

CSI 360 - Database Systems

In each of the following scenarios, give an ER diagram that portrays the situation. Add attributes that are required to keep track of the task requested. Be sure to label relations as mandatory, optional, single, or one or more. Be sure to mark your primary keys.

1. Sportsball (you can pick Football, Baseball, Basketball, or any other sport that has teams too if you like)
 - (a) The game has players.
 - (b) A player can belong to one team only.
 - (c) The game has plays, but a given play can only be in one game.
 - (d) Players can achieve a personal record linked to a specific game or a specific play.
2. Creaturemon (you can think of something like Pokemon, Digimon or any game where you catch a bunch of things)
 - (a) Creatures have names and levels
 - (b) Creatures can belong to many different biomes, but they don't have to
 - (c) Biomes often have many different preferred creatures that live in them.
3. Banks
 - (a) A bank has many clients
 - (b) Clients have one or more banks
 - (c) A client has a balance with any balance it belongs to
 - (d) Banks can give loans to clients.
 - (e) Loans have balances, rates and terms.
4. Students
 - (a) Students go to exactly one college
 - (b) Colleges have one or more students
 - (c) Students may belong to many groups on campus
 - (d) Students may attend many different classes on campus (and at least one)
 - (e) Classes are taught by one and only one instructor.
5. XPCharacters (think D&D, rpg video games and more!)
 - (a) Characters have names, levels and experience points.
 - (b) Characters have other stats and can wield multiple weapons.
 - (c) Weapons have one and only one type, damage dice and damage modifiers.
 - (d) Characters may be proficient with many different weapon types or none.