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Sec: C

ASSIGNMENT – 2

(MongoDB Schema Design - Solutions)

1. E-Commerce Store – Product & Orders

Users Collection:

{  
 bsonType: "object",  
 required: ["name", "email", "password"],  
 properties: {  
 name: { bsonType: "string" },  
 email: { bsonType: "string", uniqueItems: true },  
 password: { bsonType: "string" }  
 }  
}

Products Collection:

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

Orders Collection:

{  
 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"}  
 }  
 }  
 },  
 totalAmount: { bsonType: "double"},  
 orderDate: { bsonType: "date" }  
 }  
}

Reviews Collection:

{  
 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

Users Collection:

{

bsonType: "object",

required:["name","email","role"], properties: {

name: { bsonType: "string"},

email:{bsonType:"string", role: { enum: ["student", "instructor"] }

}

}

Courses Collection:

{

bsonType: "object",

required:["title","instructorId","category",["price","createdAt"], properties: {

title: { bsonType: "string" }, instructorId:{bsonType:"objectId"}, category: { bsonType: "string" },

price:{bsonType:"double"}, createdAt: { bsonType: "date" }

}

}

Enrollments Collection:

{

bsonType: "object",

required:["userId","courseId"], properties: {

userId: { bsonType: "objectId" }, courseId:{bsonType:"objectId"}

}

}

3.Event Booking System - Organizers &Attendees

Users Collection:

{

bsonType: "object",

required:["name","email","role"], properties: {

name: { bsonType: "string"},

email:{bsonType:"string",uniqueItems:true}, role: { enum: ["organizer", "attendee"] }

}

}

Events Collection:

{

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"}

}

}

Bookings Collection:

{

bsonType: "object",

required:["eventId","attendeeId","bookingDate"], properties: {

eventId: { bsonType: "objectId" }, attendeeId:{bsonType:"objectId"}, bookingDate: { bsonType: "date" }

}

}

4. Blogging Platform - Authors &Articles

Authors Collection:

{

bsonType: "object",

required:["name","email","bio"], properties: {

name: { bsonType: "string"},

email:{bsonType:"string"}, bio: { bsonType: "string" }

}

Articles Collection:

{

bsonType: "object",

required:["title","content","authorId","tags","published","createdAt"], properties: {

title: { bsonType: "string" }, content: { bsonType: "string" }, authorId:{bsonType:"objectId"}, tags: {

bsonType: "array",

items: { bsonType: "string"}

},

published:{bsonType:"bool"}, createdAt: { bsonType: "date"}

}

}

Comments Collection:

{

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

Users Collection:

{

bsonType: "object",

required:["email","name","signupDate"], properties: {

email:{bsonType:"string"}, name: { bsonType: "string" },

signupDate: { bsonType: "date"}

}

}

Plans Collection:

{

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"] }

}

}