EXP-4.2:
E-commerce Catalog with Nested Document Structure in MongoDB:

```json
{
 "_id": ObjectId("..."),
 "sku": "TSHIRT-001",
 "title": "Organic Cotton T-Shirt",
 "description": "100% organic cotton tee. Soft, breathable.",
 "brand": "GreenThreads",
 "categories": ["clothing", "mens", "t-shirts"],

 "attributes": [
   { "name": "material", "value": "organic cotton" },
   { "name": "fit", "value": "regular" }
 ],

 "variants": [
   {
    "variantId": "v1",
    "sku": "TSHIRT-001-RED-S",
    "price": 1999,
    "currency": "INR",
    "color": "red",
    "size": "S",
    "stock": 10,
    "images": ["img1.jpg", "img2.jpg"]
   },
   {
    "variantId": "v2",
    "sku": "TSHIRT-001-BLK-M",
    "price": 1999,
    "currency": "INR",
    "color": "black",
    "size": "M",
    "stock": 0,
    "images": ["img3.jpg"]
   }
 ],
```

```json
  "tags": ["eco-friendly", "summer"],

  "rating": {
    "avg": 4.3,
    "count": 25
  },

  "reviews": [
    {
      "userId": "user123",
      "rating": 5,
      "title": "Great fit",
      "body": "Loved the fabric!",
      "createdAt": "2025-09-20T12:00:00Z"
    }
  ],

  "createdAt": "2025-09-01T08:00:00Z",
  "updatedAt": "2025-09-21T09:00:00Z"
}
```

OUTPUTS:

Product

- _id
- sku
- title
- description
- brand
- categories

- tags
- rating
- reviews
- createdAt
- updatedAt

Attributes

- name
- value

Attributes

- name
- value

Variants

- variantId
- sku
- price
- currency
- color
- size
- stock
- images

Reviews

- userId
- rating
- title
- body