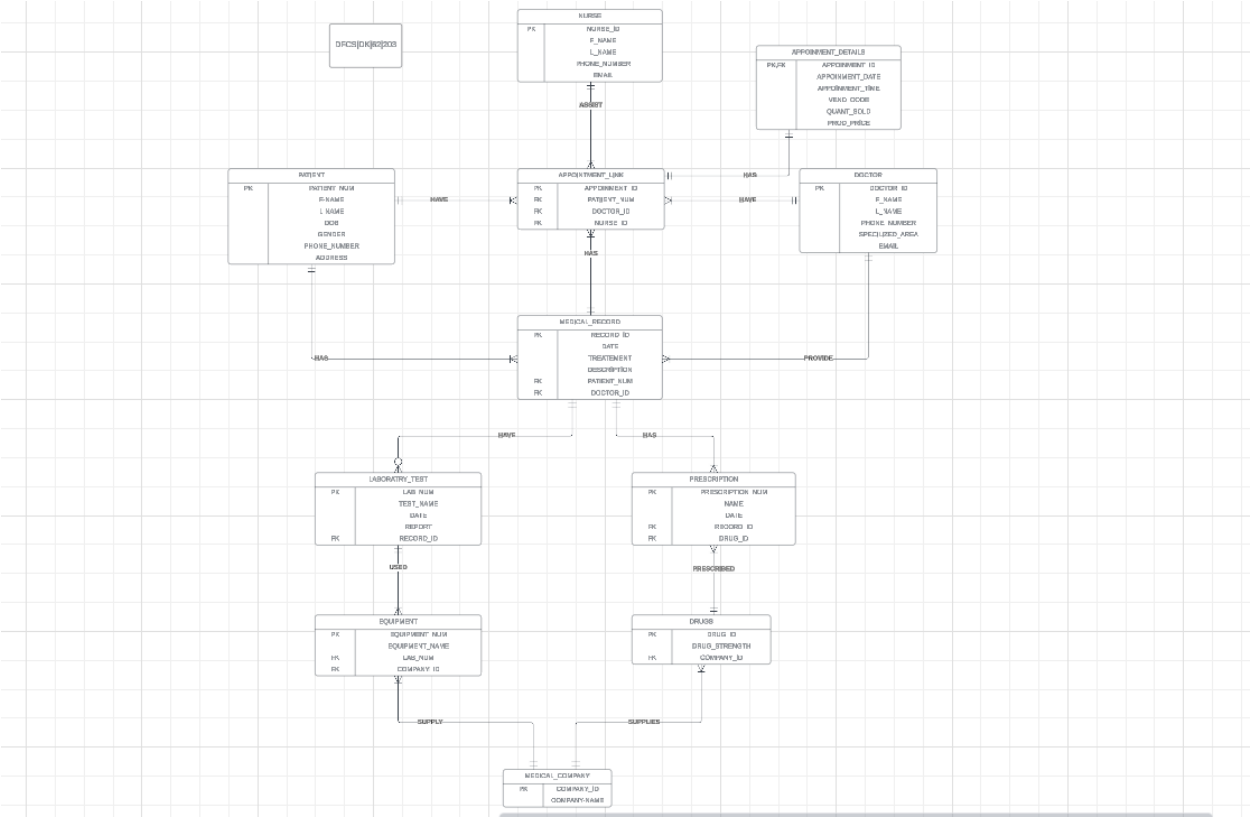
4.2C: Mini Project Part 1
6.Medical Clinic (e.g., Medical One, Geelong City Medical)

Medical Clinic Database

- The concept of a hypothetical medical clinic database system served as the foundation for this project's architecture. A few primary fundamental entities include physicians, nurses, patients, appointments, and medical records. Here, the patient schedules appointments with the clinic's doctor for various examinations or other medical issues. A nurse helps people navigate this system and offers assistance. The medical record table contains all of the documentation from the patient's visit up until their consultation with the physician. Additionally, the doctor gives prescriptions and occasionally lists lab work to be done or other checks there. There is a medical supply company that provides medical supplies and equipment.



2. Entities, Attributes and (PK)

- DOCTOR – [Doctor_ID (PK), F_Name, L_Name, Phone_Number, Specilized_Area, Email].
- PATIENT - [Patient_Num (PK), F_Name, L_Name, DOB, Gender, Phone_Number, Address].
- NURSE – [Nures_ID (PK), F_Name, L_Name, Phone_Number, Email]
- APPOINMENT_LINK – [Appoinment_ID (PK), Patient_Num (FK), Doctor_ID (FK), Nurse_ID (FK)]
- APPOINMENT_DEATAILS – [Appoinment_ID (PK,FK), Appoinment_Date, Appoinment_Time]
- MEDICAL_RECORD – [Record_ID (PK), Date, Treatment, Description, Patient_Num (FK), Doctor_ID (FK)]
- LABORATORY_TEST – [Lab_Num (PK), Test_Name, Date, Report, Record_ID (FK)]
- PRESCRIPTION – [Prescription_Num (PK), Name, Date, Record_ID (FK), Drug_ID (FK)]
- EQUIPMENT – [Equipment_Num (PK), Equipment_Name, Lab_Num (FK), Company_ID (FK)]
- DRUGS – [Drug_ID (PK), Drug_Stregth, Company_ID (FK)]
- MEDICAL_COMPANY – [Company_ID (PK), Company_Name, Company_Phone]

3. Normalization

Nurse

- Since there are no repeated groups in this entity, it achieves the 1NF.
- Because it is implemented with a primary and all the attributes fully, this also satisfies the 2NF rely on it. Partial dependencies don't exist.
- Since there are no transitive dependencies, this satisfies the 3NF requirements.

Patient

- Since there are no repeated groups in this entity, it achieves the 1NF.
- Since a primary is used in its implementation and all characteristics rely entirely on it, this also satisfies the 2NF. No partial dependencies exist.
- Since there are no transitive dependencies, this satisfies the 3NF requirements.

Doctor

- Since there are no repeated groups in this entity, it achieves the 1NF.
- Since a primary is used in its implementation and all characteristics rely entirely on it, this also satisfies the 2NF. Partial dependencies don't exist.
- Since there are no transitive dependencies, this satisfies the 3NF requirements.

Appointment table and Appointment link table

- Since there are no repeated groups in this entity, it achieves the 1NF.
- Since a primary is used in its implementation and all characteristics rely entirely on it, this also satisfies the 2NF. Partial dependencies don't exist.
- Since there are no transitive dependencies, this satisfies the 3NF requirements.

Medical Record

- As there are no repeated groups, this satisfies the 1NF.
- Since all of the qualities completely rely on the primary key and not just a portion of it, this satisfies the 2NF.
- Since it has no transitive dependencies, the 3NF already includes it.

Laboratory Test

- As there are no repeated groups, this satisfies the 1NF.
- Since all of the qualities completely rely on the primary key and not just a portion of it, this satisfies the 2NF.
- Because there are no transitive dependencies, the 3NF already contains it.

Prescription

- As there are no repeated groups, this satisfies the 1NF.
- Since all of the qualities completely rely on the primary key and not just a portion of it, this satisfies the 2NF.
- Because there are no transitive dependencies, the 3NF already contains it.

Equipment

- As there are no repeated groups, this satisfies the 1NF.
- Since every non-key attribute depends entirely on the primary key and not just a portion of it, this satisfies the 2NF.
- Because there are no transitive dependencies, the 3NF already contains it.

Drugs

- As there are no repeated groups, this satisfies the 1NF.
- Since every non-key attribute depends entirely on the primary key and not just a portion of it, this satisfies the 2NF.
- Because there are no transitive dependencies, the 3NF already contains it.

Medical Company

- As there are no repeated groups, this satisfies the 1NF.
- Since every non-key attribute depends entirely on the primary key and not just a portion of it, this satisfies the 2NF.
- Because there are no transitive dependencies, the 3NF already contains it.