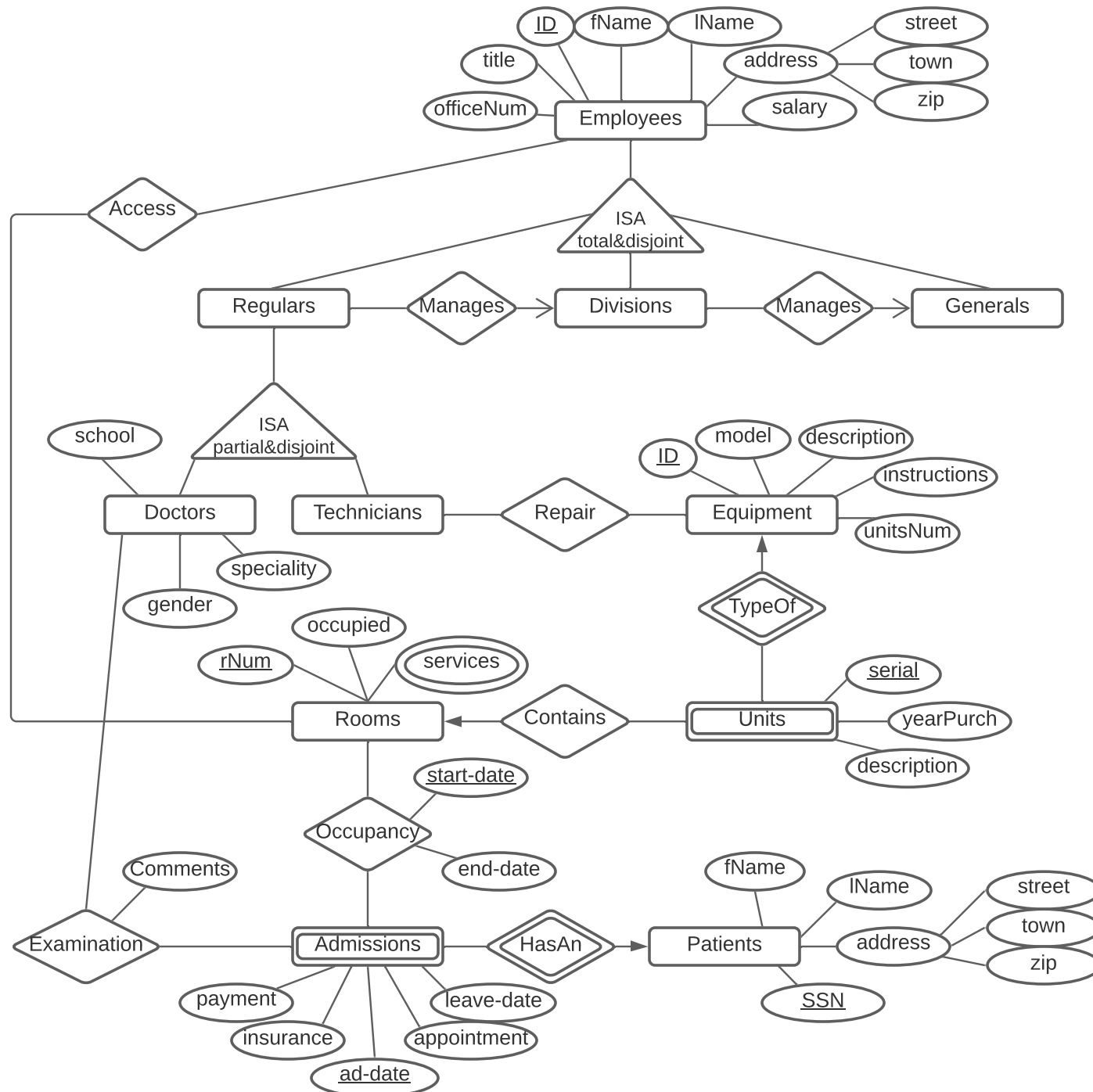**Ivan Martinovic**
Hoang Phan Pham
Phase 1

Relation Model:
General-Managers (<u>ID</u>, fName, lName, title, salary, officeNum, street, town, zip)
Division-Managers (<u>ID</u>, fName, lName, title, salary, officeNum, street, town, zip, managerID)
Regular-Employees (<u>ID</u>, fName, lName, title, salary, officeNum, street, town, zip, managerID)
Doctors (<u>ID</u>, speciality, gender, school,)
Technicians (<u>ID</u>)
Repairs (<u>ID</u>, <u>equipmentID</u>)
Equipment (<u>ID</u>, model, description, instruction, unitsNum)
Units (<u>ID</u>, <u>serial</u>, roomNum, yPurchase, description)
Rooms (<u>rNum</u>, occupied)
Services (<u>rNum</u>, <u>service</u>)
Patients (<u>SSN</u>, fName, lName, street, town, zip)
Addmission (<u>ad-date</u>, <u>SSN</u>, leave-date, payment, insurance, appointment)
Examination (<u>SSN</u>, <u>ad-date</u>, <u>doctorID</u>, comments)
Accesses (<u>ID</u>, <u>rNum</u>)
Occupancy (<u>rNum</u>, <u>SSN</u>, <u>ad-date</u>, <u>start-date</u>, end-date)

Diagram entities and relationships

Employees — attributes: ID, fName, lName, title, officeNum, address (street, town, zip), salary

ISA total&disjoint → Regulars, Divisions, Generals

Access

Manages (Regulars → Divisions), Manages (Divisions → Generals)

ISA partial&disjoint → Doctors, Technicians
Doctors — attributes: school, speciality, gender, rNum
Technicians

Repair (Technicians — Equipment)
Equipment — attributes: ID, model, description, instructions, unitsNum

TypeOf

Rooms — attributes: occupied, rNum, services
Contains
Units — attributes: serial, yearPurch, description

Occupancy — attributes: start-date, end-date

Examination — attributes: Comments

Admissions — attributes: payment, insurance, ad-date, appointment, leave-date

HasAn (Admissions → Patients)
Patients — attributes: fName, lName, address (street, town, zip), SSN

Assumptions:
1. All the dates also include time stamps, so that one patient can be admitted multiple times a day and can occupy multiple rooms for one addmission.
2. An employee has at most 1 manager.
3. An unit has to have 1 Equipment ID and a room number