DB Proposal: University Housing Review Platform

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Users Collection

Description: Stores information about registered users on the platform.

Details:

Name	Type	Description
userId	ObjectId	Unique identifier for each user.
email	String	The user's email address, used as the account identifier.
passwordHash	String	A hashed version of the user's password for security.
firstName	String	The user's first name.
lastName	String	The user's last name.
city	String	The city the user resides in.
state	String	The state the user resides in.
country	String	The country the user resides in.
age	Number	The user's age.
diploma	String	The highest diploma the user has achieved.
discipline	String	The field of study or discipline.
reviewIds	[ObjectId]	An array of ObjectIds linking to the reviews written by the user.
createdAt	Date	Timestamp of account creation.
updatedAt	Date	Timestamp of the last update to the profile.

Example:

```
{
  "userId": "5f8d3fse4b8d3c7e9f72d3e8",
  "email": "janedoe@example.com",
  "passwordHash": "$2b$10$examplehashValueHere",
  "firstName": "Jane",
```

```
    "lastName": "Doe",
    "city": "Hoboken",
    "state": "NJ",
    "country": "USA",
    "age": 22,
    "diploma": "Bachelor",
    "discipline": "Business Administration",
    "reviewIds": ["5f8d3fae4b8d3c7e9f72d3f9", "5f8d3fb14b8d3c7e9f72d400"],
    "createdAt": "2023-09-01T12:00:00Z",
    "updatedAt": "2023-10-01T12:00:00Z"
  }
```

Listings Collection

Description: Stores information about the housing on the platform.

Details:

Name	Type	Description
listingId	ObjectId	Unique identifier for each listing.
address	String	The address of the housing option.
zipCode	String	Zip code for the location.
city	String	City where the housing is located.
state	String	State where the housing is located.
homeType	String	Type of home (apartment, townhome, etc.).
amenities	[String]	List of amenities offered.
rentalCost	Number	Monthly rental cost.
beds	Number	Number of bedrooms.
baths	Number	Number of bathrooms.
petPolicy	String	Information on pet policies.
garage	Boolean	Indicates if a garage is available.
images	[String]	URLs to images of the housing.
location	Object	Contains latitude and longitude for map representation.
reviewIds	[ObjectId]	An array of ObjectIds linking to reviews of the listing.
rating	Number	Overall rating based on user reviews.

Example:

```json
{
  "listingId": "5fc92b2e8b3d48bcbf889c23",
  "address": "123 University Ave",
  "zipCode": "07030",
  "city": "Hoboken",
  "state": "NJ",
  "homeType": "Apartment",
  "amenities": ["Pool", "Gym", "Pet Friendly"],
  "rentalCost": 2000,
  "beds": 2,
  "baths": 1.5,
  "petPolicy": "Pets allowed",
  "garage": true,
  "images": ["http://example.com/image1.jpg",
"http://example.com/image2.jpg"],
  "location": {
    "latitude": 40.743991,
    "longitude": -74.032363
  },
  "reviewIds": ["5fd12c2c9b3d48bcbf889d67", "5fd12c2d9b3d48bcbf889d68"],
  "rating": 4.5
}
```

Reviews Collection

Description: Holds reviews written by users for different listings

Details:

Name	Type	Description
reviewId	ObjectId	Unique identifier for the review.
listingId	ObjectId	ObjectId of the listing being reviewed.
userId	ObjectId	ObjectId of the user who wrote the review.
rating	Number	The rating given by the user.
title	String	The title of the review.
body	String	The main content of the review.
images	[String]	URLs to images included in the review.
helpfulCounts	Number	Number of times the review was marked as helpful.
comments	[Object]	Array of comments on the review.
createdAt	Date	Timestamp when the review was created.
updatedAt	Date	Timestamp for the last update made to the review.

Example:

```json
{
  "reviewId": "5fd12c2c9b3d48bcbf889d67",
  "listingId": "5fc92b2e8b3d48bcbf889c23",
  "userId": "5f8d3fse4b8d3c7e9f72d3e8",
  "rating": 5,
  "title": "Great Place to Live!",
  "body": "I've lived here for a year and absolutely love it. The
amenities are fantastic, and it's so close to the university. Highly
recommend to anyone looking for a place in Hoboken.",
  "images": ["http://example.com/reviewImage1.jpg"],
  "helpfulCounts": 15,
  "comments": [
    {
      "userId": "5f8d3fae4b8d3c7e9f72d3f9",
      "comment": "Thanks for sharing your experience! I'm considering
moving here.",
      "createdAt": "2023-12-10T15:00:00Z"
    },
    {
      "userId": "5f8d3fb14b8d3c7e9f72d400",
      "comment": "Did you find the pet policy to be as accommodating as
advertised?",
      "createdAt": "2023-12-11T12:34:56Z"
    }
  ],
  "createdAt": "2023-11-15T12:00:00Z",
  "updatedAt": "2023-11-20T12:00:00Z"
}
```

Comments Collection

Description: Holds comments written by users for different reviews

Details:

Name	Type	Description
commentId	ObjectId	Unique identifier for the comment.
reviewId	ObjectId	The review the comment is associated with.
userId	ObjectId	The user who posted the comment.
comment	String	The text of the comment.
createdAt	Date	Timestamp when the comment was made.

Example:

```json
{
  "commentId": "5fa123b3c88f1e221f6a8b54",
```

```
    "reviewId": "5f8d3fb14b8d3c7e9f72d400",
    "userId": "5f8d3fse4b8d3c7e9f72d3e8",
    "comment": "I totally agree with this review! Thanks for sharing your
experience.",
    "createdAt": "2023-11-05T15:00:00Z"
}
```

```
    "reviewId": "5f8d3fb14b8d3c7e9f72d400",
    "userId": "5f8d3fse4b8d3c7e9f72d3e8",
    "comment": "I totally agree with this review! Thanks for sharing your
experience.",
    "createdAt": "2023-11-05T15:00:00Z"
}
```