LIBRARY DB ER DIAGRAM
Emily Van Laarhoven and MR Ngo

Catalogue #

Availability

Release date

Author/ Artist

Title

Inventory

Type

balance

borrows

Due Date

name

street

ID

Patron

city

IS A

sponsors

Until

Minor
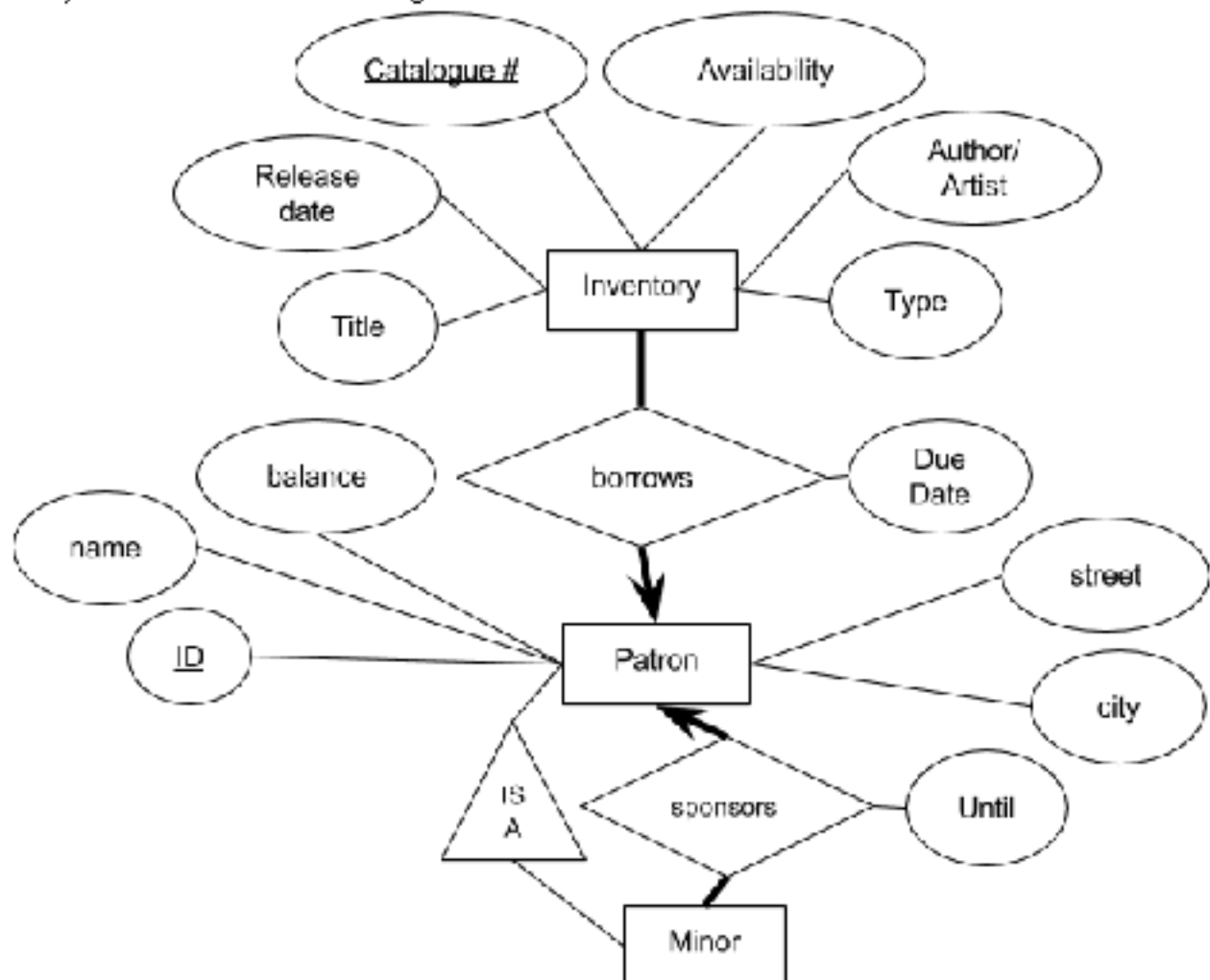
```
-- Emily Van Laarhoven, MR Ngo
-- HW2 library.sql

use evanlaar_db;

drop table if exists patron;
create table patron(
        pid integer auto_increment primary key,
        nm varchar(50) not null,
        balance decimal(3,2) default 0,
        street varchar(50) not null,
        city varchar(50) not null,
        )
        ENGINE = InnoDB;

drop table if exists sponsors;
create table sponsors(
        minor_id integer,
        sponsor_id integer,
        until date,
        INDEX(minor_id),
        foreign key (minor_id) references patron(pid) on delete restrict,
        INDEX(sponsor_id),
        foreign key (sponsor_id) references patron(pid) on delete restrict,
        )
        ENGINE = InnoDB;

drop table if exists inventory;
create table inventory(
        cid integer auto_increment primary key,
        title varchar(100),
        pub_date date,
        author_artist varchar(100),
        item_type enum('book','cd','tape','dvd'),
        availability tinyint(1) -- bool (0=not available)
        )
        ENGINE = InnoDB;

drop table if exists borrows;
create table borrows(
        pid integer not null,
        INDEX(pid),
        foreign key (pid) references patron(pid) on delete restrict,
        cid integer unique not null, -- unique (only one person checks out)
        INDEX(cid),
        foreign key (cid) references inventory(cid) on delete restrict,
        due_date date,
        )
        ENGINE = InnoDB;
```
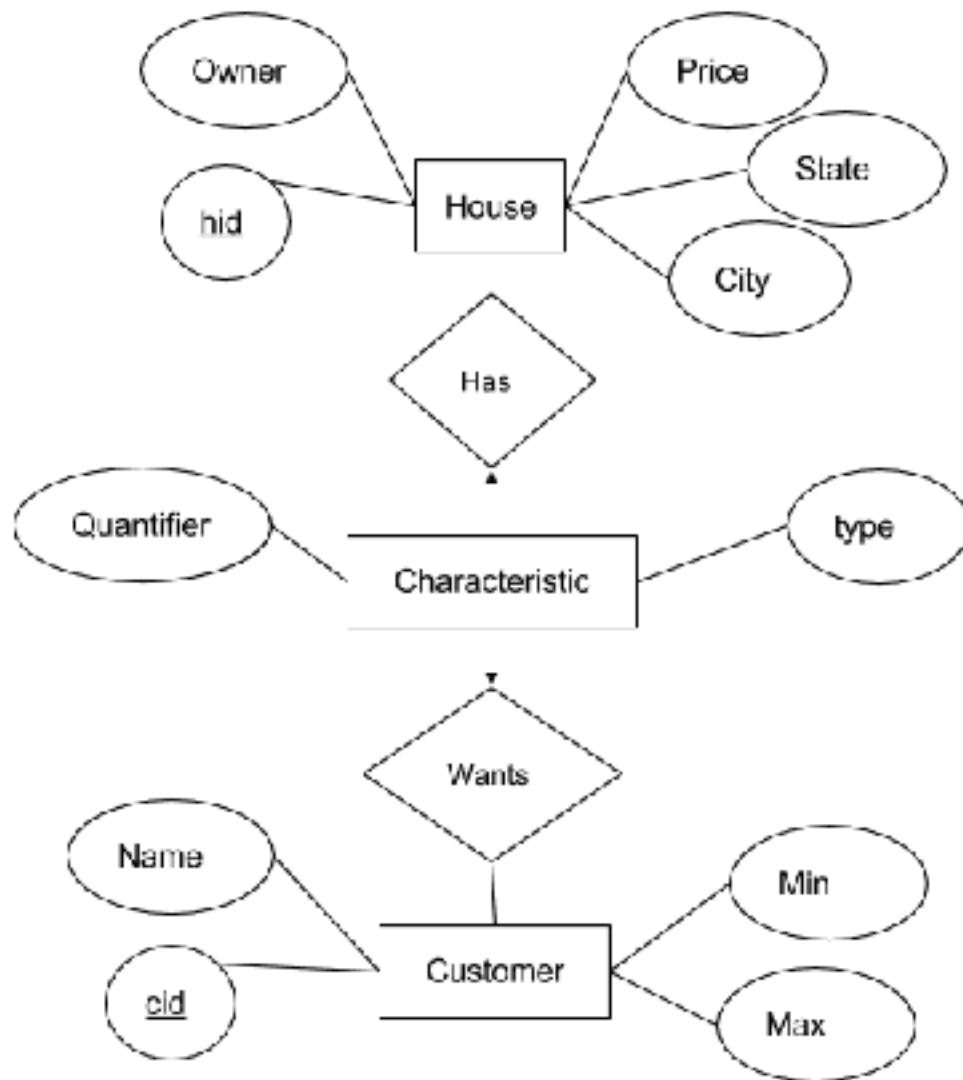
REAL ESTATE DB ER DIAGRAM
Emily Van Laarhoven, MR Ngo

```sql
-- Emily Van Laarhoven, MR Ngo
-- HW2 realestate.sql

use evanlaar_db;

-- drop tables if they exist, dropping children before parents
-- due to referential integrity constraints

drop table if exists house_attr;
drop table if exists cust_pref;
drop table if exists char_list;
drop table if exists customers;
drop table if exists house;

-- house table lists house attributes except characteristics

create table house(
        hid integer auto_increment primary key,
        owner varchar(50),
        price decimal(9,2),
        city varchar(50),
        st varchar(2)
        )
        ENGINE = InnoDB;

-- char list is characteristics that can either be attributes of
-- a house or things that a customer is seeking to find

create table char_list(
        char_id integer auto_increment primary key,
        attribute varchar(100),
        description varchar(50)
        )
        ENGINE = InnoDB;

-- house_attr links char_list and house

create table house_attr(
        hid integer,
        INDEX(hid),
        foreign key (hid) references house(hid) on delete cascade,
        char_id integer,
        INDEX(char_id),
        foreign key (char_id) references char_list(char_id) on delete cascade
        )
        ENGINE = InnoDB;

-- customers is simple list of customer info (except preferences)

create table customers(
        cid integer auto_increment primary key,
        nm varchar(50),
        price_min decimal(9,2),
        price_max decimal(9,2)
        )
        ENGINE = InnoDB;

-- cust_pref links char_list and customers

create table cust_pref(
        cid integer,
        INDEX(cid),
        foreign key (cid) references customers(cid) on delete cascade,
        char_id integer,
        INDEX(char_id),
        foreign key (char_id) references char_list(char_id) on delete cascade
        )
        ENGINE = InnoDB;
```

RESEARCH DB ER DIAGRAM
Emily Van Laarhoven and MR Ngo