NOT NULL,  
  `Desc` varchar(100),  
  PRIMARY KEY (`CatID`)  
  ) DEFAULT CHARSET=utf8;
```

```
INSERT INTO `Category` VALUES
```

```
('1','ACTOR',NULL),
```

```
('2','TorActor',NULL),
```

```
('3','MatchActor',NULL),
```

```
('4','Event',NULL);
```

```
CREATE TABLE IF NOT EXISTS `Type` (
```

```
`TypeID` int(10) unsigned NOT NULL,
```

```
`CatID` int(10) unsigned NOT NULL,
```

```
`Name` varchar(15) NOT NULL,
```

```
`Desc` varchar(100),
```

```
PRIMARY KEY (`TypeID`),
```

```
Foreign KEY (CatID) REFERENCES Category(CatID)
```

```
) DEFAULT CHARSET=utf8;
```

```
INSERT INTO `Type` VALUES
```

```
('1','1','Student',NULL),
```

```
('2','1','Faculty',NULL),
```

```
('3','1','Staff',NULL),
```

```
('4','2','Player',NULL);
```

```
CREATE TABLE IF NOT EXISTS `Department` (
```

```
`DeptID` int(10) unsigned NOT NULL,
```

```
`Code` varchar(4) NOT NULL,
```

```
`Name` varchar(200) NOT NULL,
```

```
PRIMARY KEY (`DeptID`)
```

```
) DEFAULT CHARSET=utf8;
```

```
INSERT INTO `Department` VALUES
```

```
('1','ICS','Information and Computer Science'),
```

```
('2','SWE','Software Engineering');
```

```
CREATE TABLE IF NOT EXISTS `Actor` (
```

```
`KFUPMID` int(10) unsigned NOT NULL,
```

```
`Fname` varchar(10) NOT NULL,
```

```
`Lname` varchar(10) NOT NULL,
```

```
`DeptID` int(10) unsigned NOT NULL,
```

```
`TypeID` int(10) unsigned NOT NULL,
```

```
PRIMARY KEY (`KFUPMID`),
```

```
FOREIGN KEY (DeptID) REFERENCES  
Department(DeptID),
```

```
FOREIGN KEY (TypeID) REFERENCES Type(TypeID)
```

```
) DEFAULT CHARSET=utf8;
```

```
INSERT INTO `Actor` VALUES
```

```
('1','Naif','Khaleel','1','1'),
```

```
('2','Khaled','Abdullah','2','2');
```

```
CREATE TABLE IF NOT EXISTS `TorActor` (
```

```
`TorID` int(10) unsigned NOT NULL,
```

```
`KFUPMID` int(10) unsigned NOT NULL,
```

```
`TeamID` int(10) unsigned NOT NULL,
```

```
`TypeID` int(10) unsigned NOT NULL,
```

```
FOREIGN KEY (TorID) REFERENCES Tournament(TorID),
```

```
FOREIGN KEY (KFUPMID) REFERENCES Actor(KFUPMID),
```

```
FOREIGN KEY (TeamID) REFERENCES Team(TeamID),
```

```
FOREIGN KEY (TypeID) REFERENCES Type(TypeID)
```

```
) DEFAULT CHARSET=utf8;
```

```
INSERT INTO `TorActor` VALUES
```

```
('1234','1','1','1'),
```

```
('4321','2','2','2');
```

```
CREATE TABLE IF NOT EXISTS `MatchActor` (
```

```
`MatchID` int(10) unsigned NOT NULL,
```

```
`KFUPMID` int(10) unsigned NOT NULL,
```

```
`TypeID` int(10) unsigned NOT NULL,
```

```
FOREIGN KEY (MatchID) REFERENCES  
`Match`(MatchID),
```

```
FOREIGN KEY (KFUPMID) REFERENCES Actor(KFUPMID),
```

```
FOREIGN KEY (TypeID) REFERENCES Type(TypeID)
```

```
) DEFAULT CHARSET=utf8;
```

```
INSERT INTO `MatchActor` VALUES
```

```
('1','1','1'),  
('2','2','2');
```

```
CREATE TABLE IF NOT EXISTS `Event` (  
  `MatchID` int(10) unsigned NOT NULL,  
  `KFUPMID` int(10) unsigned NOT NULL,  
  `TypeID` int(10) unsigned NOT NULL,  
  `Time` time NOT NULL,  
  FOREIGN KEY (MatchID) REFERENCES  
  `Match` (MatchID),  
  FOREIGN KEY (KFUPMID) REFERENCES Actor(KFUPMID),  
  FOREIGN KEY (TypeID) REFERENCES Type(TypeID)  
  ) DEFAULT CHARSET=utf8;
```

INSERT INTO `Event` VALUES

```
('1','1','1',time '6:30:0'),  
('2','2','1',time '8:30:0');
```

```
CREATE TABLE IF NOT EXISTS `ContactType` (  
  `ConTypeID` int(10) unsigned NOT NULL,  
  `Name` varchar(15) NOT NULL,  
  `Desc` varchar(150),  
  PRIMARY KEY (`ConTypeID`)  
  ) DEFAULT CHARSET=utf8;
```

INSERT INTO `ContactType` VALUES

```
('1','Mobile',null),  
('2','Land line',null),  
('3','Email',null),  
('4','Addres',null);
```

```
CREATE TABLE IF NOT EXISTS `Contact` (  
  `KFUPMID` int(10) unsigned NOT NULL,  
  `ConTypeID` int(10) unsigned NOT NULL,  
  `Value` varchar(25) NOT NULL,  
  FOREIGN KEY (KFUPMID) REFERENCES  
  Actor(KFUPMID),  
  FOREIGN KEY (ConTypeID) REFERENCES  
  ContactType(ConTypeID)  
  ) DEFAULT CHARSET=utf8;
```

INSERT INTO `Contact` VALUES

```
('1','1','050-0371715'),  
('2','3','adam@kfupm.edu.sa');
```

Statements to show the tables :

```
SELECT * from `Tournament`;  
  
SELECT * from `Team`;  
  
SELECT * from `Field`;  
  
SELECT * from `Match`;  
  
SELECT * from `Category`;  
  
SELECT * from `Type`;  
  
SELECT * from `Department`;  
  
SELECT * from `Actor`;  
  
SELECT * from `TorActor`;  
  
SELECT * from `MatchActor`;  
  
SELECT * from `Event`;  
  
SELECT * from `ContactType`;  
  
SELECT * from `Contact`;
```

This was made by using the following website :

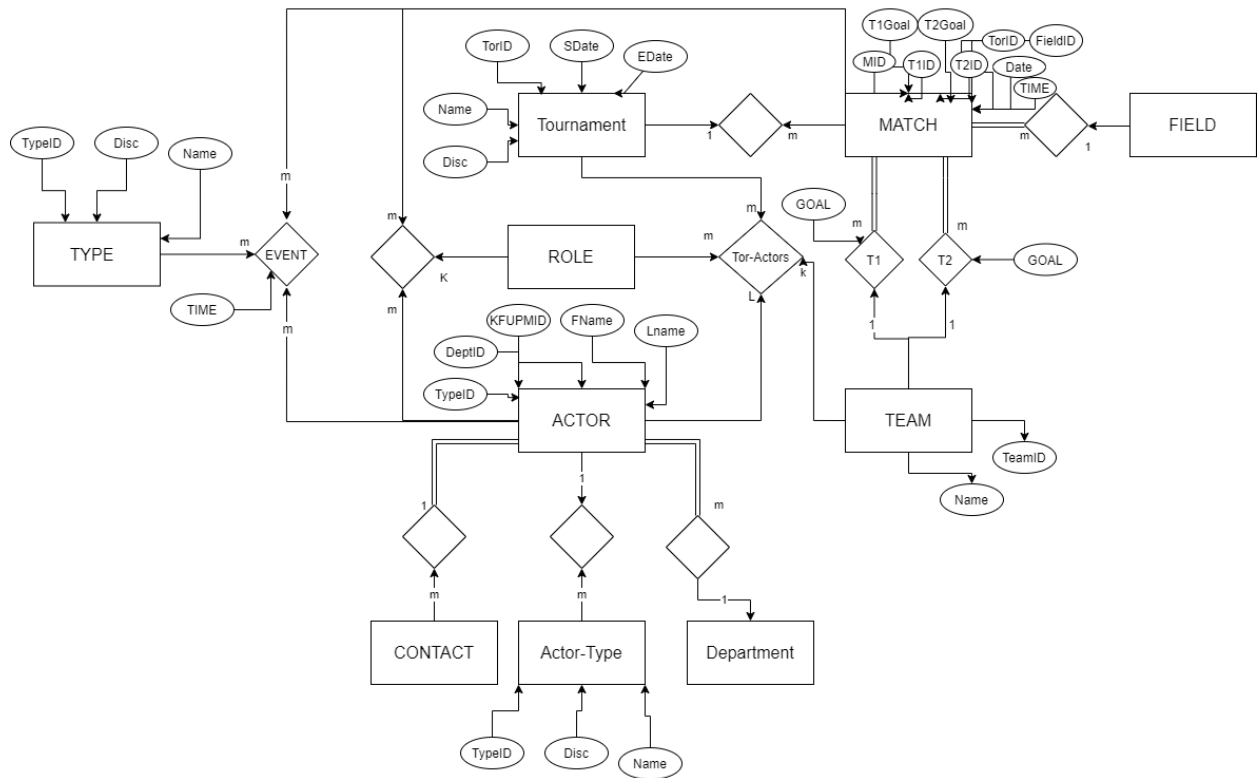
<http://sqlfiddle.com/>

# Phase 3

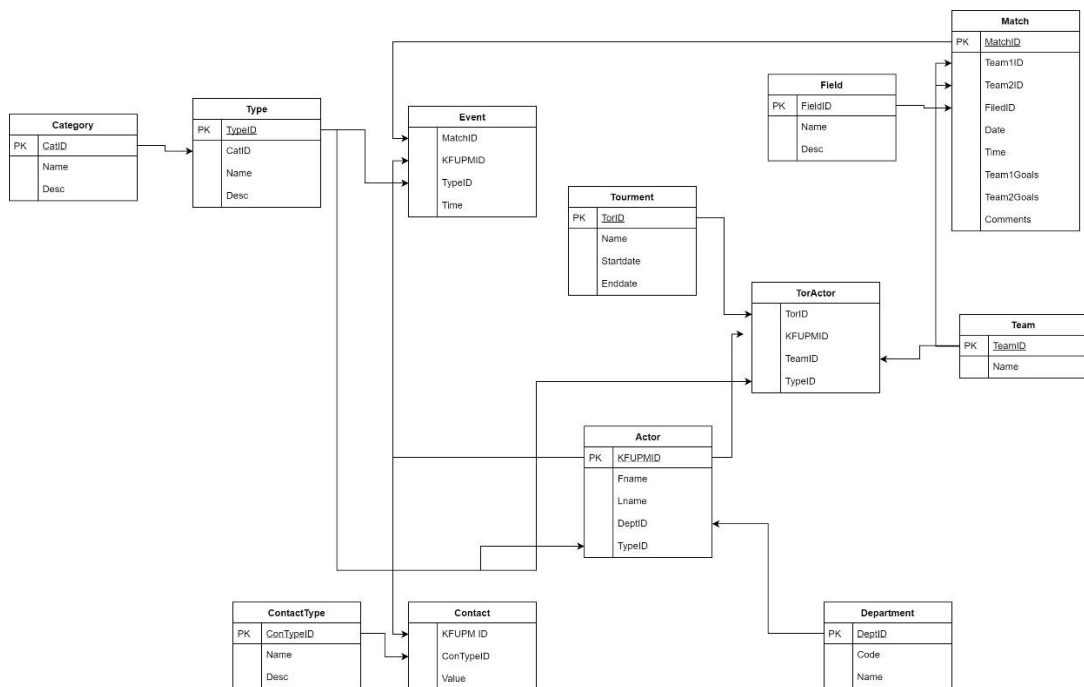
## Requirements

- **Tournament**
  - TorID
  - Name
  - Startdate
  - Enddate
- **Match**
  - MatchID
  - Team1ID
  - Team2ID
  - FiledID
  - Date
  - Time
  - Team1Goals
  - Team2Goals
  - Comments
- **Team**
  - TeamID
  - Name
- **Actor**
  - KFUPMID
  - Fname
  - Lname
  - DeptID
  - TypeID
- **TorActor**
  - TorID
  - KFUPMID
  - TeamID
  - TypeID
- **MatchActor**
  - MatchID
  - KFUPMID
  - TypeID
- **Category**
  - CatID
  - Name
  - Desc
- **Type**
  - TypeID
  - CatID
  - Name
  - Desc
- **Field**
  - FieldID
  - Name
  - Desc
- **Department**
  - DeptID
  - Code
  - Name
- **Event**
  - MatchID
  - KFUPMID
  - TypeID
  - Time
- **ContactType**
  - ConTypeID
  - Name
  - Desc
- **Contact**
  - KFUPMID
  - ConTypeID
  - Value

# Conceptual Design



# Logical design



# SQL statements for tables creation and insertion

```
CREATE TABLE IF NOT EXISTS `Tournament` (
```

```
  `TorID` int(10) unsigned NOT NULL,
```

```
  `Name` varchar(20) NOT NULL,
```

```
  `Startdate` DATE NOT NULL,
```

```
  `Enddate` DATE NOT NULL,
```

```
  PRIMARY KEY (`TorID`)
```

```
) DEFAULT CHARSET=utf8;
```

```
INSERT INTO `Tournament`
```

```
(`TorID`,`Name`,`Startdate`,`Enddate`) VALUES
```

```
  ('1234','FOOTBALL',date '2013-10-10',date '2013-10-15'),
```

```
  ('4321','BASKETBALL',date '2013-11-10',date '2013-11-15');
```

```
CREATE TABLE IF NOT EXISTS `Team` (
```

```
  `TeamID` int(10) unsigned NOT NULL,
```

```
  `Name` varchar(20) NOT NULL,
```

```
  PRIMARY KEY (`TeamID`)
```

```
) DEFAULT CHARSET=utf8;
```

```
INSERT INTO `Team` (`TeamID`,`Name`) VALUES
```

```
  ('1','TEAM1'),
```

```
  ('2','TEAM2'),
```

```
  ('3','TEAM3'),
```

```
  ('4','TEAM4');
```

```
CREATE TABLE IF NOT EXISTS `Field` (
```

```
  `FieldID` int(10) unsigned NOT NULL,
```

```
  `Name` varchar(20) NOT NULL,
```

```
  `Description` varchar(200),
```

```
  PRIMARY KEY (`FieldID`)
```

```
) DEFAULT CHARSET=utf8;
```

```
INSERT INTO `Field` VALUES
```

```
  ('1','Field1',NULL),
```

```
  ('2','Field2',NULL),
```

```
  ('3','Field3',NULL),
```

```
  ('4','Field4',NULL);
```

```
CREATE TABLE IF NOT EXISTS `Match` (
```

```
  `MatchID` int(10) unsigned NOT NULL,
```

```
  `Team1ID` int(10) unsigned NOT NULL,
```

```
  `Team2ID` int(10) unsigned NOT NULL,
```

```
  `FieldID` int(10) unsigned NOT NULL,
```

```
  `Date` DATE NOT NULL,
```

```
  `Time` TIME NOT NULL,
```

```
  `Team1Goals` int(2) unsigned NOT NULL,
```

```
  `Team2Goals` int(2) unsigned NOT NULL,
```

```
  `Comments` varchar(200),
```

```
  PRIMARY KEY (`MatchID`),
```

```
  FOREIGN KEY (Team1ID) REFERENCES Team(TeamID),
```

```
  FOREIGN KEY (Team2ID) REFERENCES Team(TeamID),
```

```
  FOREIGN KEY (FieldID) REFERENCES Field(FieldID)
```

```
) DEFAULT CHARSET=utf8;
```

```
INSERT INTO `Match` VALUES
```

```
  ('1','1','2','1',date '2013-10-10',time '6:30:00','5','3',NULL),
```

```
  ('2','3','4','4',date '2013-10-11',time '6:30:00','2','0',NULL);
```

```
CREATE TABLE IF NOT EXISTS `Category` (
```

```
  `CatID` int(10) unsigned NOT NULL,
```

```
  `Name` varchar(15) NOT NULL,
```

```
  `Desc` varchar(100),
```

```
  PRIMARY KEY (`CatID`)
```

```
) DEFAULT CHARSET=utf8;
```

```
INSERT INTO `Category` VALUES
```



```

('1','ACTOR',NULL),
('2','TorActor',NULL),
('3','MatchActor',NULL),
('4','Event',NULL);

```

```

CREATE TABLE IF NOT EXISTS `Type` (
  `TypeID` int(10) unsigned NOT NULL,
  `CatID` int(10) unsigned NOT NULL,
  `Name` varchar(15) NOT NULL,
  `Desc` varchar(100),
  PRIMARY KEY (`TypeID`),
  Foreign KEY (CatID) REFERENCES Category(CatID)
) DEFAULT CHARSET=utf8;

```

```

INSERT INTO `Type` VALUES
('1','1','Student',NULL),
('2','1','Faculty',NULL),
('3','1','Staff',NULL),
('4','2','Player',NULL),
('5','2','Referee',NULL),
('6','2','Manager',NULL),
('7','2','Coach',NULL),
('8','3','Player',NULL),
('9','3','Captain',NULL),
('10','3','Goal keeper',NULL),
('11','3','Main Refree',NULL),
('12','3','Asst. Refree',NULL),
('13','4','Yellow Card',NULL),
('14','4','Red Card',NULL),
('15','4','Normal Goal',NULL),
('16','4','Penalty Goal','Goal by penalty kick'),
('17','4','Self Goal','Goal on own team');

```

```

CREATE TABLE IF NOT EXISTS `Department` (
  `DeptID` int(10) unsigned NOT NULL,
  `Code` varchar(4) NOT NULL,
  `Name` varchar(200) NOT NULL,
  PRIMARY KEY (`DeptID`)

```

```

) DEFAULT CHARSET=utf8;

```

```

INSERT INTO `Department` VALUES
('1','ICS','Information and Computer Science'),
('2','SWE','Software Engineering');

```

```

CREATE TABLE IF NOT EXISTS `Actor` (
  `KFUPMID` int(10) unsigned NOT NULL,
  `Fname` varchar(10) NOT NULL,
  `Lname` varchar(10) NOT NULL,
  `DeptID` int(10) unsigned NOT NULL,
  `TypeID` int(10) unsigned NOT NULL,
  PRIMARY KEY (`KFUPMID`),
  FOREIGN KEY (DeptID) REFERENCES
Department(DeptID),
  FOREIGN KEY (TypeID) REFERENCES Type(TypeID)
) DEFAULT CHARSET=utf8;

```

```

INSERT INTO `Actor` VALUES
('1','Naif','Khaleel','1','1'),
('2','Khaled','Abdullah','2','2'),
('3','Naiff','K','1','1'),
('4','Khaled','A','2','2');

```

```

CREATE TABLE IF NOT EXISTS `TorActor` (
  `TorID` int(10) unsigned NOT NULL,
  `KFUPMID` int(10) unsigned NOT NULL,
  `TeamID` int(10) unsigned NOT NULL,
  `TypeID` int(10) unsigned NOT NULL,
  FOREIGN KEY (TorID) REFERENCES Tournament(TorID),
  FOREIGN KEY (KFUPMID) REFERENCES Actor(KFUPMID),
  FOREIGN KEY (TeamID) REFERENCES Team(TeamID),
  FOREIGN KEY (TypeID) REFERENCES Type(TypeID)
) DEFAULT CHARSET=utf8;

```

```

INSERT INTO `TorActor` VALUES
('1234','1','1','1'),
('1234','2','1','1'),

```

```
('1234','3','1','1'),
('1234','4','2','1'),
('4321','2','2','2');
```

```
CREATE TABLE IF NOT EXISTS `MatchActor` (
  `MatchID` int(10) unsigned NOT NULL,
  `KFUPMID` int(10) unsigned NOT NULL,
  `TypeID` int(10) unsigned NOT NULL,
  FOREIGN KEY (MatchID) REFERENCES
`Match`(MatchID),
  FOREIGN KEY (KFUPMID) REFERENCES Actor(KFUPMID),
  FOREIGN KEY (TypeID) REFERENCES Type(TypeID)
) DEFAULT CHARSET=utf8;
```

INSERT INTO `MatchActor` VALUES

```
('1','1','1'),
('1','2','2'),
('1','4','1'),
('1','3','2');
```

```
CREATE TABLE IF NOT EXISTS `Event` (
  `MatchID` int(10) unsigned NOT NULL,
  `KFUPMID` int(10) unsigned NOT NULL,
  `TypeID` int(10) unsigned NOT NULL,
  `Time` time NOT NULL,
  FOREIGN KEY (MatchID) REFERENCES
`Match`(MatchID),
  FOREIGN KEY (KFUPMID) REFERENCES Actor(KFUPMID),
  FOREIGN KEY (TypeID) REFERENCES Type(TypeID)
) DEFAULT CHARSET=utf8;
```

INSERT INTO `Event` VALUES

```
('1','3','12',time '6:30:0'),
('2','2','11',time '8:30:0'),
```

```
('2','1','15',time '6:30:0'),
('2','4','17',time '8:30:0'),
('2','1','16',time '6:30:0'),
('2','4','15',time '8:30:0'),
('2','1','17',time '6:30:0'),
('2','4','16',time '8:30:0');
```

```
CREATE TABLE IF NOT EXISTS `ContactType` (
  `ConTypeID` int(10) unsigned NOT NULL,
  `Name` varchar(15) NOT NULL,
  `Desc` varchar(150),
  PRIMARY KEY (`ConTypeID`)
) DEFAULT CHARSET=utf8;
```

INSERT INTO `ContactType` VALUES

```
('1','Mobile',null),
('2','Land line',null),
('3','Email',null),
('4','Address',null);
```

```
CREATE TABLE IF NOT EXISTS `Contact` (
  `KFUPMID` int(10) unsigned NOT NULL,
  `ConTypeID` int(10) unsigned NOT NULL,
  `Value` varchar(25) NOT NULL,
  FOREIGN KEY (KFUPMID) REFERENCES
Actor(KFUPMID),
  FOREIGN KEY (ConTypeID) REFERENCES
ContactType(ConTypeID)
) DEFAULT CHARSET=utf8;
```

INSERT INTO `Contact` VALUES

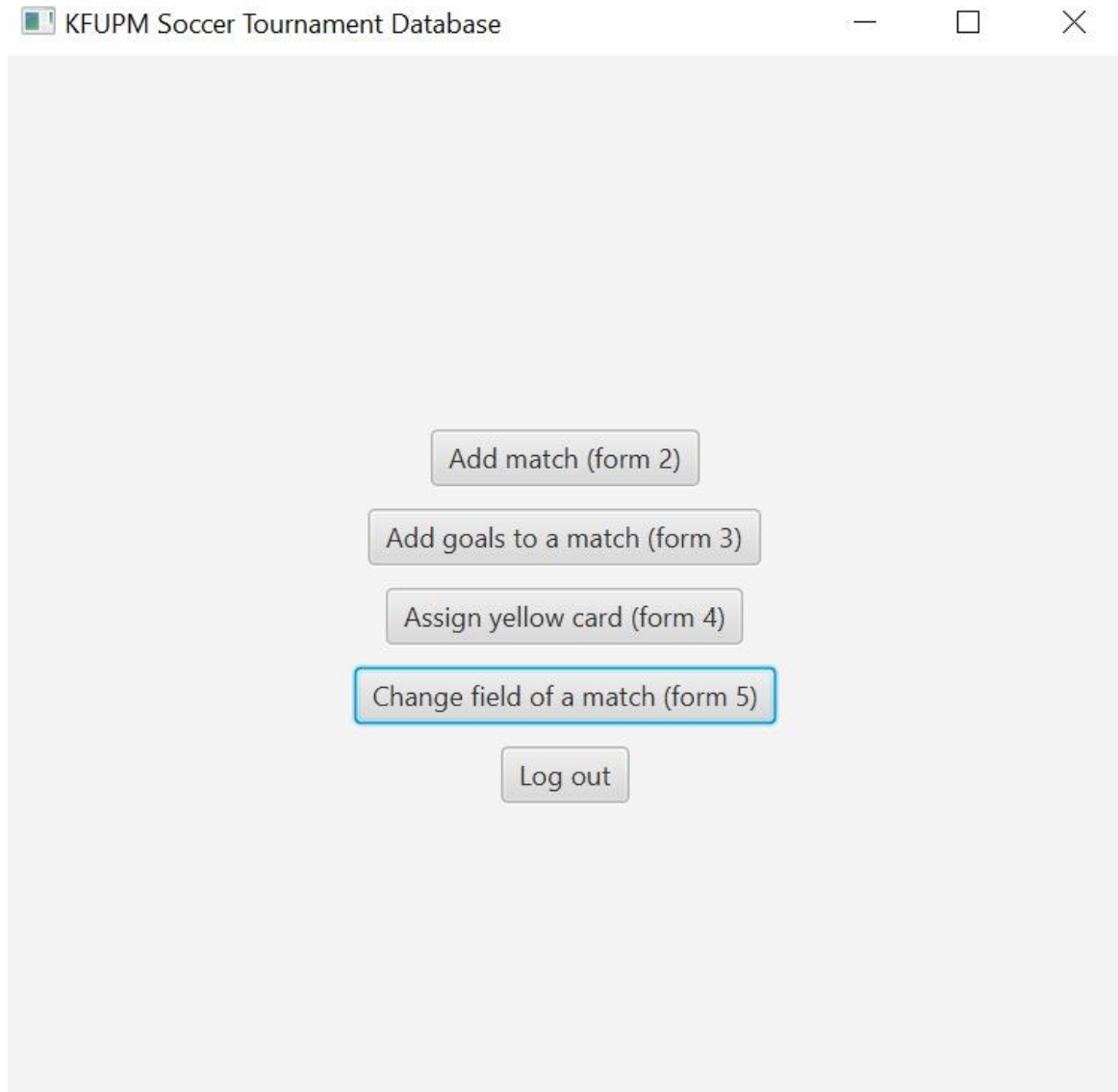
```
('1','1','050-0371715'),
('2','3','adam@kfupm.edu.sa');
```

This was made by using the following website:

<http://sqlfiddle.com/>

# Implementation

## Forms



KFUPM Soccer Tournament Database

— □ ×

Add match (form 2)

Add goals to a match (form 3)

Assign yellow card (form 4)

Change field of a match (form 5)

Log out

This image shows a window titled "KFUPM Soccer Tournament Database" with standard window controls (minimize, maximize, close). The main area contains five buttons arranged vertically: "Add match (form 2)", "Add goals to a match (form 3)", "Assign yellow card (form 4)", "Change field of a match (form 5)", and "Log out". The "Change field of a match (form 5)" button is highlighted with a blue border.

- Login & logout



**KFUPM Soccer Tournament Database**

Browse

Admin Login

Username:  Password:

This image shows a login form titled "KFUPM Soccer Tournament Database". It features a "Browse" button, an "Admin Login" button, and a login section with "Username:" and "Password:" labels followed by text input fields. The "Browse" button is highlighted with a blue border.

- Add a new match

Match ID:  Team 1 ID:  Team 2 ID:

Field ID:  Date:  Time:

Team 1 Goals:  Team 2 Goals:  Comments:

- Add goals of each team in a match

Match ID:

KFUPM ID:

Time:

## Reports

**Pick a browsing option:**

- Browse Teams(not yet made)
- Players who scored more than 2 goals(report 2)
- Match List(report 3)
- Browse Players in a team and match(report 4)
- Browse Referees(report 5)
- Go Back

- List each player who scored more than two goals.

[illegible]

- List the date, the field, and the teams of each match.

Match List					
Match ID	Date	Field ID	Team 1	Team 2	
1	2013-10-10	1	1	2	
2	2013-10-11	2	2	1	
3	3915-04-03	3	1	2	
4	3915-04-03	3	2	1	
5	3915-04-03	2	1	2	
6	3915-04-03	1	1	2	
7	3915-04-03	4	1	2	
8	3915-04-03	3	1	2	
9	2019-03-04	1	1	2	
10	2020-07-02	3	1	2	
11	2019-01-01	1	1	2	
<div>Go Back</div>					

## Tools and Resources Used

- Draw.io website
- SQL Fiddle website
- JavaFX
- MySQL application
- IntelliJ IDE

## Problem Faced

- SQL fiddle website was down for an unknown reason.
- Installing MySQL. Some of the MySQL subprograms would not install.
- Connecting JavaFX to MySQL would not work in the eclipse IDE, which lead us to transfer to IntelliJ.
- Implementing user interface in IntelliJ

## Things Learned from Project

- Implementing Informative User interface
- Connecting JavaFX to MySQL

## Percentage Operation Completion Table

<b>Operation</b>	<b>Percent Completion</b>
Login & logout	100
Add a new match	100
Add goals of each team in a match	100
Assign a player a yellow card	100
Change the field of a match	100
List, the goals scored, goals received, points, and rank of each team.	50
List each player who scored more than two goals.	100
List the date, the field, and the teams of each match	100
List the players of a given team who played in a given match	100
List the matches refereed by a given referee	100

## Task Done by Each Group member

<b>Group member</b>	<b>Task</b>
Abdullah AlSabban	User Interface
Osama Bujwaied	Forms & Reports Coding
Naif Seidan	Forms & Reports Coding

## Suggestions to improve ICS324

Improve slides for the course
Add old exam
Add more resources that can be used to make phase 3