**Identify Candidate Keys – make surrogate key if none can be found.**

SERVICE(Service\_ID, ServiceCode, ServiceDate, Charge, ParentLastName, ParentFirstName, ParentEmail, ParentPhone, ChildName, ChildGender, ChildDOB)

*Service\_ID is our Candidate Key.*

**Identify functional dependencies.**

1. ParentEmail 🡪 ParentLastName, ParentFirstName, ParentPhone
2. ChildName 🡪 ChildGender, ChildDOB, ParentEmail
3. Service\_ID 🡪 ServiceCode, ServiceDate, Charge

**Examine determinant, separate ill-formed relations (determinants are not candidate keys).**

Relation 1 ill-formed:

New relation: PARENT(ParentEmail, ParentLastName, ParentFirstName, ParentPhone)

Relation 2 ill-formed:

New relation: CHILD(ChildName, ChildGender, ChildDOB, *ParentEmail*)

Connect original relation with newly formed relations:

SERVICE(Service\_ID, ServiceCode, ServiceDate, Charge, *ChildName, ParentEmail*)

**State referential integrity constraints.**

ChildName in SERVICE must be within ChildName in CHILD.

ParentEmail in SERVICE must be within ParentEmail in CHILD.

ParentEmail in CHILD must be within ParentEmail in PARENT.