Information Management (EPPS 6354)
Assignment 4

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School of Economic, Political and Policy Sciences
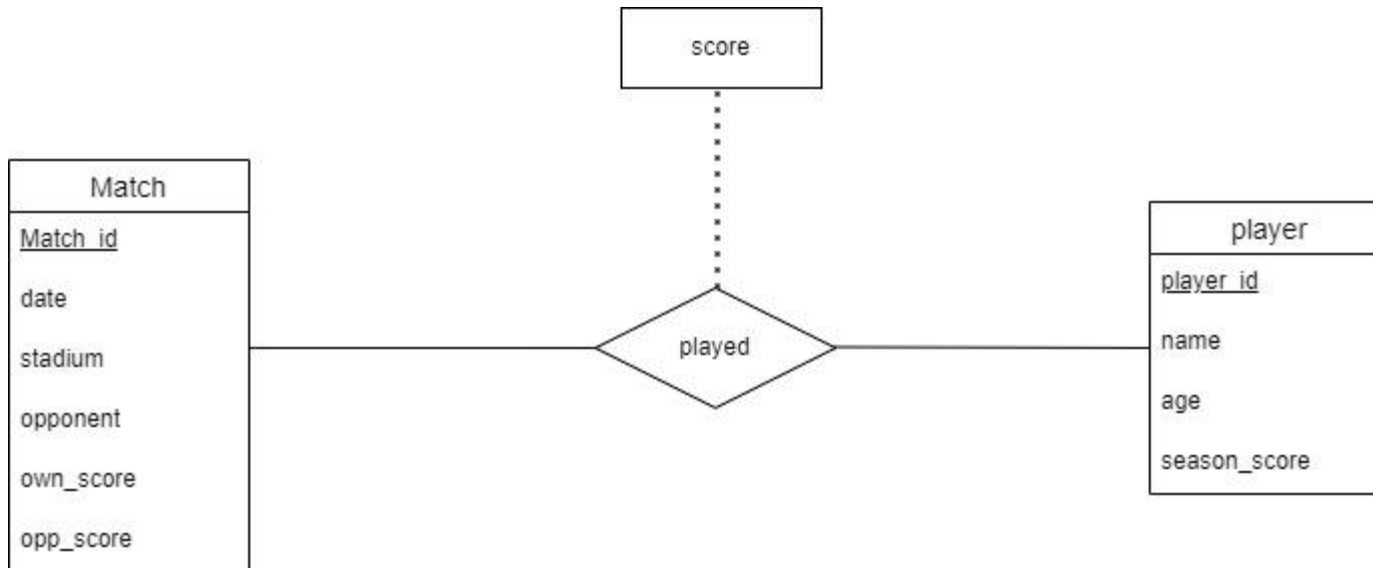
THE UNIVERSITY OF TEXAS AT DALLAS

Master in Social Data Analytics & Research

Question 1

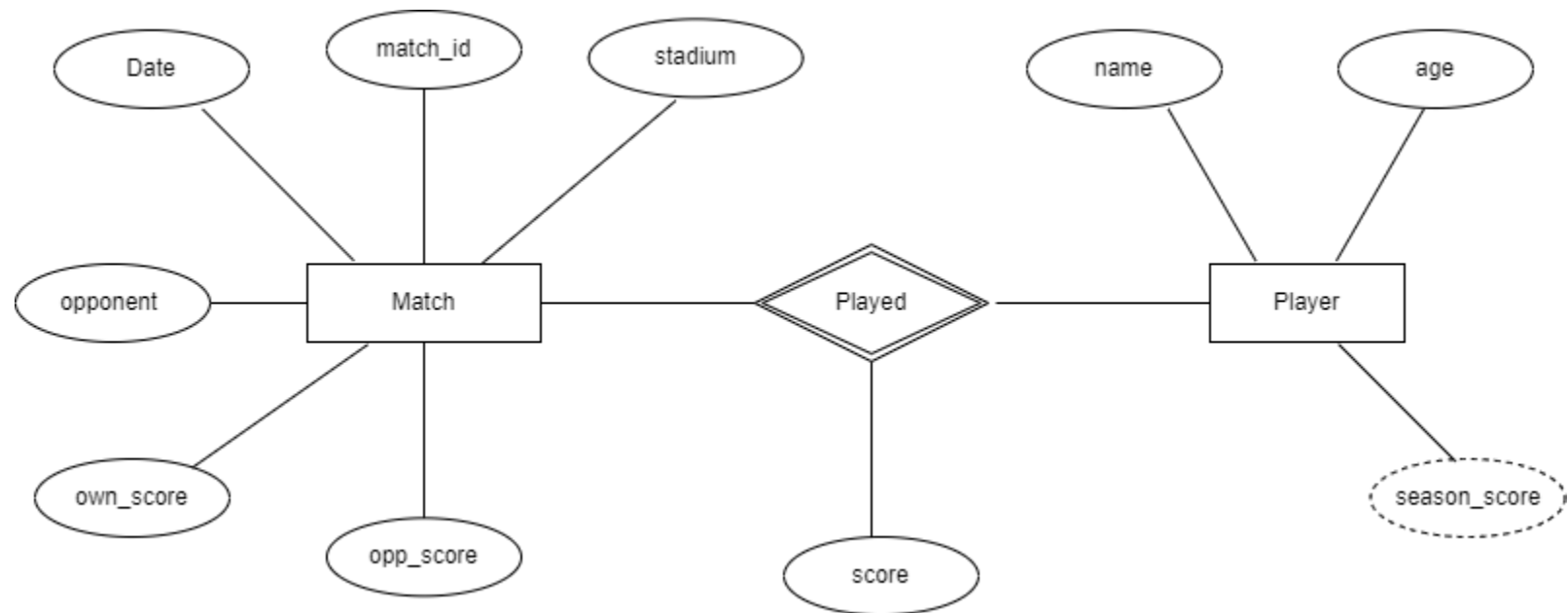| Sr. No.	Key	Strong Entity	Weak Entity
1	Key	Strong entity always have one primary key.	Weak entity have a foreign key referencing primary key of strong entity.
2	Dependency	Strong entity is independent of other entities.	Weak entity is dependent on strong entity.
3	Represented by	A strong entity is represented by single rectangle.	A weak entity is represented by double rectangle.
4	Relationship Representation	Relationship between two strong entities is represented by single diamond.	Relationship between a strong and weak entity is represented by double diamond.
5	Participation	Strong entity may or may not participate in entity relationships.	Weak entity always participates in entity relationships.

Question 1

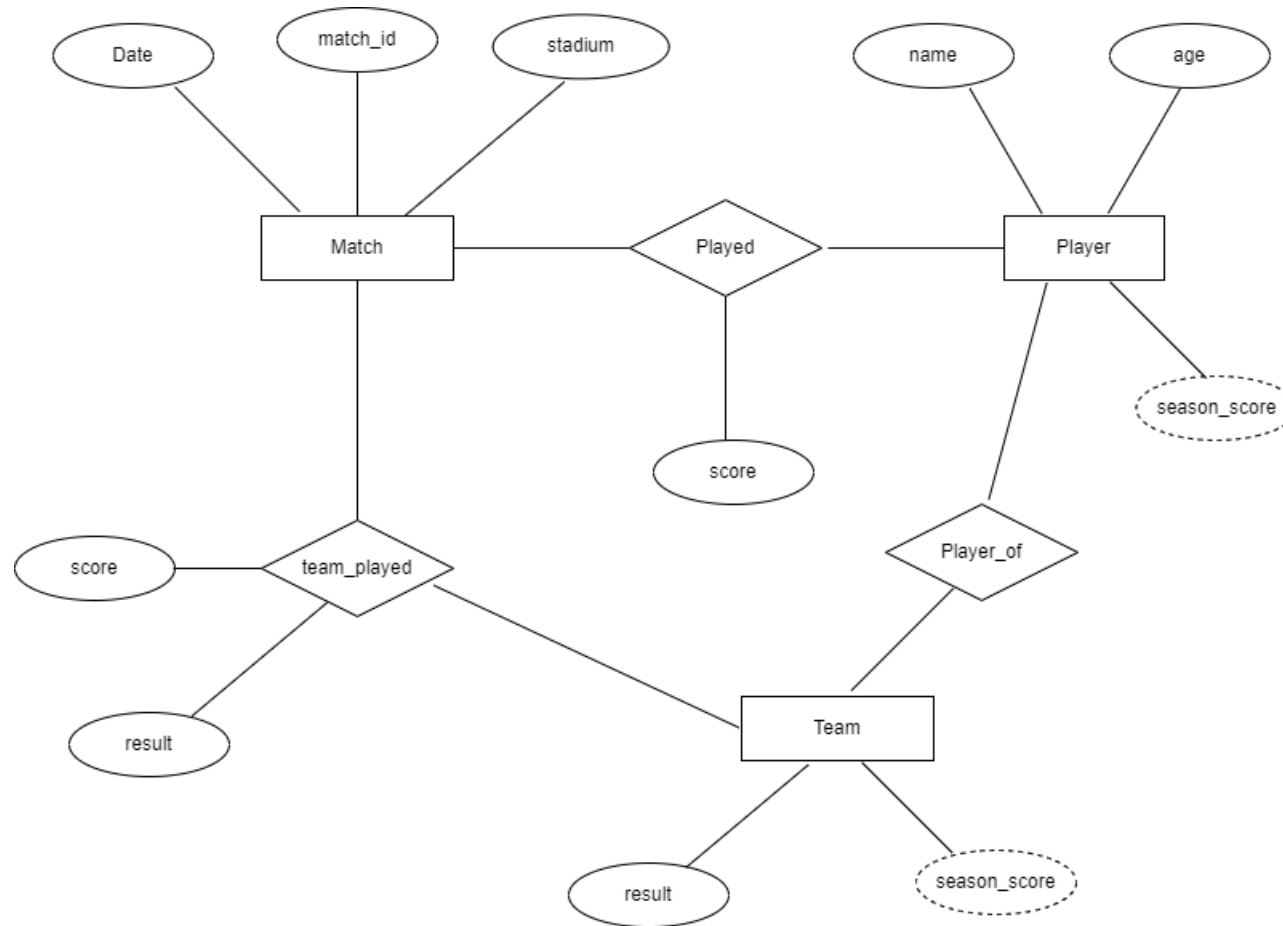| S.NO	Strong Entity	Weak Entity
1.	Strong entity always has a primary key.	While a weak entity has a partial discriminator key.
2.	Strong entity is not dependent on any other entity.	Weak entity depends on strong entity.
3.	Strong entity is represented by a single rectangle.	Weak entity is represented by a double rectangle.
4.	Two strong entity's relationship is represented by a single diamond.	While the relation between one strong and one weak entity is represented by a double diamond.
5.	Strong entities have either total participation or not.	While weak entity always has total participation.

Question 2

Question 2a

Question 2b

(i)   Yes it will not change any result because natural join will not use comparison operator.

A **NATURAL JOIN** compares all columns of two tables which have the same column-name and the **resulting** joined table contains those columns once.

The SQL NATURAL JOIN is a type of EQUI JOIN and is structured in such a way that, columns with the same name of associated tables will appear once only.
Natural Join: Guidelines
- The associated tables have one or more pairs of identically named columns.
- The columns must be the same data type.
- Don't use ON clause in a natural join.

(ii)

course_id	semester	year	sec_id	avg (tot_cred)
CS-101	Fall	2017	1	65
CS-190	Spring	2017	2	43
CS-347	Fall	2017	1	67