In an e-commerce database, you typically have several collections to organize and store data related to different aspects of the business. Here's a description of each collection, including its data, data types, and business purpose:

1. Retail Collection:

- Data: This collection contains information about transactions made in a physical retail store. Each document represents a retail transaction.

- Data Types:

- `\_id`: ObjectId (unique identifier for each transaction)

- `CustomerName`: String (name of the customer)

- `Product`: String (name of the product purchased)

- `Quantity`: Int32 (the quantity of the product purchased)

- `TotalAmount`: Double (the total amount spent on the transaction)

- `TransactionDate`: String (the date of the transaction)

- `TransactionID`: Int32 (a unique identifier for each transaction)

- `UnitPrice`: Double (the price of the product per unit)

- Business Purpose: The retail collection helps track individual transactions in a physical store, including the products sold, their quantities, and the total amount spent. It's essential for sales, inventory management, and customer analytics.

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**"types": [**

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**"path": [**

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**],**

**"count": 11,**

**"probability": 1,**

**"unique": 11,**

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**"654c483fff5785af88b6efa8",**

**"654c483fff5785af88b6efa7",**

**"654c483fff5785af88b6efa5",**

**"654c483fff5785af88b6efa0",**

**"654c483fff5785af88b6efa3",**

**"654c483fff5785af88b6efa6",**

**"654c483fff5785af88b6efa1",**

**"654c483fff5785af88b6efa4",**

**"654c577127e755d511554e7f",**

**"654c483fff5785af88b6efa2"**

**],**

**"bsonType": "ObjectId"**

**}**

**]**

**},**

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**"CustomerName"**

**],**

**"count": 11,**

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**"probability": 1,**

**"hasDuplicates": true,**

**"types": [**

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**"path": [**

**"CustomerName"**

**],**

**"count": 11,**

**"probability": 1,**

**"unique": 9,**

**"hasDuplicates": true,**

**"values": [**

**"Bob Johnson",**

**"Emily Lee",**

**"Mark Johnson",**

**"Sam Roberts",**

**"Jane Smith",**

**"Mike Wilson",**

**"Laura White",**

**"Bob Johnson",**

**"Lisa Davis",**

**"Jane Smith",**

**"Alice Brown"**

**],**

**"bsonType": "String"**

**}**

**]**

**},**

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**"path": [**

**"Product"**

**],**

**"count": 11,**

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**"path": [**

**"Product"**

**],**

**"count": 11,**

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**"unique": 9,**

**"hasDuplicates": true,**

**"values": [**

**"Product C",**

**"Product J",**

**"Product I",**

**"Product G",**

**"Product B",**

**"Product E",**

**"Product H",**

**"Product C",**

**"Product F",**

**"Product B",**

**"Product D"**

**],**

**"bsonType": "String"**

**}**

**]**

**},**

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**"Quantity"**

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**"Quantity"**

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**4,**

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**3,**

**7**

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**47.96,**

**44.94,**

**67.47,**

**38.97,**

**59.96,**

**9.99,**

**16.98,**

**37.98,**

**44.97,**

**41.93**

**],**

**"bsonType": "Double"**

**}**

**]**

**},**

**{**

**"name": "TransactionDate",**

**"path": [**

**"TransactionDate"**

**],**

**"count": 11,**

**"type": "String",**

**"probability": 1,**

**"hasDuplicates": true,**

**"types": [**

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**"name": "String",**

**"path": [**

**"TransactionDate"**

**],**

**"count": 11,**

**"probability": 1,**

**"unique": 5,**

**"hasDuplicates": true,**

**"values": [**

**"2023-11-10",**

**"2023-11-12",**

**"2023-11-12",**

**"2023-11-11",**

**"2023-11-08",**

**"2023-11-10",**

**"2023-11-11",**

**"2023-11-09",**

**"2023-11-10",**

**"2023-11-09",**

**"2023-11-09"**

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**"TransactionID"**

**],**

**"count": 11,**

**"probability": 1,**

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**"hasDuplicates": true,**

**"values": [**

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**10,**

**9,**

**7,**

**2,**

**5,**

**8,**

**3,**

**6,**

**2,**

**4**

**],**

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**]**

**},**

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**"name": "UnitPrice",**

**"path": [**

**"UnitPrice"**

**],**

**"count": 11,**

**"type": "Double",**

**"probability": 1,**

**"hasDuplicates": true,**

**"types": [**

**{**

**"name": "Double",**

**"path": [**

**"UnitPrice"**

**],**

**"count": 11,**

**"probability": 1,**

**"unique": 10,**

**"hasDuplicates": true,**

**"values": [**

**19.99,**

**11.99,**

**7.49,**

**22.49,**

**12.99,**

**14.99,**

**9.99,**

**8.49,**

**18.99,**

**14.99,**

**5.99**

**],**

**"bsonType": "Double"**

**}**

**]**

**}**

**]**

**}**

2. Sales Collection:

- Data: This collection stores data related to online sales transactions. Each document represents an online sales order.

- Data Types:

- `\_id`: ObjectId (unique identifier for each order)

- `CustomerName`: String (name of the customer)

- `Product`: String (name of the product ordered)

- `Quantity`: Int32 (the quantity of the product ordered)

- `TotalAmount`: Double (the total amount of the order)

- `OrderDate`: String (the date the order was placed)

- `OrderID`: Int32 (a unique identifier for each order)

- `UnitPrice`: Double (the price of the product per unit)

- Business Purpose: The sales collection manages and tracks online sales transactions. It helps in order processing, sales analysis, and customer order history.

{

"count": 11,

"fields": [

{

"name": "\_id",

"path": [

"\_id"

],

"count": 11,

"type": "ObjectId",

"probability": 1,

"hasDuplicates": false,

"types": [

{

"name": "ObjectId",

"path": [

"\_id"

],

"count": 11,

"probability": 1,

"unique": 11,

"hasDuplicates": false,

"values": [

"654c480aff5785af88b6ef9b",

"654c480aff5785af88b6ef9c",

"654c480aff5785af88b6ef95",

"654c57f77816e7e614afa271",

"654c57f77816e7e614afa270",

"654c480aff5785af88b6ef96",

"654c480aff5785af88b6ef98",

"654c480aff5785af88b6ef99",

"654c480aff5785af88b6ef9a",

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}

]

},

{

"name": "CustomerName",

"path": [

"CustomerName"

],

"count": 11,

"type": "String",

"probability": 1,

"hasDuplicates": true,

"types": [

{

"name": "String",

"path": [

"CustomerName"

],

"count": 11,

"probability": 1,

"unique": 9,

"hasDuplicates": true,

"values": [

"Mark Johnson",

"Emily Lee",

"Bob Johnson",

"Bob Johnson",

"Jane Smith",

"Alice Brown",

"Lisa Davis",

"Sam Roberts",

"Laura White",

"Mike Wilson",

"Jane Smith"

],

"bsonType": "String"

}

]

},

{

"name": "OrderDate",

"path": [

"OrderDate"

],

"count": 11,

"type": "String",

"probability": 1,

"hasDuplicates": true,

"types": [

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"name": "String",

"path": [

"OrderDate"

],

"count": 11,

"probability": 1,

"unique": 5,

"hasDuplicates": true,

"values": [

"2023-11-12",

"2023-11-12",

"2023-11-09",

"2023-11-10",

"2023-11-09",

"2023-11-09",

"2023-11-10",

"2023-11-11",

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]

},

{

"name": "OrderID",

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"OrderID"

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"probability": 1,

"unique": 9,

"hasDuplicates": true,

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1010,

1003,

1003,

1002,

1004,

1006,

1007,

1008,

1005,

1002

],

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"Product"

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"type": "String",

"probability": 1,

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"types": [

{

"name": "String",

"path": [

"Product"

],

"count": 11,

"probability": 1,

"unique": 9,

"hasDuplicates": true,

"values": [

"Product I",

"Product J",

"Product C",

"Product C",

"Product B",

"Product D",

"Product F",

"Product G",

"Product H",

"Product E",

"Product B"

],

"bsonType": "String"

}

]

},

{

"name": "Quantity",

"path": [

"Quantity"

],

"count": 11,

"type": "Int32",

"probability": 1,

"hasDuplicates": true,

"types": [

{

"name": "Int32",

"path": [

"Quantity"

],

"count": 11,

"probability": 1,

"unique": 6,

"hasDuplicates": true,

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6,

4,

2,

2,

3,

7,

2,

3,

1,

4,

3

],

"bsonType": "Int32"

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]

},

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"path": [

"TotalAmount"

],

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"probability": 1,

"hasDuplicates": false,

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{

"name": "Double",

"path": [

"TotalAmount"

],

"count": 11,

"probability": 1,

"unique": 11,

"hasDuplicates": false,

"values": [

44.94,

47.96,

16.98,

39.98,

44.97,

41.93,

37.98,

67.47,

9.99,

59.96,

38.97

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]

},

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"name": "UnitPrice",

"path": [

"UnitPrice"

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"count": 11,

"type": "Double",

"probability": 1,

"hasDuplicates": true,

"types": [

{

"name": "Double",

"path": [

"UnitPrice"

],

"count": 11,

"probability": 1,

"unique": 10,

"hasDuplicates": true,

"values": [

7.49,

11.99,

8.49,

19.99,

14.99,

5.99,

18.99,

22.49,

9.99,

14.99,

12.99

],

"bsonType": "Double"

}

]

}

]

}

3. Marketing Collection:

- Data: This collection contains marketing campaign data, such as details about different marketing campaigns run by the e-commerce business.

- Data Types:

- `\_id`: ObjectId (unique identifier for each campaign)

- `Budget`: Int32 (the budget allocated to the campaign)

- `CampaignID`: Int32 (a unique identifier for each campaign)

- `CampaignName`: String (name of the campaign)

- `EndDate`: String (the end date of the campaign)

- `StartDate`: String (the start date of the campaign)

- Business Purpose: The marketing collection helps track and manage marketing campaigns, including budget allocation, campaign details, and campaign periods. It supports marketing campaign analysis and planning.

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{

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"path": [

"\_id"

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"probability": 1,

"hasDuplicates": false,

"types": [

{

"name": "ObjectId",

"path": [

"\_id"

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"count": 11,

"probability": 1,

"unique": 11,

"hasDuplicates": false,

"values": [

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"654c56dd631d272eb08973a3",

"654c4c88ff5785af88b6efc9",

"654c4c88ff5785af88b6efc6",

"654c4c88ff5785af88b6efcb",

"654c4c88ff5785af88b6efca",

"654c4c88ff5785af88b6efc3",

"654c56dd631d272eb08973a4",

"654c4c88ff5785af88b6efc7",

"654c4c88ff5785af88b6efc4",

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},

{

"name": "Budget",

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"Budget"

],

"count": 11,

"type": "Int32",

"probability": 1,

"hasDuplicates": true,

"types": [

{

"name": "Int32",

"path": [

"Budget"

],

"count": 11,

"probability": 1,

"unique": 10,

"hasDuplicates": true,

"values": [

7000,

8000,

4200,

6000,

5500,

8500,

4000,

10000,

6500,

5500,

4800

],

"bsonType": "Int32"

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},

{

"name": "CampaignID",

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],

"count": 11,

"type": "Int32",

"probability": 1,

"hasDuplicates": true,

"types": [

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"name": "Int32",

"path": [

"CampaignID"

],

"count": 11,

"probability": 1,

"unique": 9,

"hasDuplicates": true,

"values": [

17,

12,

18,

15,

20,

19,

12,

13,

16,

13,

14

],

"bsonType": "Int32"

}

]

},

{

"name": "CampaignName",

"path": [

"CampaignName"

],

"count": 11,

"type": "String",

"probability": 1,

"hasDuplicates": false,

"types": [

{

"name": "String",

"path": [

"CampaignName"

],

"count": 11,

"probability": 1,

"unique": 11,

"hasDuplicates": false,

"values": [

"Black Friday",

"Summer Promotion",

"Cyber Monday",

"Halloween Promotion",

"New Year Countdown",

"Holiday Season",

"Independence Day",

"Holiday Special",

"Fall Discounts",

"Back to School",

"Labor Day Sale"

],

"bsonType": "String"

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]

},

{

"name": "EndDate",

"path": [

"EndDate"

],

"count": 11,

"type": "String",

"probability": 1,

"hasDuplicates": true,

"types": [

{

"name": "String",

"path": [

"EndDate"

],

"count": 11,

"probability": 1,

"unique": 10,

"hasDuplicates": true,

"values": [

"2023-11-27",

"2023-08-31",

"2023-11-28",

"2023-10-31",

"2024-01-01",

"2023-12-31",

"2023-07-04",

"2023-12-31",

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]

},

{

"name": "StartDate",

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"StartDate"

],

"count": 11,

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"probability": 1,

"hasDuplicates": false,

"types": [

{

"name": "String",

"path": [

"StartDate"

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"count": 11,

"probability": 1,

"unique": 11,

"hasDuplicates": false,

"values": [

"2023-11-24",

"2023-06-01",

"2023-11-28",

"2023-10-01",

"2023-12-31",

"2023-12-01",

"2023-07-01",

"2023-11-01",

"2023-10-15",

"2023-08-15",

"2023-09-01"

],

"bsonType": "String"

}

]

}

]

}

4. Items Collection:

- Data: This collection holds information about the products available for sale on the e-commerce platform.

- Data Types:

- `\_id`: ObjectId (unique identifier for each product)

- `ItemID`: Int32 (a unique identifier for each product)

- `ItemName`: String (name of the product)

- `Category`: String (the category to which the product belongs)

- `Price`: Double (the price of the product per unit)

- `StockQuantity`: Int32 (the available quantity of the product in stock)

- Business Purpose: The items collection serves as the product catalog, containing details about each product's name, category, price, and stock quantity. It supports inventory management, pricing, and product display on the e-commerce website.

{

"count": 8,

"fields": [

{

"name": "\_id",

"path": [

"\_id"

],

"count": 8,

"type": "ObjectId",

"probability": 1,

"hasDuplicates": false,

"types": [

{

"name": "ObjectId",

"path": [

"\_id"

],

"count": 8,

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"unique": 8,

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"654c48dcff5785af88b6efb3",

"654c48dcff5785af88b6efae",

"654c48dcff5785af88b6efb6",

"654c48dcff5785af88b6efb1",

"654c48dcff5785af88b6efb4",

"654c55ac5f15c8765c317cc9",

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"654c55ac5f15c8765c317cc8"

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]

},

{

"name": "Category",

"path": [

"Category"

],

"count": 8,

"type": "String",

"probability": 1,

"hasDuplicates": true,

"types": [

{

"name": "String",

"path": [

"Category"

],

"count": 8,

"probability": 1,

"unique": 2,

"hasDuplicates": true,

"values": [

"Home & Garden",

"Clothing",

"Home & Garden",

"Clothing",

"Clothing",

"Home & Garden",

"Home & Garden",

"Clothing"

],

"bsonType": "String"

}

]

},

{

"name": "ItemID",

"path": [

"ItemID"

],

"count": 8,

"type": "Int32",

"probability": 1,

"hasDuplicates": false,

"types": [

{

"name": "Int32",

"path": [

"ItemID"

],

"count": 8,

"probability": 1,

"unique": 8,

"hasDuplicates": false,

"values": [

7,

2,

10,

5,

8,

13,

3,

12

],

"bsonType": "Int32"

}

]

},

{

"name": "ItemName",

"path": [

"ItemName"

],

"count": 8,

"type": "String",

"probability": 1,

"hasDuplicates": true,

"types": [

{

"name": "String",

"path": [

"ItemName"

],

"count": 8,

"probability": 1,

"unique": 6,

"hasDuplicates": true,

"values": [

"Product G",

"Product B",

"Product J",

"Product E",

"Product H",

"Product C",

"Product C",

"Product B"

],

"bsonType": "String"

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]

},

{

"name": "Price",

"path": [

"Price"

],

"count": 8,

"type": "Double",

"probability": 1,

"hasDuplicates": true,

"types": [

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"name": "Double",

"path": [

"Price"

],

"count": 8,

"probability": 1,

"unique": 6,

"hasDuplicates": true,

"values": [

89.99,

29.99,

129.99,

39.99,

49.99,

79.99,

79.99,

29.99

],

"bsonType": "Double"

}

]

},

{

"name": "StockQuantity",

"path": [

"StockQuantity"

],

"count": 8,

"type": "Int32",

"probability": 1,

"hasDuplicates": true,

"types": [

{

"name": "Int32",

"path": [

"StockQuantity"

],

"count": 8,

"probability": 1,

"unique": 6,

"hasDuplicates": true,

"values": [

80,

50,

70,

60,

55,

75,

75,

50

],

"bsonType": "Int32"

}

]

}

]

}

These collections are crucial for an e-commerce business to manage and analyze various aspects of its operations, from sales and marketing to inventory and customer data. The data types mentioned are common in MongoDB, but actual data types can vary depending on your database schema and application requirements.