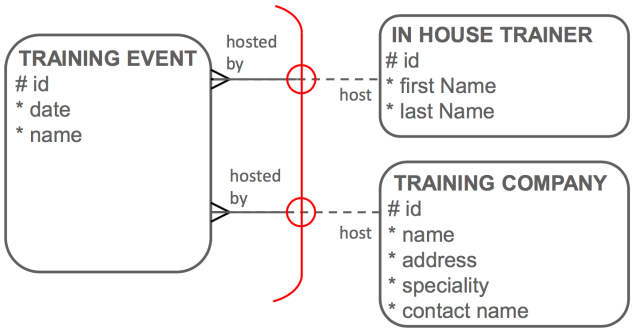
Week-4 Summary

- An Exclusive OR relationship is a relationship between one entity and two (or more) other entities where only one of the relationships can exist at a time
- Arcs: Arcs in data modeling help designers clarify an exclusive OR across relationships.



- Certain situations are best modeled as an arc (like when entities are not kind of something), and others as supertype and subtypes.
- The unique identifier (UID) is very important in relational databases. It is the value or combination of values that enables the user to find that one unique item among all the rest.
- Artificial UIDs: Artificial UIDs are those that don't occur in the natural world but are created for purposes of identification in a system.
- The candidate UIDs: Sometimes two or more possible UIDs exist. Only one of the candidate UIDs is chosen as the actual UID. This is called the primary UID. The other candidates are called secondary UIDs
- Normalization: Redundancy causes unnecessary problems in a database (like would have to do update at many places). Normalization is a process that is used to eliminate redundancy problems. One of your goals as a database designer is to "store information in one place and in the best possible place".
- First Normal Form (1NF): First Normal Form requires that no multi-valued attributes exist. To check for 1NF, validate that each attribute has a single value for each instance of the entity.