

CS 157A Final Project

Application Name/Team Name: Blue Swift

Team Members:

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Project Overview:

Our application will be a platform for apartment searching. This application will allow users to easily search for apartments according to their requirements/expectations. It will filter out options for users and provide them with the best apartment choices. All information inputted by users will be saved in a domain database.

Relations:

Suite(SuiteID:int, roomNumber: int, roomSharing: boolean, Price: decimal, Specifications: String, petsAllowed: boolean, numberOfRooms: int)

Apartment(Name: String, Long: double, Lat: double)

Tenant(Name: String, Description: String, phoneNumber: String)

Hobbies(Name: String)

ModesOfTransportation(Name: String, Address: String)

Bus(mName: String, Route: int)

Train(mName: String, Route: int)

Stops(Name: String, Time: String, Long: double, Lat: double)

SchoolSystems(Name: String, Rating: decimal, Grades: String, Long: double, Lat: double)

Relationship Relations:

ApartmentHasModeOfTransportation(aLong: double, aLat: double, mName: String)

ApartmentHasSchoolSystem(aLong: double, aLat: double, ssLong: double, ssLat: double)

ApartmentHasStores(aLong: double, aLat: double, asLong: double, asLat: double)

ApartmentHasSuites(aLong: double, aLat: double, suiteID: int)

TenantHasSuite(TphoneNumber: String, suiteID: int)

TenantHasHobbies(TphoneNumber: String, hName: String)

BusHasStops(mName: String, route: int, sName: String, sTime: String, sLong: double, sLat: double)

TrainHasStops(mName: String, route: int, sName: String, sTime: String, sLong: double, sLat: double)

SchoolSystemHasGrades(sLong: double, sLat: double, gradeLevel: int)

Updated Create Statements:

```
CREATE TABLE Suite(  
Suite ID int primary key,  
roomNumber int,  
roomSharing boolean,  
Price decimal(12,2),  
Specifications varchar(253),  
petsAllowed boolean  
numberOfRooms int,  
);
```

```
CREATE TABLE Apartment(  
Name varchar(255),  
Long double,  
Lat double,  
Primary Key(long,lat));
```

```
CREATE TABLE Tenant(  
Name varchar (255),  
Description varchar(255),  
phoneNumber varchar(12) primary key  
);
```

```
CREATE TABLE Hobbies(  
Name varChar(255) primary key  
);
```

```
CREATE TABLE ModeOfTransportation(  
Name varchar(255) primary key,  
Address varchar(255)  
);
```

```
CREATE TABLE Bus(  
mName varchar(255),  
Route int,  
primaryKey(mName, route)  
);
```

```
CREATE TABLE Train(  
mName varChar(255),  
Route int  
primaryKey (mName, route)  
);
```

```
CREATE TABLE Stops(  
Name varchar(255),  
Time varchar(235),  
Long double,  
Lat double,  
primaryKey(name, time, long, lat)  
);
```

```
CREATE TABLE Stores(  
Name varchar(255),  
Description (255),  
Long double,  
Lat double,  
primaryKey(long, lat)  
);
```

```
CREATE TABLE School System(  
Name varchar(255),  
Rating decimal(2,2),  
Grades varchar(255),  
Long double,  
Lat double,  
primaryKey(long, lat)  
);
```

```
CREATE TABLE ApartmentHasModeOfTransportation(  
aLong double,  
aLat double,  
mName varchar(255),  
primaryKey(aLong, aLat, mName),  
Foreign key (aptLongitude,aptLatitude) References Apartment(longitude,latitude),  
Foreign key (modeName) References ModeOfTransportation(name)  
);
```

```
CREATE TABLE ApartmentHasSchoolSystem(  
aLong double,  
aLat double,  
ssLong double,  
ssLat double,  
PrimaryKey(aLong, aLat, ssLong, ssLat),  
Foreign key (aptLongitude,aptLatitude) References Apartment(longitude,latitude),  
Foreign key (schoolLongitude,schoolLatitude) References  
SchoolSystems(longitude,latitude)  
);
```

```
CREATE TABLE ApartmentHasStores(  
aLong double,  
aLat double,  
sLong double,  
sLat double,  
PrimaryKey(aLong, aLat, sLong, sLat),  
FOREIGN KEY(aptLongitude,aptLatitude) References Apartment(longitude,latitude),  
Foreign key (schoolLongitude,schoolLatitude) References  
SchoolSystems(longitude,latitude)  
);
```

```
CREATE TABLE ApartmentHasSuites(  
aLong double  
aLat double,  
suiteID int,  
Primarykey (SuiteID),
```

Foreign key (aptLongitude,aptLatitude) References Apartment(longitude,latitude),
Foreign key (suiteId) References Suite(suiteId)
);

CREATE TABLE TenantHasSuite(
tPhoneNumber varchar(255) primary key,
SuiteID int,
Foreign key (tPhoneNumber) References Tenant(phoneNumber),
Foreign key (suiteId) References Suite(suiteId)
);

CREATE TABLE TenantHasHobbies(
+PhoneNumber varchar(255),
hName varchar(255),
Primary Key(+PhoneNumber, hName)
Foreign key (tPhoneNumber) References Tenant (phoneNumber),
Foreign key (hName) References Hobbies (name)
);

CREATE TABLE BusHasStops(
mName varchar(255),
Route int,
sName varchar(255),
sTime varchar(255),
SLong double,
SLat double,
primarykey(mName, route, SName, STime, SLong, SLat)
Foreign key (modeName,route) References Bus(modeName,route),
Foreign key (stopName,stopTime,longitude,latitude) References Stops(name,
stopTime,longitude,latitude)
);

CREATE TABLE TrainHasStops(
mName varchar(255),
Route int,
sName varchar(255),
sTime varchar(255),
SLong double,
SLat double,
primarykey(mName, route, SName, STime, SLong, SLat),
Foreign key (modeName,route) References Bus(modeName,route),
Foreign key (stopName,stopTime,longitude,latitude) References Stops(name,
stopTime,longitude,latitude)
);

```
CREATE TABLE SchoolSystemHasGrades(  
  sLong double,  
  sLat double,  
  gradeLevel int,  
  Primary key(sLong, sLat, gradeLevel),  
  Foreign key (sLong, sLat) References SchoolSystems (Long, Lat),  
  Foreign key (gradeLevel) References Grades (gradeLevel)  
);
```

Question 2:

Explain whether or not somebody who is truly working in the domain of your application would use your web-enabled database, or if there is something missing or intrinsically complex that will deter them from using it. (Is your web-enabled database not powerful enough for the real world, or too complicated for the real world?) For example, if you are in the books domain, would a bookseller use your database? It would be ideal if you had access to a real application domain person; you could just ask him/her to visit your web page and give you feedback. Alternately, look at "similar" systems or web pages and see if they are doing something differently and if your approach is better (or worse) and why. Include your answer to this question in your project report.

Answer:

The web-enabled database for our project would be useful to a potential person who is working in the domain of this application for the most part. The data we have collected and displayed would be useful for finding out street names, different methods of transportation, and school system. However, the suite information is made up data. The user can get an idea of how all these data tables relate with one another, even if the data is not real.

Contributions:

Sridivya Kondapalli: Front-end UI, PHP files to connect to backend, wrote sql queries to access db

LingFang Gao: Report, Sql queries to access db

Archana Yadawa: Report, sql queries to access db

Daksha Divakar: Collected all the data for all the tables

Sandeep Samra: Report