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CS 3330-801
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Fan

PK is SSN because it will uniquely identify each individual without being auto incrementing.
FKs are plate_num to point to that fan's car and event_name to point to the event that the fan is attending.
Domain of Attributes

- SSN: 9 digit number, no dashes included. Int
- first_name: String
- last_name: String
- plate_num: Includes numbers, characters, and special characters. String
- event_name: String
- is_handicap: Boolean

Assumptions: Each fan can attend many events (n:n), which is why event_name is a multivalued attribute. Each fan only has one car, as the relationship is n:1.

Event

PK is a composite primary key of name and date, since one event may be held on different dates.
FK is stadium_name to refer to the stadium in which the event is held.
Domain of Attributes

- name: String
- date: DATE value in SQL
- stadium_name: String
- is_soldout: Boolean
- duration: Time in minutes. Int

Assumptions: An event cannot be taking place in multiple stadiums at the same time.

Stadium

PK is name since all stadiums are named differently.
FK no foreign key for this entity.
Domain of Attributes

- name: String
- location: city, zip, state. String
- capacity: Int
- seats_sold: Int

Assumptions: All stadiums will be located in the United States since the country field for location is skipped.

Parking-Lot

PK is lot_id which will be based on positioning (ex: 3SW, 8NE) to give insight on its location.
FK is stadium_name to provide which stadium the lot belongs to.
Domain of Attributes

- lot_id: Will be directional (S: south, N:north,...) preceded by a digit that indicates distance from stadium (1 is close, 8 is far). String
- stadium_name: String
- num_spots: Int
- is_full: Boolean

Assumptions: No one lot will belong to more than one stadium. In addition, we are assuming that the lot is operational and has completed the construction process.

Parking-Spot

PK is a composite of the lot_id and spot_id since there will be duplicate spot_ids, but never within the same parking lot. Spot_id is the auto incrementing (1 of 2 allowed).
FKs are lot_id to determine what lot the spot is in and allocation_id which will link the spot to a car, employee, and price.
Domain of Attributes

- spot_id: Int
- lot_id: Will be directional (S: south, N:north,...) preceded by a digit that indicates distance from stadium (1 is close, 8 is far). String
- allocation_id: Int
- is_handicap: Boolean

Assumptions: One spot cannot belong to two lots. One spot will only get one allocation per event. The entity is weak since it relies on lot_id as a part of its primary key.

Parking-Allocation

PK is allocation_id which will be auto incrementing (2 of 2 allowed).
FKs are spot_name which is the composite of spot_id and lot_id, plate_num to point to a car, and emp_SSN to point to an employee.
Domain of Attributes

- allocation_id: Int
- spot_name: (ex: 3SW54, 1NE88). String
- plate-num: Includes numbers, characters, and special characters. String
- emp_SSN: 9 digit number, no dashes included. Int
- price: Number with two decimals. Double or Float

Assumptions: One allocation only has one employee and one car.

Employee

PK is SSN because it will uniquely identify each individual without being auto incrementing.
FK is lot_id to show where that employee works
Domain of Attributes

- SSN: 9 digit number, no dashes included. Int
- first_name: String
- last_name: String
- lot_id: Will be directional (S: south, N:north,...) preceded by a digit that indicates distance from stadium (1 is close, 8 is far). String. Can be NULL if not assigned to a lot.

Assumptions: As defined in the handout, the relationship of employee to lot is always 3:1. Each employee only works at one lot.

Car

PK is plate_num as all license plates are different.
FK is allocation_id to point to parking spot, price, and employee who helped with the allocation process.
Domain of Attributes

- plate_num: Includes numbers, characters, and special characters. String
- type: String option list of; Coupe, Sedan, Hatchback, SUV, Minivan, Van, Truck, or RV
- Color: String
- allocation_id: Int

Assumptions: A car will fall under one of the type categories. Each car receives one allocation_id.