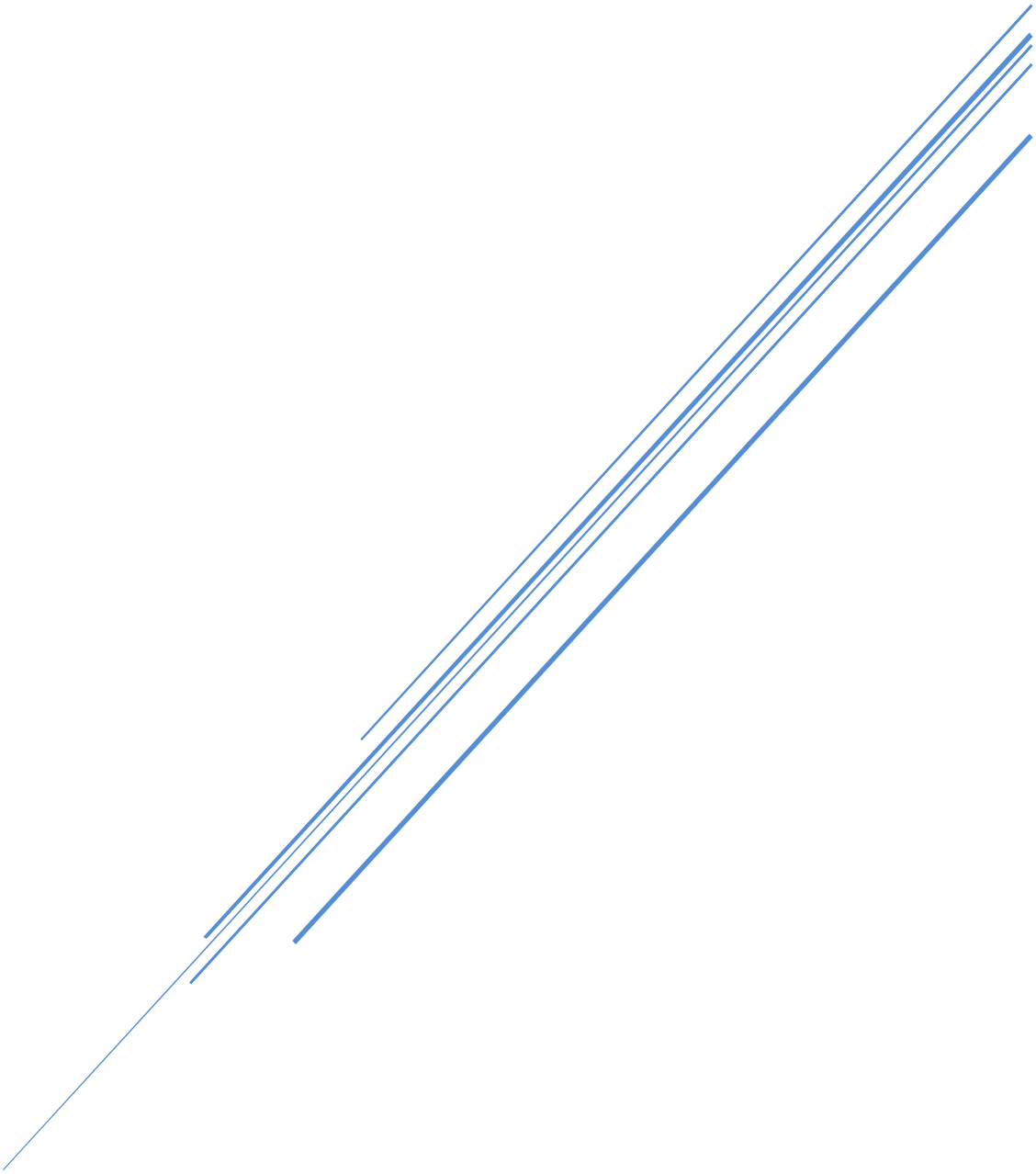
HOSPITAL MANAGEMENT DB

ΠΑΝΑΓΙΩΤΗΣ ΚΕΠΕΣΙΔΗΣ – ΓΙΩΡΓΟΣ ΡΟΥΣΕΛΑΤΟΣ



GROUP 3

1.1. Executive Summary

This paperwork provides a brief description of a hospital management database. It is divided in four parts, which are the following:

- The database sample queries section, where a number of potential daily sample user requests (to the database) can be found
- The requirements, presenting a brief description of the way the database will be organized.
- The ER diagram, where a basic conceptual design of the database can be seen.
- The database entity relational schema, providing an overview of the tables (relations) of the database design.

The whole proposal of this project aims to provide the absolute core of what a hospital management database could be like. The list of attributes for every entity is by no means exhaustive, therefore the design phase does not include attributes to entities for every possible piece of information that could be recorded.

1.2. Database Sample Queries

Below there are a number of sample queries that represent potential routine user cases that could be expressed by the day-to-day user of the final database:

- Bring all the doctor records from the cardiology (or any other) clinic.
- Bring all the patient records from the intensive care unit.
- Return all the records of patients that were admitted to the hospital within the last month.
- Insert a new patient record to a specific room.
- Update a patient record to input new correct postcode.
- Return the count of all patients that were admitted during last month.
- Bring the record of the nurse who is assigned to a specific room.
- Edit the medicine prescription of a given patient according to the supervising doctor's instructions.
- Count all the patient records with a specific medical problem.
- Return all the admin staff (non-medical support staff) that work as desk administrators.

1.3. Data Requirements and ER-diagram

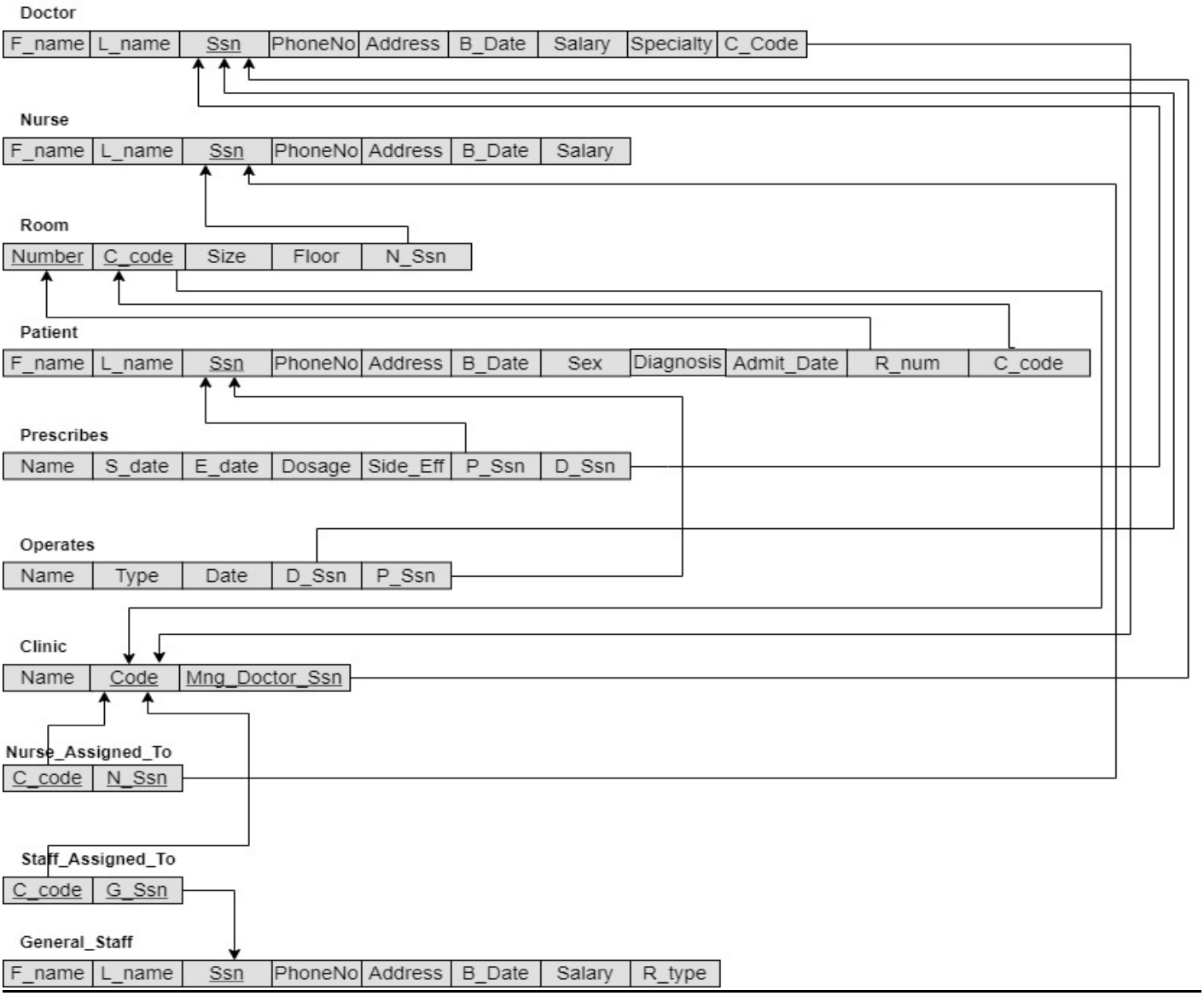
Part A: Data Requirements Text

- The hospital is organized into several clinics. Each clinic has a name, code and a doctor who acts as the clinic manager.
- The hospital has doctors, nurses and other general staff.
- Each doctor has a first name, last name, social security number, birthdate, address, phone number, salary and specialty. A doctor also prescribes medicine to patients.
- Each nurse has a first name, last name, social security number, birthdate, address, phone number and salary.
- Each member of the general staff has a first name, last name, social security number, birthdate, address, phone number, salary and role type.
- Each doctor and nurse are assigned to at least one clinic.
- Each clinic has several doctors and nurses. Each doctor is unique to a clinic, but due to shortages nurses may be assigned to more than one clinic. Admin staff is also shared between clinics.
- The hospital receives patients. All patients that are admitted need to be in a specific room.
- A patient has a first name, last name, social security number, birthdate, address, phone number, sex, date of admittance, diagnosis, assigned room, prescribed medicine and undertaken operations.
- A patient can undergo one or more operations conducted by one or more doctors. Operations are recorded by name, type of operation, receiving patient, doctor, date.
- A patient can also receive medicine prescriptions from a doctor. Prescriptions of medicines will have name, start date, end date, dosage side effects, prescribing doctor and receiving patient.
- The hospital also has rooms. All rooms belong to a clinic and can be categorized as normal beds, intensive care or medical operations rooms, and all have a nurse on shift as a supervision agent. Rooms have number, clinic they belong to, supervising nurse, floor they are on and size (number of beds) as information.

Part B: ER Diagram

Note: Foreign keys are intentionally left out. They are described in the relational model instead.

1.4. Entity Relational Model



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