

| Relationship | ERD | Rails / AR | Example | Comments |
|---|---|---------------------------------|--|---|
| One to One | Side A: line (may have "1" above line) | child: belongs_to | Address belongs_to Customer | For a one-to-one, you need to pick a side that is the child and a side that is the parent. It might be somewhat arbitrary but consider the order of creation and deletion of each side. |
| | Side B: line (may have "1" above line) | parent: has_one | Customer has_one Address | |
| One to Many | Side A: line (may have "1" above line) | parent: has_many | Order belongs_to Customer | Side A, the one side (aka the parent) is created first. Side B, the many side (aka the child) is created last and depends on the parent. |
| | Side B: line with crows feet (or have astrick above line) | child: belongs_to | Customer has_many orders | |
| Many to Many (no Association Model) | Side A: line with crows feet (or have astrick above line) | Side A: has_and_belongs_to_many | Movie has_and_belongs_to_many actors | In a many-to-many we need a place to store the foreign keys between Side A and Side B. Thus an association table is created for us to manage all of the associations. |
| | Side B: line with crows feet (or have astrick above line) | Side B: has_and_belongs_to_many | Actor has_and_belongs_to_many movies | |
| Many to Many (with Association Model = AM) | AM: one-to-many to A | AM belongs_to A | Customer has_many reservations | In this many-to-many, the association model contains data that has business meaning (i.e. it isn't just for storing the foreign keys). In our example the AM would have the start_date and the end_date for the reservation. Therefore we need to have a dedicated Model class for the association. In our example this would be the Reservation class. |
| | AM: one-to-many to B | AM belongs_to B | Car has_many reservations | |
| | | A has_many AM | Reservation belongs_to a customer | |
| | | B has_many AM | Reservation belongs_to a car | |
| | | A has_many B through AM | Customer has_many cars through Reservation | |
| | | B has_many A through AM | Car has_many customers through Reservation | |