Create database project;

use project;

drop table IF EXISTS Amenities, PaymentMethod, The\_Listings, The\_Bookings, RenterRates, HostRates;

drop table IF EXISTS P\_User, Renter, Host, CreditCard, Listing, Amenity, Availability, Rating;

CREATE TABLE P\_User (

userID integer auto\_increment primary key,

username varchar(255),

address varchar(255),

birthdate date,

occupation varchar(100),

usertype varchar(100),

SIN integer

);

CREATE TABLE Renter (

renterID integer primary key,

foreign key (renterID) references P\_User (userID)

);

CREATE TABLE Host (

hostID integer primary key,

foreign key (hostID) references P\_User (userID)

);

CREATE TABLE CreditCard (

cardnumber integer,

expiredate date,

holdername varchar(255),

primary key (cardnumber, expiredate)

);

CREATE TABLE Listing (

listingID integer auto\_increment primary key,

listingtype varchar(100),

latitude numeric(7, 2),

longitude numeric(8, 2),

postal\_code varchar(100),

city varchar(100),

country varchar(100),

address varchar(255)

);

CREATE TABLE Amenity (

amenityname varchar(255) primary key

);

CREATE TABLE Amenities (

listingID integer,

amenityname varchar(255),

primary key (listingID, amenityname),

foreign key (listingID) references Listing (listingID),

foreign key (amenityname) references Amenity (amenityname)

);

CREATE TABLE Availability (

listingID integer,

a\_date date,

price numeric,

primary key (listingID, a\_date),

foreign key (listingID) references Listing (listingID)

);

CREATE TABLE Rating (

ratingID integer auto\_increment primary key,

rating numeric,

r\_comment varchar(500),

CHECK(rating >= 0.0 and rating <= 5.0)

);

CREATE TABLE PaymentMethod (

renterID integer,

cardnumber integer,

primary key (renterID, cardnumber),

foreign key (renterID) references Renter (renterID),

foreign key (cardnumber) references CreditCard (cardnumber)

);

CREATE TABLE The\_Listings (

hostID integer,

listingID integer,

primary key (hostID, listingID),

foreign key (hostID) references Host (hostID),

foreign key (listingID) references Listing (listingID)

);

CREATE INDEX idx\_availability\_date ON Availability (a\_date);

CREATE TABLE The\_Bookings (

renterID integer,

listingID integer,

a\_date date,

primary key (renterID, listingID, a\_date),

foreign key (renterID) references Renter (renterID),

foreign key (listingID) references Availability (listingID),

foreign key (a\_date) references Availability (a\_date)

);

CREATE TABLE RenterRates (

renterID integer,

ratingID integer,

hostID integer,

listingID integer,

primary key (renterID, ratingID, hostID, listingID),

foreign key (renterID) references Renter (renterID),

foreign key (ratingID) references Rating (ratingID),

foreign key (hostID) references Host (hostID),

foreign key (listingID) references Listing (listingID)

);

CREATE TABLE HostRates (

hostID integer,

ratingID integer,

renterID integer,

primary key (hostID, ratingID, renterID),

foreign key (hostID) references Host (hostID),

foreign key (ratingID) references Rating (ratingID),

foreign key (renterID) references Renter (renterID)

);

show tables;