CSCC43 MyBNB

Description: MyBNB is a home sharing service which can be used to create listing for your home or to book listings for rent. The system also allows you to search for various listings using different search criteria. The system requires the user to login and specify if they are renting or hosting, once they do this depending on the option they chose they are given options on what they can do. Hosts have the option to create new listings while renters have the option to book listings and cancel their previous bookings. Both users and hosts have the option to search through listings based on various criteria, while they also have the option to view reports on listing data based on certain criteria, such as by postal code, city and country.

Conceptual Problems:

1. MySQL does not support the use of tuples meaning that the location could not be stored together.

Solution: Separate latitude and longitude into two separate attributes, which functionally was the same, it only means that the user must enter both attributes separately.

Relation Schema:

Users(occupation, address, name, SIN, username, password, credit card number)

Login(users.username, users.password)

Renters(users.occupation, users.address, users.name, users.SIN, users.username, users.password, users.creditcardnumber)

Hosts(users.occupation, users.address, users.name, users.SIN, users.username, users.password, users.creditcardnumber)

Listings(type, latitude, longitude, listing address, listing city, listing country, postal code, amenities, rental price)

Listingslisted(listings.type, listings.latitude, listings.longitude, listings.listingaddress, listings.listingcity, listings.listingcountry, listings.postalcode, listings.amenities, listings.rentalprice, hosts.occupation, hosts.address, hosts.name, hosts.SIN, hosts.username, hosts.password, hosts.creditcardnumber)

Listingsrented(listings.type, listings.latitude, listings.longitude, listings.listingaddress, listings.listingcity, listings.listingcity, listings.postalcode, listings.amenities, listings.rentalprice, renters.occupation, renters.address, renters.name, renters.SIN, renters.username, renters.password, renters.creditcardnumber)

Calendar(days available, listings.type, listings.latitude, listings.longitude, listings.listingaddress, listings.postalcode, listings.amenities, listings.rentalprice)

DDL statements:

CREATE TABLE USERS (occupation VARCHAR(255), address VARCHAR(255), name VARCHAR(255), sin INT not null, username VARCHAR(255), password VARCHAR(255), credit\_card\_number INT not null, UNIQUE ( username ), PRIMARY KEY ( sin ));

CREATE TABLE LOGIN (SELECT username, password FROM USERS);

CREATE TABLE RENTERS (SELECT \* FROM USERS );

CREATE TABLE HOSTS (SELECT \* FROM USERS );

CREATE TABLE LISTINGS (type VARCHAR(255), latitude FLOAT not null, longitude FLOAT not null, listing\_address VARCHAR(255), listing\_city VARCHAR(255), listing\_country VARCHAR(255), postal\_code VARCHAR(255), amenities VARCHAR(255), rental\_price DOUBLE not null, PRIMARY KEY ( latitude, longitude ));

CREATE TABLE LISTINGS\_LISTED(SELECT \* FROM LISTINGS, HOSTS);

CREATE TABLE LISTINGS\_RENTED(SELECT \* FROM LISTINGS, RENTERS);

CREATE TABLE CALENDAR(days\_available INT, SELECT \* FROM LISTINGS);