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// Create the PRODUCT_DIM collection
db.createCollection("PRODUCT_DIM", {
  validator: {
    $jsonSchema: {
      bsonType: "object",
      required: ["Product_ID", "Product_Name", "Category", "Brand", "Supplier"],
      properties: {
        Product_ID: { bsonType: "int" },
        Product_Name: { bsonType: "string" },
        Category: { bsonType: "string" },
        Brand: { bsonType: "string" },
        Supplier: { bsonType: "string" }
      }
    }
  }
});
db.PRODUCT_DIM.createIndex({ Product_ID: 1 }, { unique: true });

// Create the STORE_DIM collection
db.createCollection("STORE_DIM", {
  validator: {
    $jsonSchema: {
      bsonType: "object",
      required: ["Store_ID", "Store_Name", "Location", "Region", "Manager"],
      properties: {
        Store_ID: { bsonType: "int" },
        Store_Name: { bsonType: "string" },
        Location: { bsonType: "string" },
        Region: { bsonType: "string" },
        Manager: { bsonType: "string" }
      }
    }
  }
});
db.STORE_DIM.createIndex({ Store_ID: 1 }, { unique: true });

// Create the DATE_DIM collection
db.createCollection("DATE_DIM", {
  validator: {
    $jsonSchema: {
      bsonType: "object",
      required: ["Date_ID", "Date", "Day", "Month", "Quarter", "Year"],
      properties: {
        Date_ID: { bsonType: "int" },
        Date: { bsonType: "date" },
        Day: { bsonType: "string" },
        Month: { bsonType: "string" },
        Quarter: { bsonType: "string" },
        Year: { bsonType: "string" }
      }
    }
  }
});

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        }
    });
db.DATE_DIM.createIndex({ Date_ID: 1 }, { unique: true });

// Create the CUSTOMER_DIM collection
db.createCollection("CUSTOMER_DIM", {
    validator: {
        $jsonSchema: {
            bsonType: "object",
            required: ["Customer_ID", "First_Name", "Last_Name", "Gender", "Age",
"Email", "Address"],
            properties: {
                Customer_ID: { bsonType: "int" },
                First_Name: { bsonType: "string" },
                Last_Name: { bsonType: "string" },
                Gender: { bsonType: "string" },
                Age: { bsonType: "int" },
                Email: { bsonType: "string" },
                Address: { bsonType: "string" }
            }
        }
    }
});
db.CUSTOMER_DIM.createIndex({ Customer_ID: 1 }, { unique: true });

// Create the PROMOTION_DIM collection
db.createCollection("PROMOTION_DIM", {
    validator: {
        $jsonSchema: {
            bsonType: "object",
            required: ["Promotion_ID", "Promotion_Name", "Type", "Start_Date",
"End_Date"],
            properties: {
                Promotion_ID: { bsonType: "int" },
                Promotion_Name: { bsonType: "string" },
                Type: { bsonType: "string" },
                Start_Date: { bsonType: "date" },
                End_Date: { bsonType: "date" }
            }
        }
    }
});
db.PROMOTION_DIM.createIndex({ Promotion_ID: 1 }, { unique: true });

// Create the SALES_FACT collection
db.createCollection("SALES_FACT", {
    validator: {
        $jsonSchema: {
            bsonType: "object",

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required: [
    "Sales_ID",
    "Product_ID",
    "Store_ID",
    "Date_ID",
    "Customer_ID",
    "Promotion_ID",
    "Quantity_Sold",
    "Sales_Amount",
    "Discount_Amount",
    "Total_Cost"
],
properties: {
    Sales_ID: { bsonType: "int" },
    Product_ID: { bsonType: "int" },
    Store_ID: { bsonType: "int" },
    Date_ID: { bsonType: "int" },
    Customer_ID: { bsonType: "int" },
    Promotion_ID: { bsonType: "int" },
    Quantity_Sold: { bsonType: "int" },
    Sales_Amount: { bsonType: ["double", "decimal"] },
    Discount_Amount: { bsonType: ["double", "decimal"] },
    Total_Cost: { bsonType: ["double", "decimal"] }
}
}
});
db.SALES_FACT.createIndex({ Sales_ID: 1 }, { unique: true });

// Sample data insertion (optional)
// Insert sample documents into PRODUCT_DIM
db.PRODUCT_DIM.insertMany([
{
    Product_ID: 1,
    Product_Name: "Widget",
    Category: "Gadgets",
    Brand: "Acme",
    Supplier: "Acme Suppliers"
}
]);

// Insert sample documents into STORE_DIM
db.STORE_DIM.insertMany([
{
    Store_ID: 1,
    Store_Name: "Main Street Store",
    Location: "123 Main St",
    Region: "North",
    Manager: "Alice Smith"
}
]);

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}

]);

// Insert sample documents into DATE_DIM
db.DATE_DIM.insertMany([
{
  Date_ID: 20211015,
  Date: ISODate("2021-10-15"),
  Day: "Friday",
  Month: "October",
  Quarter: "Q4",
  Year: "2021"
}
]);

// Insert sample documents into CUSTOMER_DIM
db.CUSTOMER_DIM.insertMany([
{
  Customer_ID: 1,
  First_Name: "John",
  Last_Name: "Doe",
  Gender: "Male",
  Age: 30,
  Email: "john.doe@example.com",
  Address: "456 Elm St"
}
]);

// Insert sample documents into PROMOTION_DIM
db.PROMOTION_DIM.insertMany([
{
  Promotion_ID: 1,
  Promotion_Name: "Holiday Sale",
  Type: "Discount",
  Start_Date: ISODate("2021-12-01"),
  End_Date: ISODate("2021-12-31")
}
]);

// Insert sample documents into SALES_FACT
db.SALES_FACT.insertMany([
{
  Sales_ID: 1,
  Product_ID: 1,
  Store_ID: 1,
  Date_ID: 20211015,
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Customer_ID: 1,  
Promotion_ID: 1,  
Quantity_Sold: 2,  
Sales_Amount: 200.0,  
Discount_Amount: 20.0,  
Total_Cost: 180.0  
}  
]);
```