

## Assumptions:

- 1) There can be more than one midwife in a health care center or there may be no midwife in a specific health care center.
- 2) There might be more than one pregnancy records in pregnancy\_details entity related to a specific couple or parent.
- 3) A midwife can host multiple online information sessions.
- 4) There may be many or no observation notes to a specific appointment.
- 5) One parent can attend one or many online information sessions while one session can be attended by one or many parents.
- 6) A parent represents a couple; it can be a mother or a father.
- 7) One midwife can be assigned to one or many parents (mothers) while one parent(mother) is assigned only one midwife.
- 8) One midwife can set up many appointments while one appointment can be set up by midwife.
- 9) All appointments have observations while for every one observation that belongs to one appointment.
- 10) One appointment can be joined by exact one parent while a parent can join many appointments.
- 11) All Appointments include many medical tests while for every medical tests, each belongs to one appointment.
- 12) One medical test is performed by one technician while one technician can perform many tests.
- 13) Parents should attend a brief session before appointment

## Restriction:

- 1) It's mandatory for midwives that they should be associated to a specific and only one health care center.
- 2) The data of the Lab Technician is compulsory in medical test reports.

## Artificial keys:

- 1) Note\_ID for Observation entity.
- 2) Appointment\_ID for Appointment entity.
- 3) Medical\_Test\_ID for Medical\_Test entity.
- 4) Institution\_ID for Healthcare\_Institution entity.
- 5) Session\_ID for Information\_Session entity.
- 6) Pregnancy\_ID for Pregnancy\_Details entity.
- 7) Baby\_ID for Baby entity.

## Relational Translation:

- **Midwife**(Practitioner\_ID, Name, Email, Phone\_Number, *Institution\_ID*\*)
  - ❖ *Institution\_ID*\* foreign key references Healthcare\_Institution.
- **Healthcare\_Institution**(Institution\_ID, Institution\_Name, Institution\_Phone, Institution\_Email, Institution\_Website, Institution\_Type)
- **Parent**(Quebec\_Health\_Care\_ID, Name, Gender, Date\_Of\_Birth, Email, Phone\_Number, Address, Profession, Pregnancy\_Number, Blood\_Type, Expected\_Timeframe\_for\_Birth, *Session\_ID*\*, *Appoinement\_ID*\*, *1st\_midwife\_Practitioner\_ID*\*, *2nd\_midwife\_Practitioner\_ID*\*, *Second\_Parent\_Quebec\_Health\_Care\_ID*\*)
  - ❖ *Session\_ID*\* foreign key references Information\_Session;

- ❖ *Appointment\_ID\** foreign key references Appointment;
- ❖ *1st\_midwife\_Practitioner\_ID\** and *2nd\_midwife\_Practitioner\_ID\** both foreign keys references Midwife;
- ❖ *Second\_Parent\_Quebec\_Health\_Care\_ID\** reference Parent itself.
- **Appointment**(Appointment\_ID, Appointment\_Date, Appointment\_Start\_Time, Appointment\_End\_Time, *Practitioner\_ID\**, *Quebec\_Health\_Care\_ID\**)
  - ❖ *Practitioner\_ID\** foreign key references Midwife;
  - ❖ *Quebec\_Health\_Care\_ID\** foreign key references Parent.
- **Observation**(Note\_ID, Note, Note\_Time\_Stamp, *Appointment\_ID\**)
  - ❖ *Appointment\_ID\** foreign key references Appointment.
- **Medicat\_Test**(Medical\_Test\_ID, Test\_Prescribed\_Date, Sample\_Taken\_Date, Medical\_Test\_Type, Lab\_Test\_Result, Lab\_Work\_Date, *Technician\_ID\**, *Appointment\_ID\**)
  - ❖ *Technician\_ID\** foreign key references Lab\_Technician;
  - ❖ *Appointment\_ID\** foreign key references Appointment.
- **Lab\_Technician**(Technician\_ID, Technician\_Name, Technician\_Phone)
- **Information\_Session**(Session\_ID, Session\_Date, Session\_Language, Session\_Start\_Time, Session\_End\_Time, *Practitioner\_ID\**)
  - ❖ *Practitioner\_ID\** foreign key references Midwife.
- **Pregnancy\_Details**(Pregnancy\_ID, Expected\_Date\_Last\_Period, Expected\_Date\_Ultrasound, Final\_Estimated\_Date, Birth\_Place, *Quebec\_Health\_Care\_ID\**)
  - ❖ *Quebec\_Health\_Care\_ID\** foreign key references Parent.
- **Baby**(Baby\_ID, Baby\_Name, Baby\_Gender, Baby\_Blood\_Type, Date\_of\_Birth, Number\_Of\_Babies, *Pregnancy\_ID\**)
  - ❖ *Pregnancy\_ID\** foreign key references Pregnancy\_Details.