MongoDB Assignment 2

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1. E-Commerce Store – Product & Orders

User Schema

```
{
 bsonType: "object",
 required: ["name", "email", "password"],
 properties: {
  name: { bsonType: "string" },
  email: { bsonType: "string", pattern: "^.+@.+\..+$" },
  password: { bsonType: "string" }
 }
}
```

Product Schema

```
{
 bsonType: "object",
 required: ["title", "description", "price", "category", "stock"],
 properties: {
  title: { bsonType: "string" },
  description: { bsonType: "string" },
  price: { bsonType: "double", minimum: 0 },
  category: { bsonType: "string" },
  stock: { bsonType: "int", minimum: 0 }
 }
}
```

Order Schema

```
{
 bsonType: "object",
 required: ["userId", "products", "totalAmount", "orderDate"],
 properties: {
```

```
      userId: { bsonType: "objectId" },
      products: {
       bsonType: "array",
       items: {
        bsonType: "object",
        required: ["productId", "quantity"],
        properties: {
         productId: { bsonType: "objectId" },
         quantity: { bsonType: "int", minimum: 1 }
        }
       }
      },
      totalAmount: { bsonType: "double", minimum: 0 },
      orderDate: { bsonType: "date" }
    }
}
```

Review Schema

```
{
 bsonType: "object",
 required: ["userId", "productId", "rating", "comment"],
 properties: {
   userId: { bsonType: "objectId" },
   productId: { bsonType: "objectId" },
   rating: { bsonType: "int", minimum: 1, maximum: 5 },
   comment: { bsonType: "string" }
 }
}
```

2. Online Course Platform – Instructors & Students

User Schema

```
{
 bsonType: "object",
 required: ["name", "email", "role"],
 properties: {
   name: { bsonType: "string" },
   email: { bsonType: "string", pattern: "^.+@.+\..+$" },
   role: { enum: ["student", "instructor"] }
 }
}
```

Course Schema

```
{
 bsonType: "object",
 required: ["title", "instructorId", "category", "price", "createdAt"],
 properties: {
  title: { bsonType: "string" },
  instructorId: { bsonType: "objectId" },
  category: { bsonType: "string" },
  price: { bsonType: "double", minimum: 0 },
  createdAt: { bsonType: "date" },
  lessons: {
   bsonType: "array",
   items: {
    bsonType: "object",
    required: ["title", "videoURL", "duration"],
    properties: {
     title: { bsonType: "string" },
     videoURL: { bsonType: "string" },
     duration: { bsonType: "double", minimum: 1 }
    }
   }
  }
 }
}
```

Enrollment Schema

```
{
 bsonType: "object",
 required: ["userId", "courseId"],
 properties: {
  userId: { bsonType: "objectId" },
  courseId: { bsonType: "objectId" },
  enrolledAt: { bsonType: "date" }
 }
}
```

3. Event Booking System – Organizers & Attendees

You are building an event management system like Eventbrite.

User Schema

```
{
 bsonType: "object",
```

```
  required: ["name", "email", "role"],
  properties: {
   name: { bsonType: "string" },
   email: { bsonType: "string", pattern: "^.+@.+\..+$" },
   role: { enum: ["organizer", "attendee"] }
  }
}
```

Event Schema

```
{
 bsonType: "object",
 required: ["title", "organizerId", "location", "startTime", "endTime", "capacity"],
 properties: {
  title: { bsonType: "string" },
  organizerId: { bsonType: "objectId" },
  location: { bsonType: "string" },
  startTime: { bsonType: "date" },
  endTime: { bsonType: "date" },
  capacity: { bsonType: "int", minimum: 1 }
 }
}
```

Booking Schema

```
{
 bsonType: "object",
 required: ["eventId", "attendeeId", "bookingDate"],
 properties: {
  eventId: { bsonType: "objectId" },
  attendeeId: { bsonType: "objectId" },
  bookingDate: { bsonType: "date" }
 }
}
```

4. Blogging Platform – Authors & Articles

Author Schema

```
{
 bsonType: "object",
 required: ["name", "email", "bio"],
 properties: {
  name: { bsonType: "string" },
  email: { bsonType: "string", pattern: "^.+@.+\..+$" },
  bio: { bsonType: "string" }
```

```
  }
}
```

Article Schema

```
{
 bsonType: "object",
 required: ["title", "content", "authorId", "published", "createdAt"],
 properties: {
  title: { bsonType: "string" },
  content: { bsonType: "string" },
  authorId: { bsonType: "objectId" },
  tags: { bsonType: "array", items: { bsonType: "string" } },
  published: { bsonType: "bool" },
  createdAt: { bsonType: "date" }
 }
}
```

Comment Schema

```
{
 bsonType: "object",
 required: ["articleId", "userName", "commentText", "postedAt"],
 properties: {
  articleId: { bsonType: "objectId" },
  userName: { bsonType: "string" },
  commentText: { bsonType: "string" },
  postedAt: { bsonType: "date" }
 }
}
```

5. Subscription App – Users & Plans

User Schema

```
{
 bsonType: "object",
 required: ["email", "name", "signupDate"],
 properties: {
  email: { bsonType: "string", pattern: "^.+@.+\..+$" },
  name: { bsonType: "string" },
  signupDate: { bsonType: "date" }
 }
}
```

Plan Schema

```
{
 bsonType: "object",
 required: ["name", "price", "features", "billingCycle"],
 properties: {
  name: { bsonType: "string" },
  price: { bsonType: "double", minimum: 0 },
  features: { bsonType: "array", items: { bsonType: "string" } },
  billingCycle: { enum: ["monthly", "yearly"] }
 }
}
```

Subscription Schema

```
{
 bsonType: "object",
 required: ["userId", "planId", "startDate", "isActive"],
 properties: {
  userId: { bsonType: "objectId" },
  planId: { bsonType: "objectId" },
  startDate: { bsonType: "date" },
  isActive: { bsonType: "bool" }
 }
}
```