DAY 3-API INTEGRATION REPORT-COMFORTY MARKETPLACE

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1. INTRODUCTION

Ye report hackathon ke Day 3 ke activities explain karti hai jo Team Comforty ne complete ki. Focus tha product data ko Comforty Marketplace mein migrate karna using Sanity CMS. Integration process, schema adjustments aur migration steps neeche detail mein diye gaye hain.

2. API INTEGRATION PROCESS

API integration ka purpose seamless data migration aur interaction ensure karna tha Sanity CMS backend aur marketplace frontend ke darmiyan. Neeche steps diye gaye hain:

SANITY API CONFIGURATION

Migration process start karne ke liye ye steps follow kiye gaye hain:

- Product ID aur API Token ko use kiya gaya Sanity CMS API ke saath connect karne ke liye.
- Sensitive data ki safety ensure karne ke liye credentials environment variables ke taur par store kiye gaye.

SCHEMA ADJUSTMENTS

Sanity CMS schema folder mein do naye files add kiye gaye (sanity/schemas ke andar):

1. **product.ts** - Product data store karne ke liye, jaise title, description, price aur image.

2. **categories.ts** - Products ko categorize karne aur CMS mein link karne ke liye.

Ye files ensure karte hain ke data structured aur easily queryable ho.

3. DATA MIGRATION PROCESS

Migration process mein ek script banayi gayi jo product data Sanity CMS se local database mein transfer kare. Process kaise execute kiya gaya, neeche diya gaya hai:
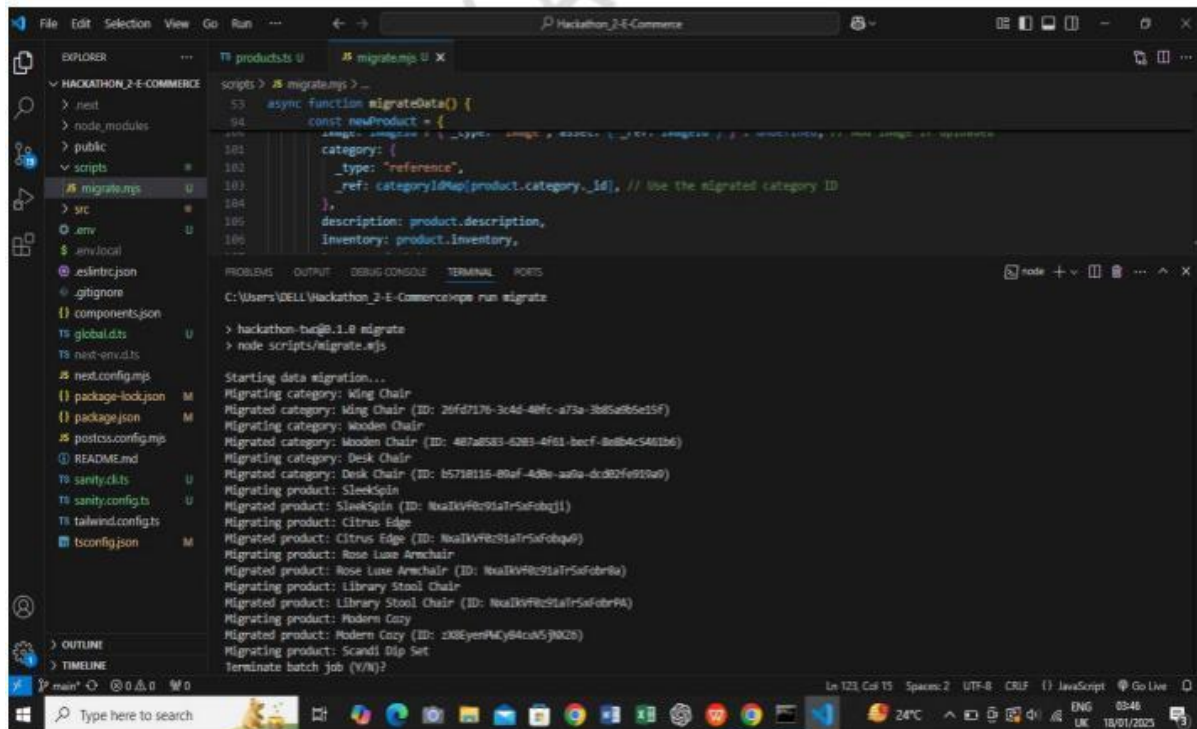
Migration Script Banana

-	Root directory mein ek nayi folder `scripts` ke naam se banayi gayi.
-	Ek custom script `migrate.mjs` likha gaya jo Sanity CMS se data fetch karke local database mein migrate kare.

Migration Execute Karna

Migration initiate karne ke liye terminal mein ye command run ki gayi:

`npm run migrate`

Is command ne migration process start ki aur data Sanity CMS se local database mein successfully transfer hua.

VERIFICATION

Migration verify karne ke liye ye steps perform kiye gaye:
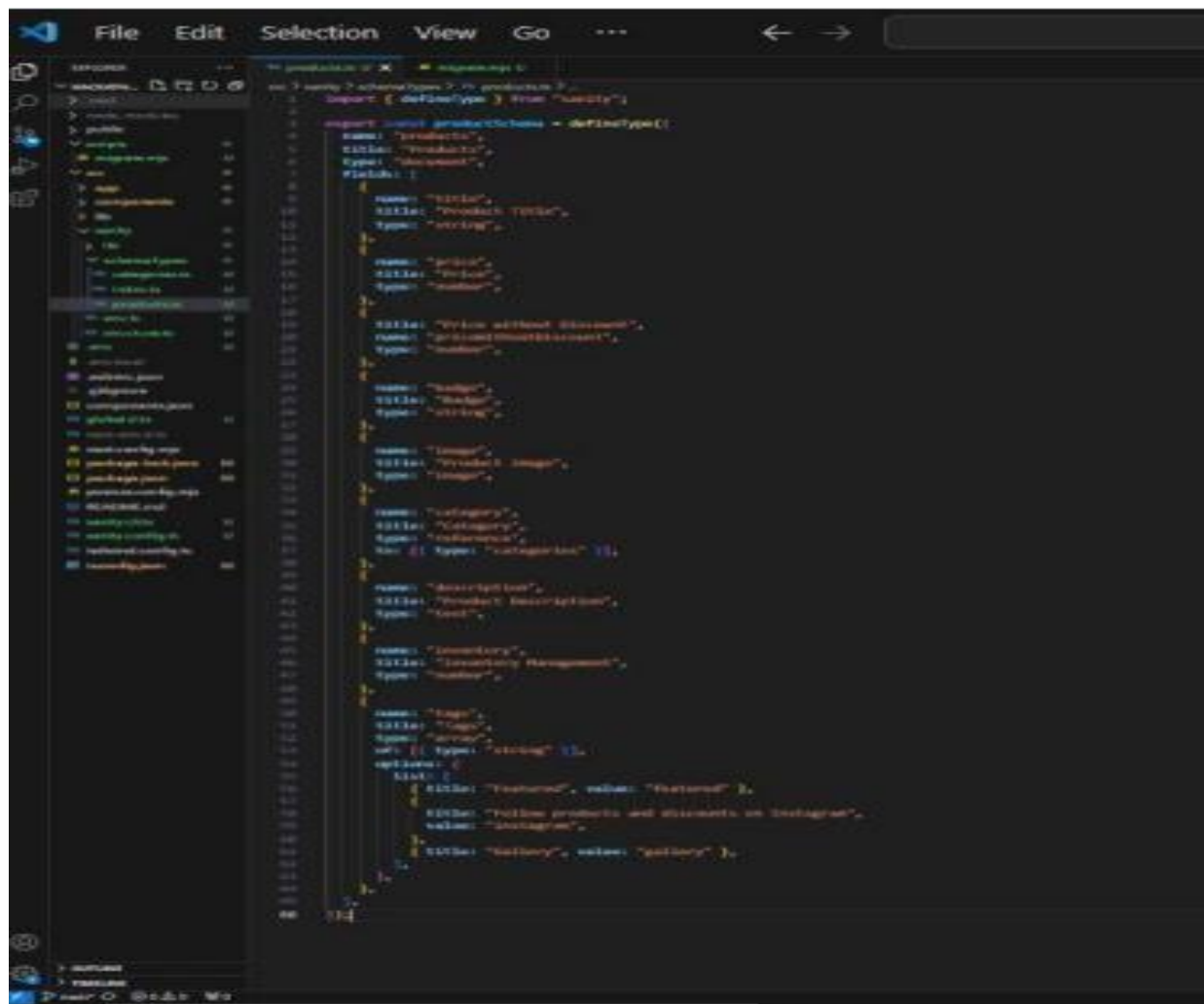
- Project ko locally run kiya gaya.
- `/studio/structure` endpoint localhost par access kiya gaya
  taake check ho ke data migrate ho gaya hai.
- CMS ke liye use hone wala Sanity account login kiya gaya
  consistency aur data correctness ensure karne ke liye.

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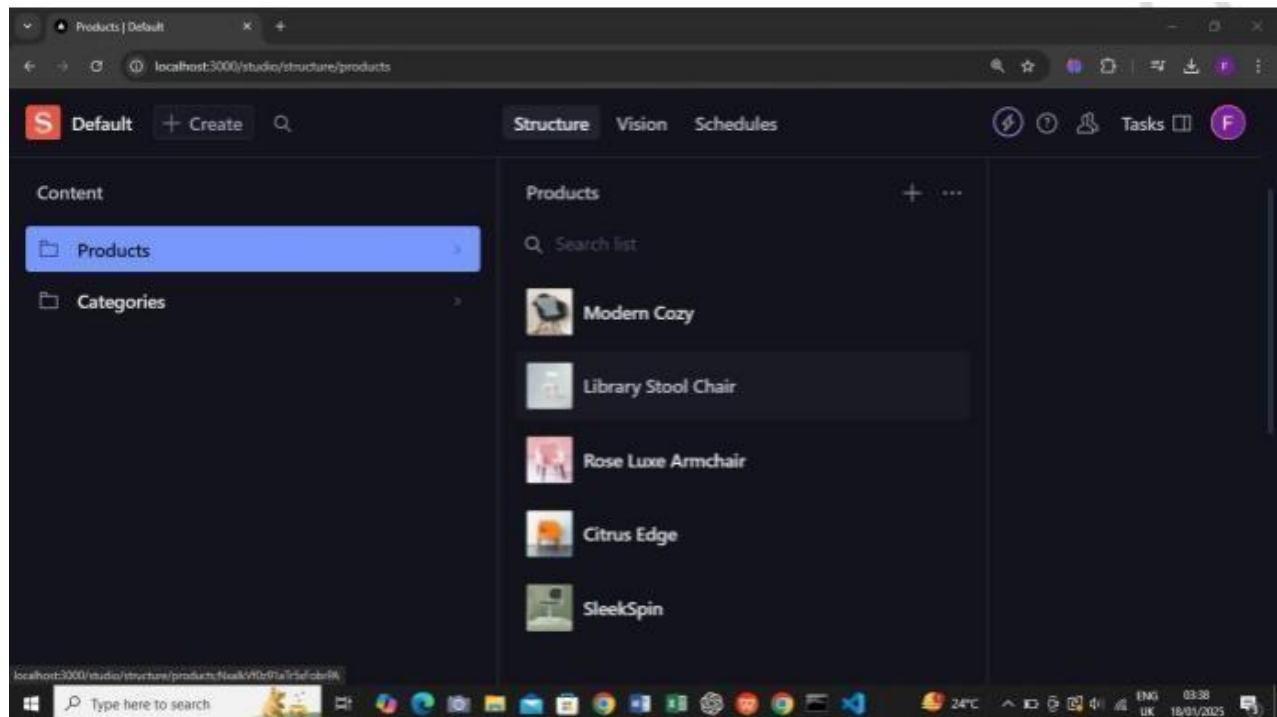
4. SCHEMA ADJUSTMENTS

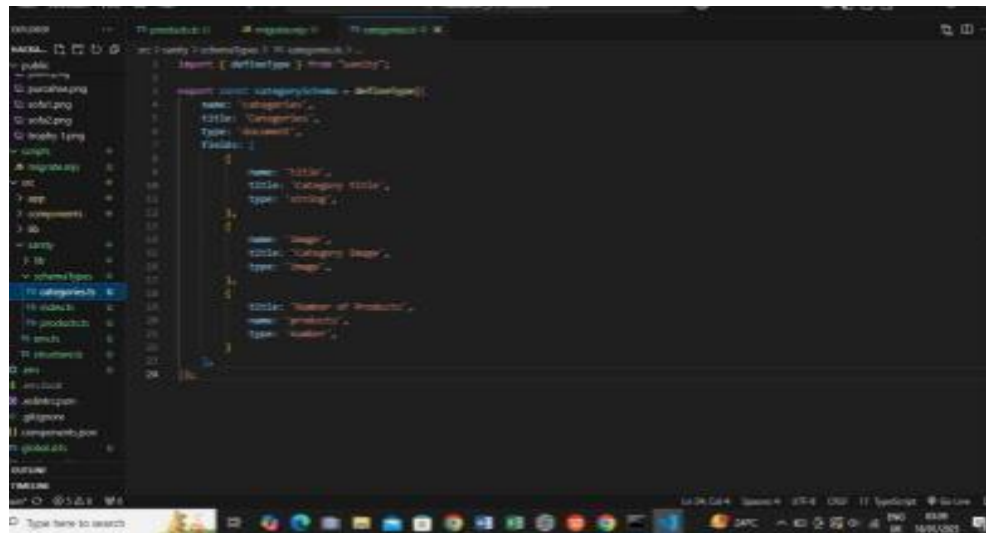Data structure do schemas ke zariye organize kiya gaya:
Product Schema (product.ts)

Fields:

- Title: Product ka name.
- Description: Product ka detailed description.
- Price: Product ki cost.
- Image: Product ka image(s).

Categories Schema (categories.ts)

- **Fields:**

- Name: Category ka name.

- Products: Is category se belong karne wale products ka
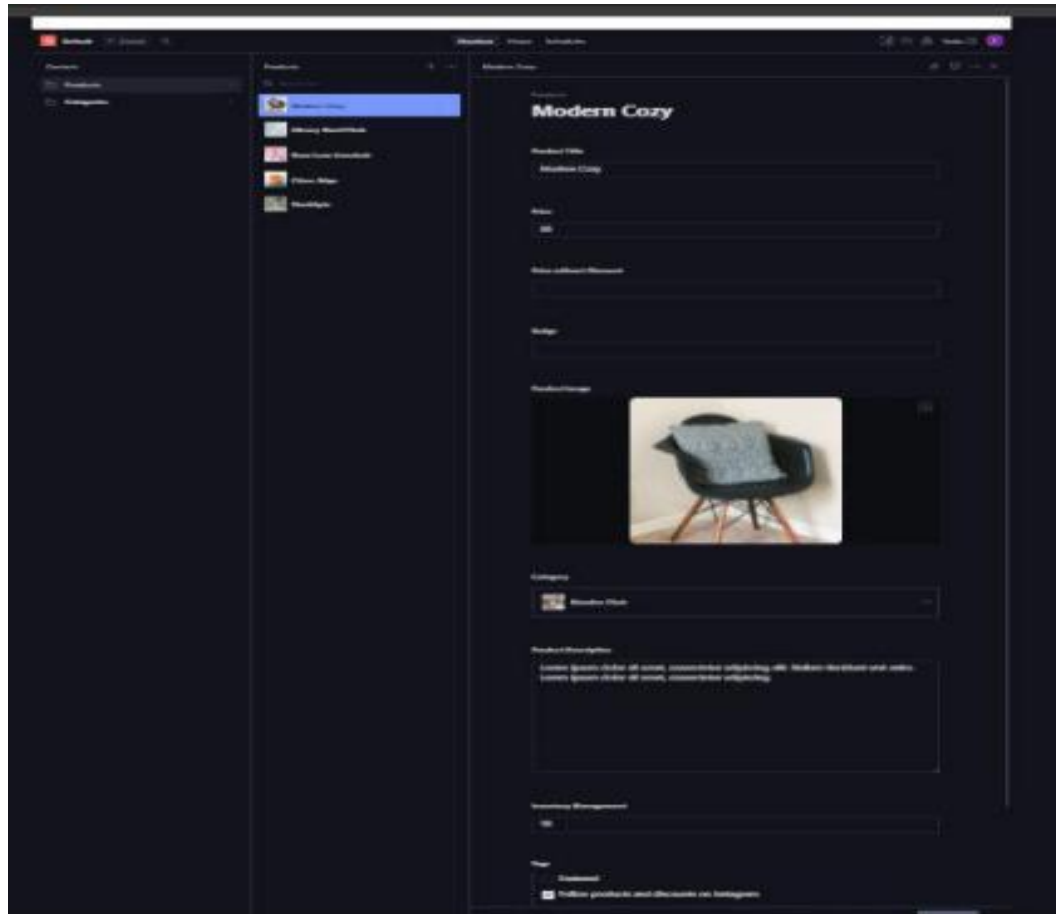 reference.

5. MIGRATION SCRIPT

Migration script (`migrate.mjs`) banayi gayi taake data ko automate tarike se Sanity
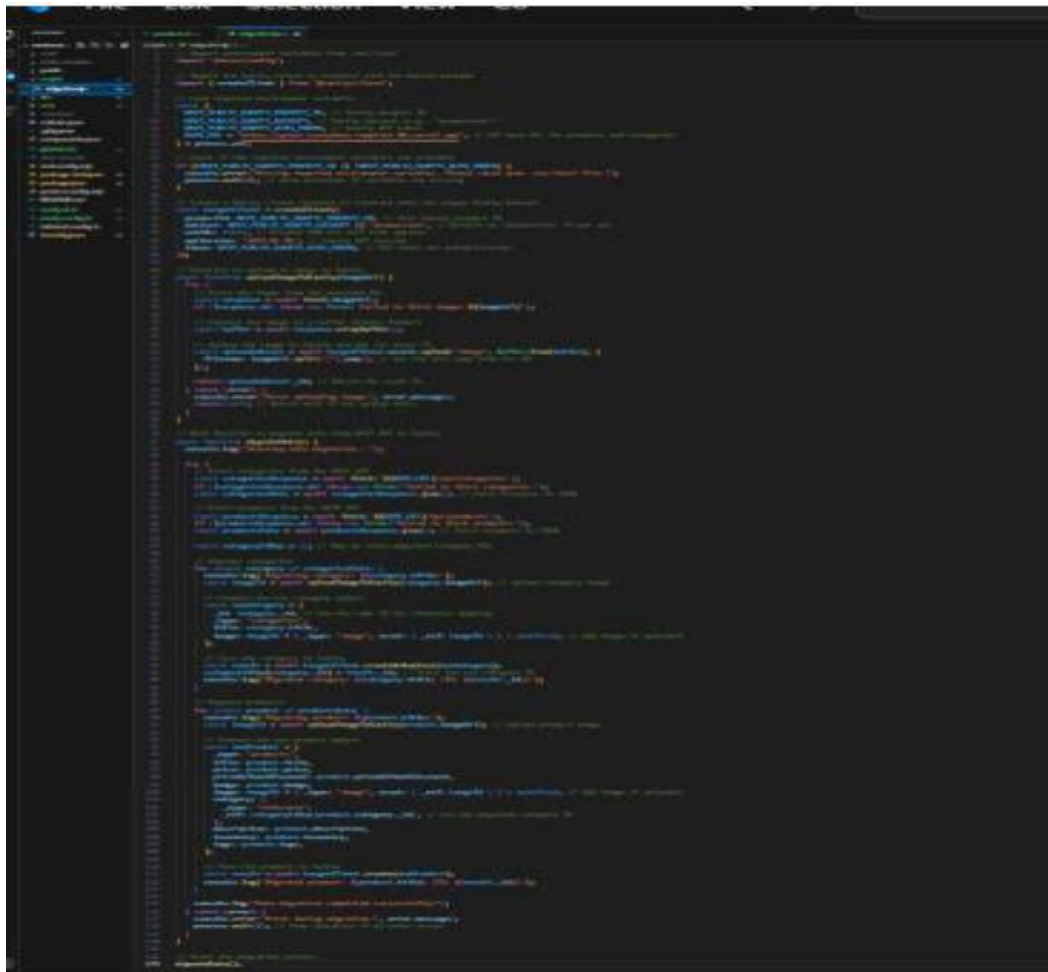
CMS se local database mein transfer kiya ja sake. Is script ne data fetch karke
 `client.create()` method ka use kiya data insert karne ke liye.

6. API INTEGRATION SCREENSHOTS

Sanity Product Schema:

- **Title Field:**

- Type: String
- Purpose: Product ka name store karna (e.g., "Comfortable Chair").
- Validation: Ensure karta hai ke ye field empty na ho kyunke ye required field hai.

- **Image Field:**

- Type: Image
- Purpose: Product ka ek single image store karna.
- Options:
- High-resolution images ko support karta hai.
- Accessibility ke liye alternative text allow karta hai.

- **Description Field:**

  - Type: Text
  - Purpose: Product ka detailed description provide karta hai, jaise features, dimensions, aur other details.

- **Price Field:**

  - Type: Number
  - Purpose: Product ki cost ko represent karta hai.   - Validation: Ensure karta hai ke price ek positive value ho (e.g., greaterThan(0)).
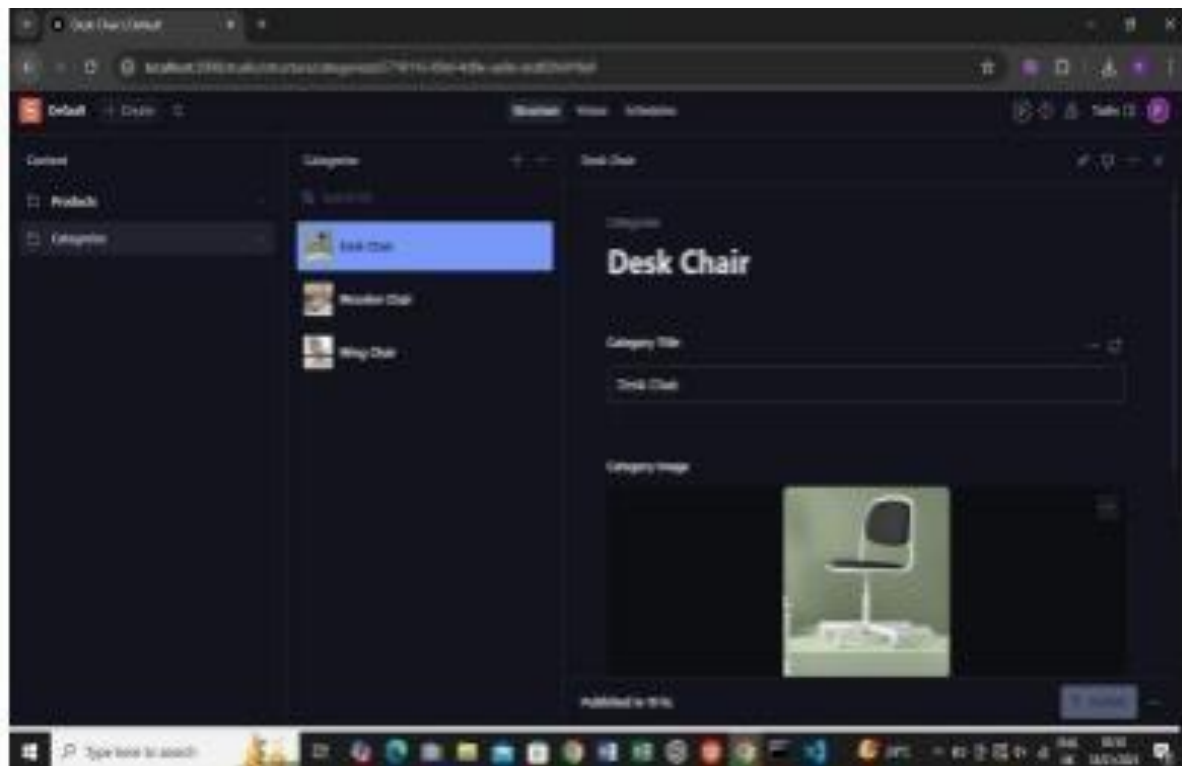
- **Category Field:**

  - Type: Reference ya String
  - Purpose: Product ko ek category ke saath associate karta hai (e.g., "Sofas", "Sectionals").
  - Benefits: Products ko unki categories ke base par filter aur organize karne mein help karta hai.

Sanity Categories Schema:

Fields:
- Name: Category ka name (e.g., "Sofas").
- Products: Is category se belong karne wale products ka reference.

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7. CONCLUSION

Hackathon ke Day 3 par Comforty Marketplace ke backend
mein significant progress hui:

- Data migration process successfully execute hua, jo product aur category data ko
  Sanity CMS se local database mein transfer karta hai.

- Product aur category ke liye schemas create aur implement kiye gaye.

- Frontend ke saath API integration successful raha, jo marketplace ko data fetch aur display karne ka enable karta ha