

Database Proposal

(House Rental Application)

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Users

The Users collection stores data of all users. Users will be able to login to their account, update their details and post properties. This collection will consist of a field name of “userType” to describe the type of user (tenant/owner). For the users that are owners, the field “housesPosted” will consist of the propertyIds that user has posted. The “favoriteIds” field that stores an array of propertyIds that the user has favorited.

```

{
  "userId": "7b696b2-d0f2-4f8g-h67a-7a2d2b6b6710",
  "firstName": "Edwin",
  "middleName": "A",
  "lastName": "Stevens",
  "email": "edwin@gmail.com",
  "gender": "M",
  "age": 25,
  "userType": "owner",
  "hashedPassword": "$2a$08$XdvMJfdNIL8F5yduIUEsbNOFgK0M0iV3JOskfVn7.AWmdShU.O",
  "city": "Hoboken",
  "state": "NJ",
  "profilePicture": "/static/picture1.jpg",
  "housesPosted": [
    "7b696b2-d0f2-4f8g-h67a-7a2d2b6b6710",
    "7b7997a2-c0e2-4e8c-b20a-6a2d4b5b310",
    "7b696b2-b0f2-4f8g-h67e-7a1e4b6b6310"
  ],
  "favoriteIds": [
    "7b696b2-c0e2-4f8v-h67e-7a9f0a7v6710",
    "7b696b2-d1e3-4f8g-h67a-7a2d2a7v6710"
  ]
}

```

Name	Type	Description
userId	ObjectID	Global unique identifier to represent the user.
firstName	string	A string that stores user's first name
middleName	string	A string that stores user's middle name
lastName	string	A string that stores user's last name
email	string	user's email id when user registers/logs in
profilePicture	string	A string that consists of the file location of the user's profile image
gender	string	Gender of the user
age	number	Age of the user
hashedPassword	string	The password when users log in
favoriteIds	array	An array to store the references to the properties (propertyIDs) that the user has favorited
city	string	City of the user
state	string	State of the user
housesPosted	array	An array to store the propertyIDs that the user has posted
userType	string	Describes whether the user is property owner or a tenant

Properties

The properties collection stores data of properties. The “details” field stores all the details about the property (aptType, area, propertyType, bedroomCount, etc). It also has a subdocument that stores comments that are related to this property.

```
{
  "propertyId": "7b696b2-c0e2-4f8v-h67e-7a9f0a7v6710",
  "address": {
    "street": "18 Westside Ave",
    "apartmentNum": "A-102",
    "city": "Jersey City",
    "state": "NJ",
    "zip": "07306",
  },
  "price": "2800$",
  "ownerId": "7b696b2-d0f2-4f8g-h67a-7a2d2b6b6710",
  "location": {
    "latitude": 40.843739,
    "longitude": -74.148739,
  },
  "favoriteCount": 3,
  "images": ["/static/house1.jpg", "/static/house2.jpg", "/static/house3.jpg", "/static/house4.jpg"],
  "details": {
    "description": "A spacious newly renovated 2 bedroom 2 bath apartment - ready to move in.",
    "propertyType": "Private",
    "apartmentType": "2 BHK",
    "accomodationType": "Permanent",
    "area": "666 sqft",
    "bedroomCount": 2,
    "bathroomCount": 2,
  },
  "comments": [
    {
      "commentId": "7b696b2-d0f2-4f8g-h67a-7a2d2b6b6710",
      "userId": "7b696b2-d0f2-4f8g-h67a-7a2d2b6b6710",
      "commentText": "How far is this property from JSQ path station?",
      "postTime": "03/31/2024, 5:13:46 PM"
    }
  ]
}
```

Name	Type	Description
propertyID	ObjectID	Global unique identifier to represent the property
comments	subDocument	Array of comment object with details about the comments that have been posted
ownerID	string	The userID of owner in user collection
details	object	An object that consists of property details i.e., description, aptType (1bhk/2bhk etc), area (square footage),

		propertyType(private house / building), accomodationType(shared/private), noOfBedroom, noOfBathroom, utilities
images	array	An array of string that consists of file location references of images of the property
address	object	An object that consists of address keys i.e., AptNo, street, city, state, zip
location	object	An object that consists of latitude and longitude of the location of the property
price	number	The price of the property
favoriteCount	number	The count of the number of times the property has been favorited

Comments

Comments is a subdocument of the Properties collection. It consists of a “userId” field to refer to the user (Users collection) that has posted the comment.

```
"comments": [{
  "commentId": "7b696b2-d0f2-4f8g-h67a-7a2d2b6b6710",
  "userId": "7b696b2-d1f3-4f0v-h67a-7a2dc83b6520",
  "CommentText": "How far is this property from hoboken terminal?",
  "postTime": "03/31/2024, 5:13:46 PM"
},
{
  "commentId": "7b696b2-d1g0-5f8g-h67b-7a2d9v5b6711",
  "userId": "7b696b2-d1f3-4f0v-h67a-7a2dc83b6520",
  "CommentText": "It`s just a 10 minutes walk to jsq station.",
  "postTime": "04/01/2024, 9:18:46 AM"
}]
```

Name	Type	Description
commentID	ObjectID	Global unique identifier to represent the comment
userID	string	Reference of the user that has posted the comment
commentText	string	The comment that has been posted
postTime	string	The date and time at which the comment was posted