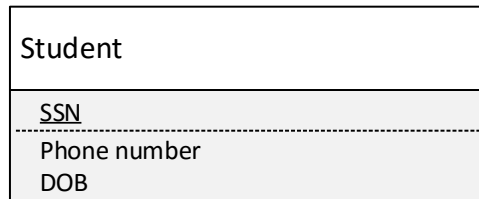


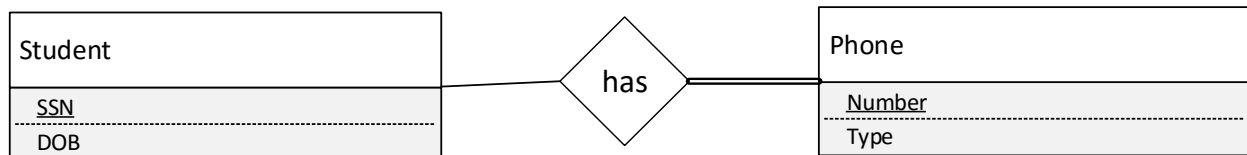
Entity vs. Attribute

When should you model something as an entity as opposed to an attribute?

Let's start with a basic entity – Student. When we begin to discover what information we want to store about the student, we discover it is their SSN, DOB, and phone number. That creates the following:



But now imagine that students can have several phone numbers, such as home, office, cell, etc. We could add a field for each of those – but that leads to wasted space in the database. In addition, the construct could have several possibilities instead of just a few. Instead, we model phone as an entity rather than an attribute.



As with any entity relationship, we ask the participation and key constraint questions:

Does a student have at most one phone? No – no arrowhead

Does a student have at least one phone? No – normal line

Does a phone have at most one student? No – no arrowhead

Does a phone have at least one student? Yes – bold line (or double)