

CS 180: Software Engineering
ER Diagram
Draft 4

The ER diagram illustrates the relationships between various entities in a medical system. The entities and their attributes are as follows:

- Permission**: permission_id (PK), permission_type, date_created.
- Medical_Records**: medical_record_id (PK), date_created, description, issue, file_name, information.
- Medical_Account**: tel_number, pic_name, fax_number, address, sex, date_of_birth, first_name, middle_name, auto_connect, ssn.
- Payment**: bill_id (PK), amount, due_date, cleared, description.
- HP_Account**: ssn (PK), first_name, middle_name, last_name, date_of_birth, address, pic_name, tel_number, fax_number, specialization, organization.
- Groups**: group_id (PK), name, group_type, description, public_private.
- Accounts**: account_id (PK), password, email, active, privacy, is_a (discriminator).
- Connections**: requester, acceptor, level, date_created, accepted.
- Messages**: message_id (PK), subject, content, date_time, sender_kept, receiver_kept.
- Appointments**: appointment_id (PK), date_time, description, approved.
- Refers**: date_time, referral_id, status.

The relationships between these entities are defined by the following connections:

- Permission** is associated with **Medical_Records** via a **can see** relationship.
- Medical_Records** is associated with **Medical_Account** via a **has** relationship.
- Medical_Account** is associated with **Payment** via a **pays** relationship.
- Payment** is associated with **HP_Account** via a **bills** relationship.
- HP_Account** is associated with **Groups** via an **invite** relationship.
- HP_Account** is associated with **Accounts** via an **is_a** relationship.
- Accounts** is associated with **Groups** via an **invite** relationship.
- Accounts** is associated with **Connections** via a **requester** relationship.
- Accounts** is associated with **Messages** via a **sent** relationship.
- Accounts** is associated with **Messages** via a **received** relationship.
- Accounts** is associated with **Appointments** via a **schedules** relationship.
- Accounts** is associated with **Refers** via a **referring** relationship.
- Accounts** is associated with **Refers** via a **receiving** relationship.
- Accounts** is associated with **Refers** via a **has** relationship.

