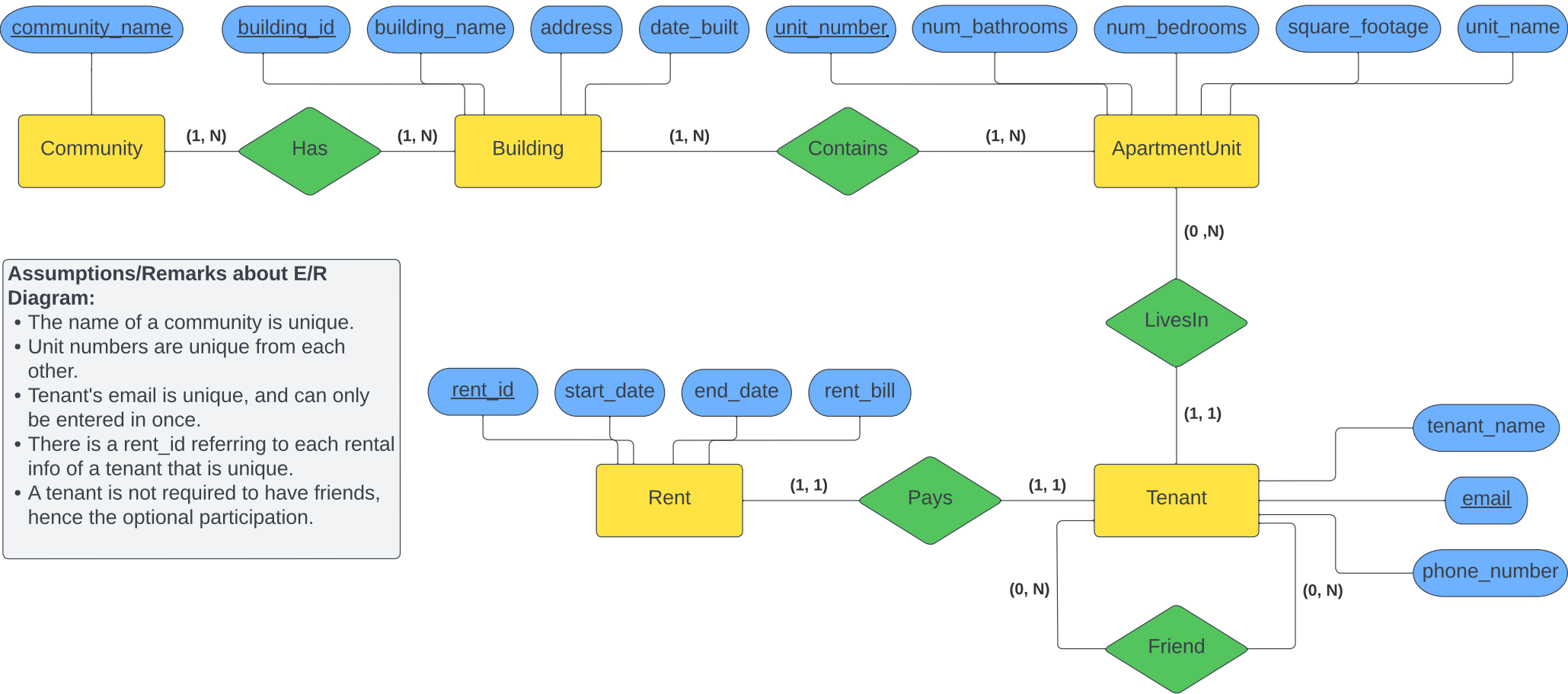


Assignment 4: Entity-Relationship Diagram

THIS ASSIGNMENT IS MY OWN WORK, IT WAS WRITTEN WITHOUT CONSULTING WORK WRITTEN BY OTHER STUDENTS OR COPIED FROM ONLINE RESOURCES. ANDREW CHOI

Q1: Apartment Tracking Database

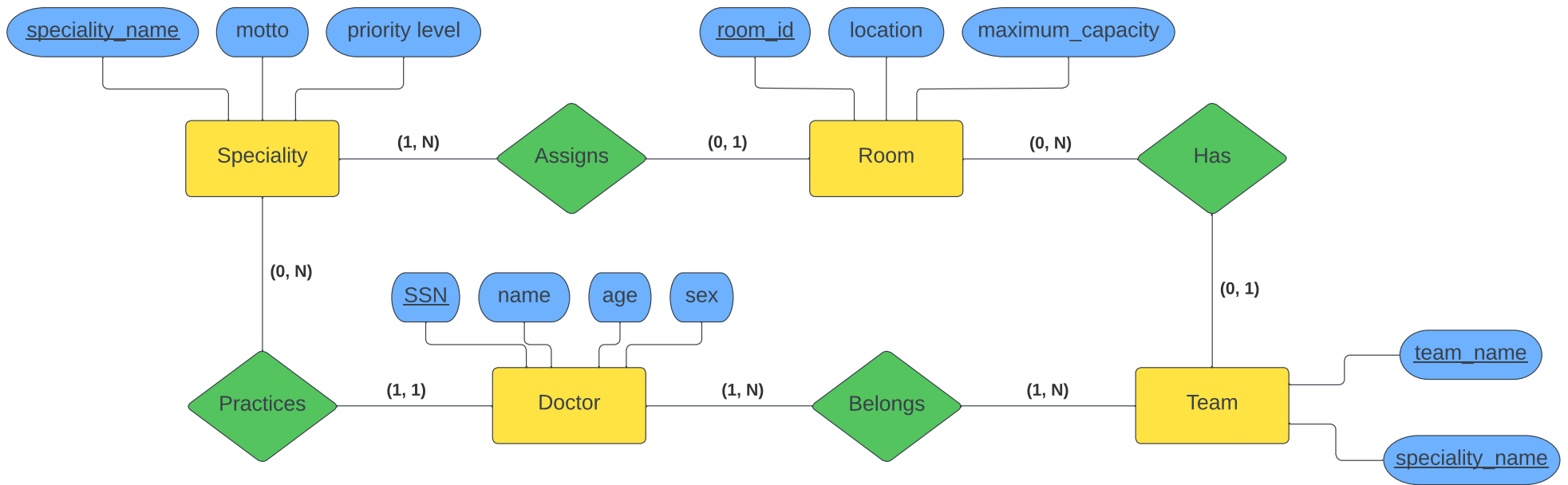


Assumptions/Remarks about E/R

Diagram:

- The name of a community is unique.
- Unit numbers are unique from each other.
- Tenant's email is unique, and can only be entered in once.
- There is a rent_id referring to each rental info of a tenant that is unique.
- A tenant is not required to have friends, hence the optional participation.

Q2: Emory Hospital Database



Assumptions/Remarks about E/R

Diagram:

- SSN is a unique value of every doctor.
- It is assumed that every doctor must be assigned to a team.
- Rooms can be empty in the hospital.
- Teams do not have to be assigned to a room.
- A team can only occupy on room at a time.

Q3: Car Insurance Database

Relations:

Customer(clD, name, address)

Car(licenseNo, model, year, clD)

Accident(alD, date, place, damageAmt)

Participates(licenseNo, alD)

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Foreign Keys:

Car[clD] \subseteq Customer[clD]

Participates[licenseNo] \subseteq Car[licenseNo]

Participates[alD] \subseteq Accident[alD]

Q4: Emory College Database

Relations:

Course(courseID, cname, descrip, dName)

Department(dName, addr, phone, SSN, startDate)

Faculty(SSN, name, office, phone, salary, dName)

Section(sectionID, courseID, semID, SSN)

Semester(semID, startDate, endDate)

Student(studID, name, addr)

Takes(studID, sectionID)

--

Foreign Keys:

Course[dName] \subseteq Department[dName]

Section[courseID] \subseteq Course[courseID]

Section[semID] \subseteq Semester[semID]

Section[SSN] \subseteq Faculty[SSN]

Takes[studID] \subseteq Student[studID]

Takes[studID] \subseteq Section[sectionID]

Faculty[dName] \subseteq Department[dName]

Department[SSN] \subseteq Faculty[SSN]