United International University

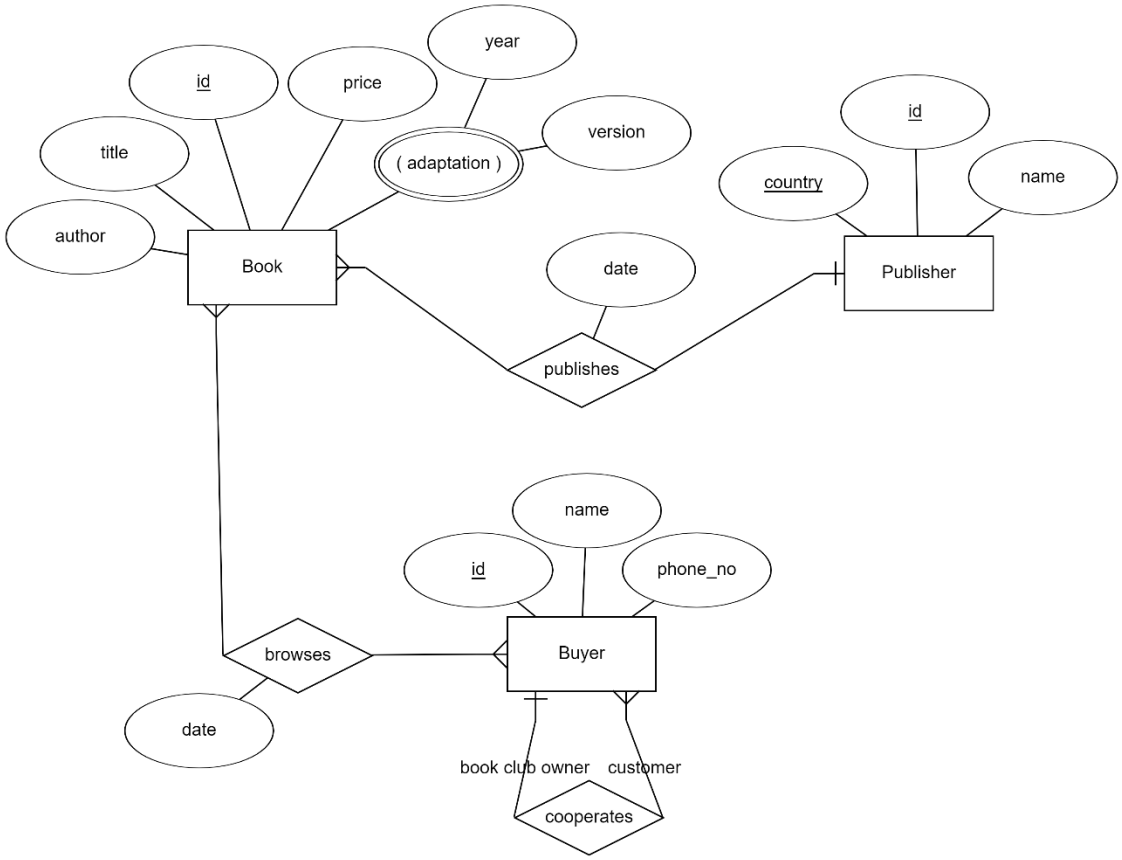
Department of Computer Science and Engineering

CSE 3521 – Database Management Systems, Mid Term Exam, **Summer 2021**

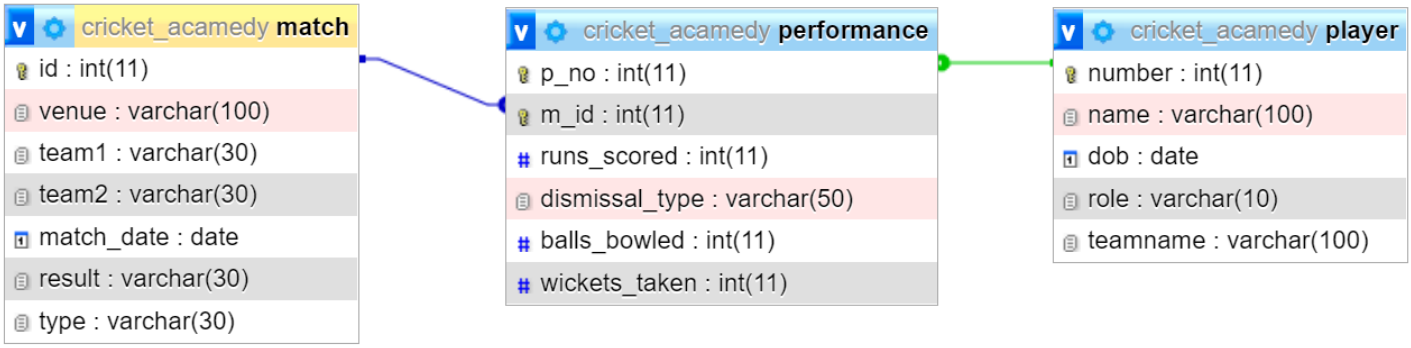
Total Marks: 20, Time: 1 hour

Answer all the questions

1. Convert the following ER Diagram to equivalent relational schema diagram: **[4]**



2. Consider the following ER Diagram for a Cricket Academy:



Now solve the following query problems using MySQL: **[1.5+1.5+3+4]**

a) Show all those test match details that were played by the team named 'teamUIU' and played between the year 2015 to 2021 inclusive.

b) For each player of allrounder role, show his name and calculate the total number of wickets he has taken.

"Any examinee found adopting unfair means will be expelled from the trimester / program as per UIU disciplinary rules."

c) For each player, count the total number of his senior teammates of the same role. Do not consider players having less than 3 senior teammates.

d) Show the player(s) details who was dismissed the maximum number of times by 'LBW'. If multiple players have the same maximum number of LBW records then show all of their information.
or,
Show the player(s) details who has scored maximum average runs. If multiple players have the same maximum average runs then show all of their information.

3. Consider the following database tables:

users

id	name
1	user1
2	user2
3	user3

orders

id	amount	o_date	user_id	payment_id
1	1500	2021-01-25	1	1567
2	2000	2021-01-10	2	2345
3	2500	2021-01-18	1	NULL
4	1000	2021-01-25	3	0199

payments

txn_id	date	time	amount
0199	2021-01-25	11:30:25	1000
2345	2021-01-10	04:55:20	2000
1567	2021-01-25	18:30:10	1500

Show the output of the following MySQL queries: **[1.5+2+2.5]**

a)

```
SELECT      o_date, amount, user_id, payment_id
FROM        orders
WHERE       payment_id IS NOT NULL
ORDER BY    o_date DESC, amount DESC
```

b)

```
SELECT  u.name,
        order_count.num_orders

FROM    users AS u

        JOIN
        (
            SELECT   user_id AS u_id, COUNT(*) AS num_orders
            FROM     orders
            GROUP BY user_id
        ) AS order_count

        ON u.id=order_count.u_id
```

c)

```
SELECT  u.name
FROM    users AS u
WHERE   1 < (
                SELECT  COUNT(*)
                FROM    orders AS o
                WHERE   o.user_id = u.id
            )
```