Lecture 4 Activity Solutions
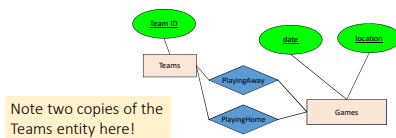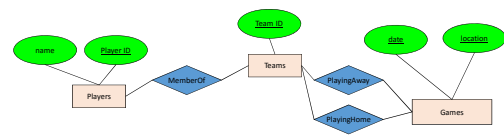
Lecture and activity contents are based on what Prof Chris Ré used in his CS 145 in the fall 2016 term with permission.
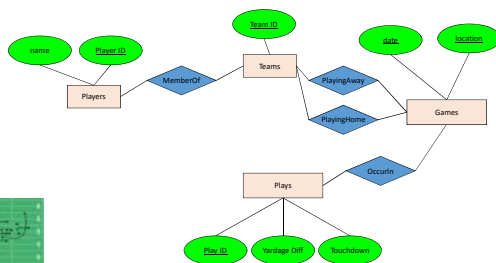
Activity 4.1

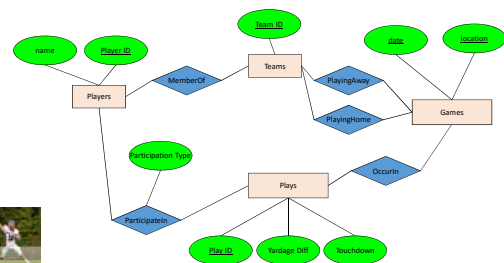Note that various ER diagrams could work, not just the following one!

Note two copies of the Teams entity here!

Teams play each other in **Games**. Each pair of teams can play each other multiple times

Players belong to Teams (assume no trades / changes)
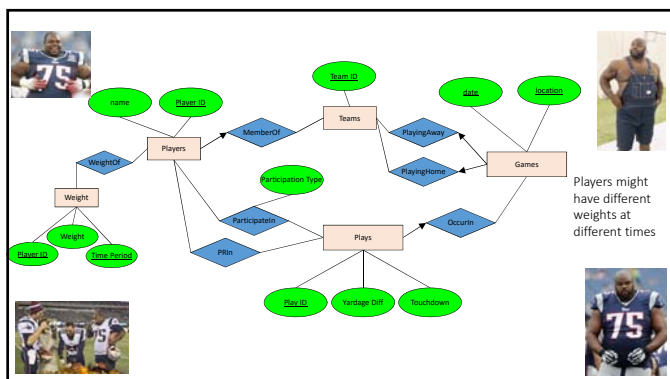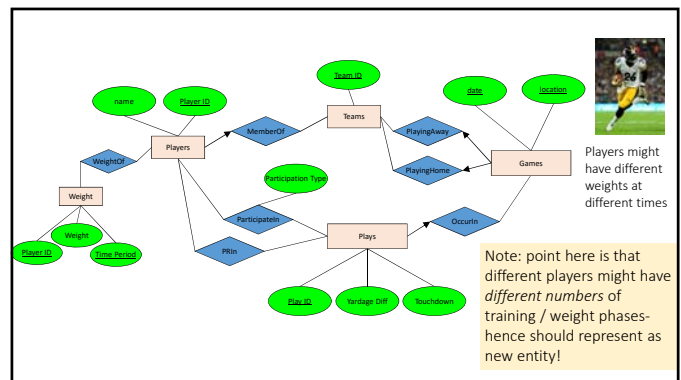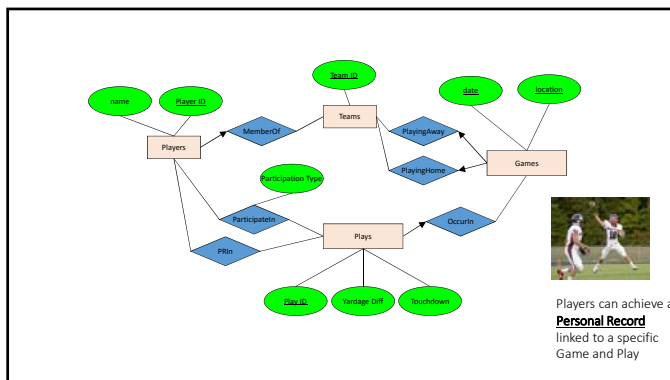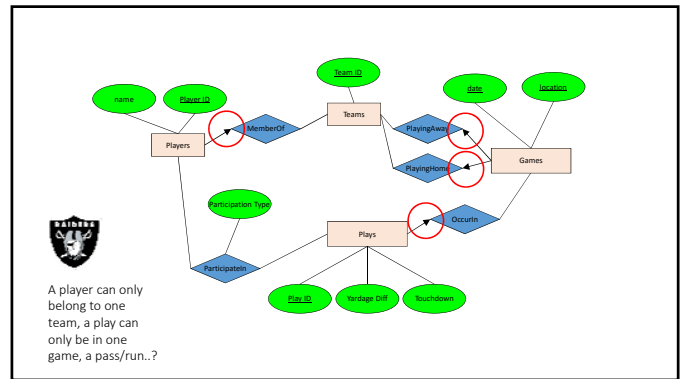

A Game is made up of **Plays** that result in a yardage gain/loss, and potentially a touchdown

A Play will contain either a **Pass** from one player to another, or a **Run** by one player

Activity 2

Note that various ER diagrams could work, not just the following one!

A player can only belong to one team, a play can only be in one game, a pass/run..?

Players can achieve a **Personal Record** linked to a specific Game and Play

Players might have different weights at different times

Note: point here is that different players might have *different numbers* of training / weight phases- hence should represent as new entity!

Players might have different weights at different times

Weak entities, constraints

Note that various ER diagrams could work, not just the following one!

Add in: Subclasses, constraints, and weak entity sets

Concepts to include / model:

Teams belong to cities- model as *weak entity sets*

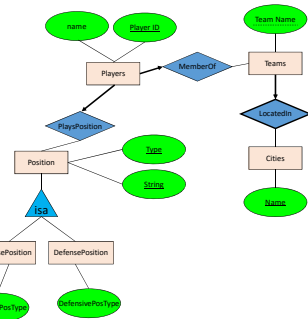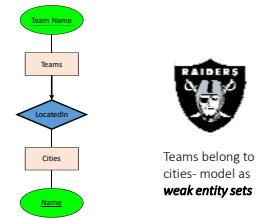Players are either on Offense or Defense, and are of types (QB, RB, WR, TE, K, Farmer*...)

All passes are to exactly one player; all runs include a player

Make sure you have designated keys for all our concepts!

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*https://twitter.com/MrdXP/status/638728908628586496/photo/1

Team Name

Teams

LocatedIn

Cities

Name

Teams belong to cities- model as *weak entity sets*

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name | Player ID

Players — MemberOf — Teams | Team Name

PlaysPosition

Position — Type

String

Isa

OffensePosition | DefensePosition

OffensivePosType | DefensivePosType

LocatedIn

Cities

Name

Players are either on Offense or Defense, and are of types (QB, RB, WR, TE, K, Farmer*...)