

ER Modeling (Conceptual Design)

- Entities - object that has independent existence
 - physical - car, desk, etc..
 - conceptual - job, class, etc..
- Attributes - makes up the majority of our databases (things that describe the entities)
 - Name (attribute name), Addison (attribute value)
- Relationships - how the entities interact with each other (attributes on entity interacting with another entity)

Key Attributes

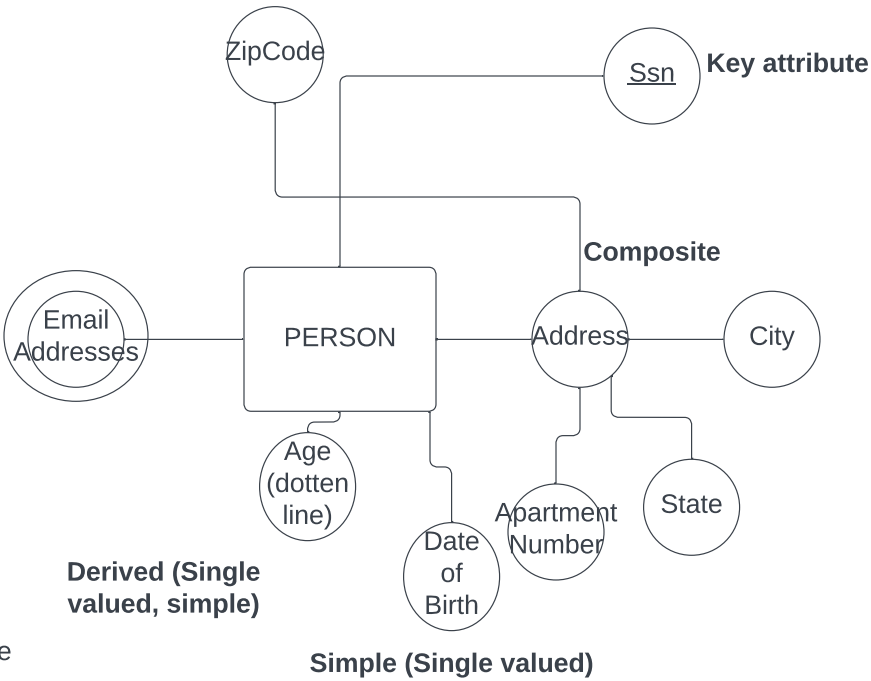
- Entity set - selection of the instances of entity type E, ei. 2^n possible entity sets (without ordering), i.e. two choices for each entity instance ei and each choice is independent.

Entities

- represent in ER Model?
- Entity name, Entity type.

Attributes

- simple vs. composite
 - simple - can't be divided into more simple attributes.
 - composite - can be divided into more simple attributes.
- stored vs. derived
 - derived - value can be gotten from other stored attributes on the entity, or related entities. i.e. for Age we use Date of Birth in combination with today's date.
 - stored - can't be derived from other attributes on the entity, or related entities.
- single valued vs. multivalued
 - single value (can only have a single value at one time i.e. instance of my database).
 - multi valued - can have multiple values at one time i.e. instance of my database).



NULL Values
two cases

- the value exists, we just missing it
- not known whether the attribute exists
 - don't make an assumption about one or the other*