

Faculty of Engineering and Computer Science Expectations of Originality

This form sets out the requirements for originality for work submitted by students in the Faculty of Engineering and Computer Science. Submissions such as assignments, lab reports, project reports, computer programs and take-home exams must conform to the requirements stated on this form and to the Academic Code of Conduct. The course outline may stipulate additional requirements for the course.

1. Your submissions must be your own original work. Group submissions must be the original work of the students in the group.
2. Direct quotations must not exceed 5% of the content of a report, must be enclosed in quotation marks, and must be attributed to the source by a numerical reference citation¹. Note that engineering reports rarely contain direct quotations.
3. Material paraphrased or taken from a source must be attributed to the source by a numerical reference citation.
4. Text that is inserted from a web site must be enclosed in quotation marks and attributed to the web site by numerical reference citation.
5. Drawings, diagrams, photos, maps or other visual material taken from a source must be attributed to that source by a numerical reference citation.
6. No part of any assignment, lab report or project report submitted for this course can be submitted for any other course.
7. In preparing your submissions, the work of other past or present students cannot be consulted, used, copied, paraphrased or relied upon in any manner whatsoever.
8. Your submissions must consist entirely of your own or your group's ideas, observations, calculations, information and conclusions, except for statements attributed to sources by numerical citation.
9. Your submissions cannot be edited or revised by any other student.
10. For lab reports, the data must be obtained from your own or your lab group's experimental work.
11. For software, the code must be composed by you or by the group submitting the work, except for code that is attributed to its sources by numerical reference.

You must write one of the following statements on each piece of work that you submit:

For individual work: **"I certify that this submission is my original work and meets the Faculty's Expectations of Originality"**, with your signature, I.D. #, and the date.

For group work: **"We certify that this submission is the original work of members of the group and meets the Faculty's Expectations of Originality"**, with the signatures and I.D. #s of all the team members and the date.

A signed copy of this form must be submitted to the instructor at the beginning of the semester in each course.

I certify that I have read the requirements set out on this form, and that I am aware of these requirements. I certify that all the work I will submit for this course will comply with these requirements and with additional requirements stated in the course outline.

Course Number: COMP 353

Instructor: Dr. Shiri

Names: Raffi Alan Bezirjian, Jeffrey Li,
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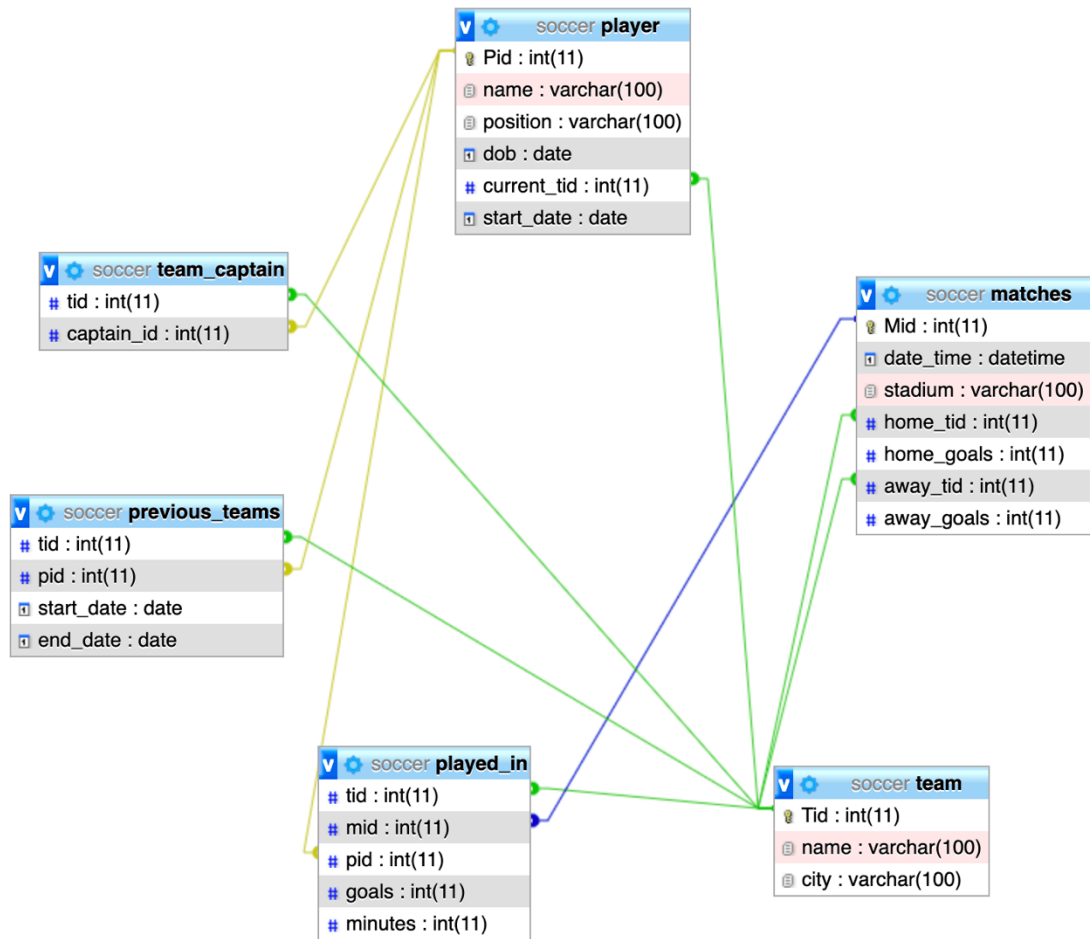
Group Account: fwc353_4

Date: 17/02/2020

Signature: RaffiB, JeffreyL, RaniaA, CoreyC.

¹ Rules for reference citation can be found in "Form and Style" by Patrich MacDonagh and Jack Bordan, fourth edition, May, 2000, available at <http://www.encs.concordia.ca/scs/Forms/Form&Style.pdf>.
Approved by the ENCS Faculty Council February 10, 2012

Part I – Design: E/R Diagram



Part II – Table Creations *(SoccerLeague.sql)*

```
CREATE TABLE team(  
    Tid INT not null AUTO_INCREMENT PRIMARY KEY,  
    name VARCHAR(100),  
    city VARCHAR(100)  
);
```

```
CREATE TABLE player(  
    Pid INT not null AUTO_INCREMENT PRIMARY KEY,  
    name VARCHAR(100),  
    position VARCHAR(100),  
    dob DATE,  
    current_tid INT,  
    FOREIGN KEY(current_tid) REFERENCES team(Tid),  
    start_date DATE  
);
```

```
CREATE TABLE team_captain(  
    tid INT,  
    FOREIGN KEY(tid) REFERENCES team(Tid),  
    captain_id INT,  
    FOREIGN KEY (captain_id) REFERENCES player(Pid)  
);
```

```
CREATE TABLE previous_teams(  
    tid INT,  
    FOREIGN KEY(tid) REFERENCES team(Tid),  
    pid INT,  
    FOREIGN KEY (pid) REFERENCES player(Pid),  
    start_date DATE,  
    end_date DATE  
);
```

```
CREATE TABLE matches(  
    Mid INT AUTO_INCREMENT PRIMARY KEY,  
    date_time DATETIME,  
    stadium VARCHAR(100),  
    home_tid INT,  
    FOREIGN KEY(home_tid) REFERENCES team(Tid),  
    home_goals INT,  
    away_tid INT,  
    FOREIGN KEY(away_tid) REFERENCES team(Tid),  
    away_goals INT  
);
```

```
CREATE TABLE played_in(  
    tid INT,  
    mid INT,  
    pid INT,  
    FOREIGN KEY(tid) REFERENCES team(Tid),  
    FOREIGN KEY(mid) REFERENCES matches(Mid),  
    FOREIGN KEY(pid) REFERENCES player(Pid),  
    goals INT,  
    minutes INT  
);
```

Part 3 – Insertions (*INSERTIONS.sql*)

```
INSERT INTO team (name, city)
VALUES ('FC Barcelona', 'Catalonia'),
('Real Madrid', 'Madrid'),
('Getafe', 'Madrid'),
('Atletico Madrid', 'Madrid'),
('Sevilla', 'Andalusia'),
('Real Sociedad', 'San Sebastian'),
('Valencia', 'Valencia'),
('Villareal', 'Villareal'),
('Athletic Bilbao', 'Bilbao'),
('Granada CF', 'Granada')
;
```

```
INSERT INTO player (name, position, dob, current_tid, start_date)
VALUES ('Lionel Messi', 'Forward', 19870623, 1, 20000101),
('Hector Herrera', 'Midfielder', 19900418, 4, 20190101),
('Sergio Ramos', 'Defender', 19860329, 2, 20050622),
('Yangel Herrera', 'Midfielder', 19980606, 10, 20190101),
('Alexander Isak', 'Forward', 19900920, 6, 20170202),
('Luis Suarez', 'Forward', 19870321, 1, 20140808),
('Thomas Lemar', 'Midfielder', 19951111, 4, 20180719),
('Ter Stegen', 'GoalKeeper', 19920429, 1, 20140101),
('Rodrigo Moreno', 'Forward', 19910503, 7, 20160622),
('Gerard Moreno', 'Forward', 19920101, 8, 20120101),
('Karim Benzema', 'Forward', 19871218, 2, 20090829),
('Unai Simon', 'GoalKeeper', 19970610, 9, 20190617),
('Sergio Escudero', 'Defender', 19890901, 5, 20150101),
('Angel Rodriguez', 'Forward', 19870425, 3, 20170101),
('Gerard Pique', 'Defender', 19870201, 1, 20080527)
;
```

```
INSERT INTO team_captain (tid, captain_id)
VALUES (1, 1),
(4, 2),
(2, 3),
(10, 4),
(6, 5),
(7, 9),
(8, 10),
(9, 12),
(5, 13),
(3, 14);
```

```

INSERT INTO previous_teams (tid, pid, start_date, end_date)
VALUES (10, 2, 20170101, 20180101),
(7, 12, 20130101, 20140101),
(1, 11, 20060101, 20080101),
(2, 1, 19980101, 19990101),
(1, 3, 20030101, 20040101),
(1, 5, 20150101, 20160202),
(2, 6, 20000101, 20020101),
(6, 7, 20020101, 20030101),
(2, 8, 20000101, 20020101),
(3, 9, 20010101, 20020101),
(1, 13, 20060202, 20080101),
(1, 14, 20070101, 20080101),
(2, 15, 19980101, 19990101)

```

```

;

```

```

INSERT INTO matches (date_time, stadium, home_tid, home_goals, away_tid, away_goals)
VALUES (20190608140000, 'San Mames', 9, 1, 1, 0),
(20190817180000, 'Mestalla', 7, 1, 6, 1),
(20190817150000, 'Estadio Ceramica', 8, 4, 10, 4),
(20190818210000, 'Wanda Metropolitano', 4, 1, 3, 0),
(20190918170000, 'Santiago Bernabeu', 2, 2, 5, 1),
(20191119193000, 'Camp Nou', 1, 1, 10, 0),
(20191023200000, 'Anoeta', 6, 2, 2, 2),
(20191123213000, 'Ramon Sanchez', 5, 1, 9, 1),
(20191124210000, 'Coliseum Alfonso', 3, 3, 7, 0),
(20191124190000, 'Los Carmenes', 10, 1, 4, 1)

```

```

;

```

```

INSERT INTO played_in (tid, mid, pid, goals, minutes)
VALUES (1, 1, 1, 0, 90),
(4, 4, 7, 1, 80),
(1, 6, 6, 1, 70),
(9, 1, 12, 1, 80),
(2, 5, 11, 1, 90),
(3, 4, 14, 0, 90),
(8, 3, 10, 3, 90),
(4, 4, 2, 0, 90),
(1, 1, 15, 0, 90),
(1, 1, 8, 0, 90),
(7, 2, 9, 1, 90),
(2, 7, 3, 1, 90),
(1, 6, 1, 2, 70),
(3, 9, 14, 0, 90)

```

```

;

```

Part IV- SQL scripts: (*SQL_scripts.sql*)

#1. Find the birth date and position of every player whose name starts with the letter T.

```
SELECT name,dob,position FROM player WHERE name LIKE "T%";
```

#2. Find all the players who are currently playing for the team named "FC Barcelona".

```
SELECT * FROM player WHERE current_tid = (SELECT tid FROM team WHERE name = 'FC Barcelona');
```

#3. Find the players who are the captain of a team. List the player names and IDs, and also the team name.

```
SELECT p.name AS PlayerName,p.Pid,t.name AS TeamName FROM player p, team t
WHERE
p.Pid IN (SELECT captain_id FROM team_captain)
AND p.current_tid = t.Tid;
```

#List only the players with a name starting with the letter T.

```
SELECT p.name AS PlayerName,p.Pid,t.name AS TeamName FROM player p, team t
WHERE
p.Pid IN (select captain_id FROM team_captain)
AND p.current_tid = t.Tid
AND p.name LIKE "T%";
```

#4. Find all the draws or ties (matches without a winner). List the date and times, stadium of these matches.

```
SELECT date_time,stadium FROM matches WHERE home_goals = away_goals;
```

#5. Find the total number of goals scored by each team during the year 2019.

```
SELECT SUM(goals) TotalGoals, tid
FROM played_in
GROUP BY tid
HAVING (
tid in (SELECT home_tid FROM matches WHERE date_time in (SELECT date_time FROM matches WHERE
year(date_time)='2019'))
OR
tid in (SELECT away_tid FROM matches WHERE date_time in (SELECT date_time FROM matches WHERE
year(date_time)='2019'))
);
```

#6. Find the names and IDs of the players who have never scored any goal.

```
SELECT p.name,p.Pid FROM played_in pi, player p WHERE
goals=0
AND pi.pid NOT IN (SELECT pid FROM played_in WHERE goals>0)
AND p.Pid=pi.pid
GROUP by pi.pid;
```

#7. For each player, find the total number of goals they scored. List the player names and IDs along with the number of goals.

```
SELECT p.Pid,p.name,pi.totalGoals
FROM player p
JOIN
( SELECT SUM(goals) totalGoals, pid FROM played_in GROUP BY pid ) pi
ON pi.pid = p.pid ORDER BY pi.totalGoals;
```

Part V- Result of 'SELECT COUNT (*) FROM R;'

```
mysql> SELECT * FROM matches;
```

Mid	date_time	stadium	home_tid	home_goals	away_tid	away_goals
1	2019-06-08 14:00:00	San Mames	9	1	1	0
2	2019-08-17 18:00:00	Mestalla	7	1	6	1
3	2019-08-17 15:00:00	Estadio Ceramica	8	4	10	4
4	2019-08-18 21:00:00	Wanda Metropolitano	4	1	3	0
5	2019-09-18 17:00:00	Santiago Bernabeu	2	2	5	1
6	2019-11-19 19:30:00	Camp Nou	1	1	10	0
7	2019-10-23 20:00:00	Anoeta	6	2	2	2
8	2019-11-23 21:30:00	Ramon Sanchez	5	1	9	1
9	2019-11-24 21:00:00	Coliseum Alfonso	3	3	7	0
10	2019-11-24 19:00:00	Los Carmenes	10	1	4	1

```
10 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM team;
```

Tid	name	city
1	FC Barcelona	Catalonia
2	Real Madrid	Madrid
3	Getafe	Madrid
4	Athletico Madrid	Madrid
5	Sevilla	Andalusia
6	Real Sociedad	San Sebastian
7	Valencia	Valencia
8	Villareal	Villareal
9	Athletic Bilbao	Bilbao
10	Granada CF	Granada

```
10 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM player;
```

Pid	name	position	dob	current_tid	start_date
1	Lionel Messi	Forward	1987-06-23	1	2000-01-01
2	Hector Herrera	Midfielder	1990-04-18	4	2019-01-01
3	Sergio Ramos	Defender	1986-03-29	2	2005-06-22
4	Yangel Herrera	Midfielder	1998-06-06	10	2019-01-01
5	Alexander Isak	Forward	1990-09-20	6	2017-02-02
6	Luis Suarez	Forward	1987-03-21	1	2014-08-08
7	Thomas Lemar	Midfielder	1995-11-11	4	2018-07-19
8	Ter Stegen	GoalKeeper	1992-04-29	1	2014-01-01
9	Rodrigo Moreno	Forward	1991-05-03	7	2016-06-22
10	Gerard Moreno	Forward	1992-01-01	8	2012-01-01
11	Karim Benzema	Forward	1987-12-18	2	2009-08-29
12	Unai Simon	GoalKeeper	1997-06-10	9	2019-06-17
13	Sergio Escudero	Defender	1989-09-01	5	2015-01-01
14	Angel Rodriguez	Forward	1987-04-25	3	2017-01-01
15	Gerard Pique	Defender	1987-02-01	1	2008-05-27

```
15 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM played_in;
```

tid	mid	pid	goals	minutes
1	1	1	0	90
4	4	7	1	80
1	6	6	1	70
9	1	12	1	80
2	5	11	1	90
3	4	14	0	90
8	3	10	3	90
4	4	2	0	90
1	1	15	0	90
1	1	8	0	90
7	2	9	1	90
2	7	3	1	90
1	6	1	2	70
3	9	14	0	90

```
14 rows in set (0.00 sec)
```



```
mysql> SELECT * FROM previous_teams;
```

tid	pid	start_date	end_date
10	2	2017-01-01	2018-01-01
7	12	2013-01-01	2014-01-01
1	11	2006-01-01	2008-01-01
2	1	1998-01-01	1999-01-01
1	3	2003-01-01	2004-01-01
1	5	2015-01-01	2016-02-02
2	6	2000-01-01	2002-01-01
6	7	2002-01-01	2003-01-01
2	8	2000-01-01	2002-01-01
3	9	2001-01-01	2002-01-01
1	13	2006-02-02	2008-01-01
1	14	2007-01-01	2008-01-01
2	15	1998-01-01	1999-01-01

```
13 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM team_captain;
```

tid	captain_id
1	1
4	2
2	3
10	4
6	5
7	9
8	10
9	12
5	13
3	14

```
10 rows in set (0.00 sec)
```