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Course Title : No SQL Database

Reg no: 22MIC7251

Course Code : CSE3009

Slot : F2 + TF2

DIGITAL ASSIGNMENT

Use MongoDB for execution of following

- 1. Create an ecommerce database.**

Command :

use ecommerce

Output :



```
> mongosh: Mokshagnya +
>_MONGOSH
> use ecommerce
< switched to db ecommerce
ecommerce>
```

- 2. First create an collection of profile with details and order history.**

Command :

```
db.createCollection("profile")
```

```
db.profile.insertMany([
  { name: "Alice", email: "alice@example.com", address: "123 Street", order_history: [{
    product_id: 101,
    quantity: 2 }, { product_id: 102, quantity: 1 }] },
  { name: "Bob", email: "bob@example.com", address: "456 Avenue", order_history: [{
    product_id: 103, quantity: 3 }, { product_id: 101, quantity: 1 }] },
  { name: "Carol", email: "carol@example.com", address: "789 Road", order_history: [{
    product_id: 104, quantity: 1 }] },
  { name: "David", email: "david@example.com", address: "234 Lane", order_history: [{
    product_id: 102, quantity: 2 }, { product_id: 105, quantity: 1 }] },
  { name: "Ella", email: "ella@example.com", address: "567 Street", order_history: [{
    product_id: 101, quantity: 4 }] },
  { name: "Frank", email: "frank@example.com", address: "890 Avenue", order_history: [{
    product_id: 106, quantity: 2 }, { product_id: 102, quantity: 1 }] },
  { name: "Grace", email: "grace@example.com", address: "321 Place", order_history: [{
    product_id: 107, quantity: 1 }, { product_id: 103, quantity: 1 }] },
```

{ name: "Hank", email: "hank@example.com", address: "654 Road", order_history: [{ product_id: 101, quantity: 1 }, { product_id: 108, quantity: 2 }] },

{ name: "Ivy", email: "ivy@example.com", address: "147 Drive", order_history: [{ product_id: 109, quantity: 3 }] },

{ name: "Jack", email: "jack@example.com", address: "258 Street", order_history: [{ product_id: 110, quantity: 2 }, { product_id: 105, quantity: 1 }] },

{ name: "Liam", email: "liam@example.com", address: "369 Circle", order_history: [{ product_id: 101, quantity: 1 }, { product_id: 105, quantity: 2 }] },

{ name: "Mia", email: "mia@example.com", address: "482 Blvd", order_history: [{ product_id: 103, quantity: 2 }, { product_id: 104, quantity: 1 }] },

{ name: "Noah", email: "noah@example.com", address: "796 Street", order_history: [{ product_id: 106, quantity: 3 }] },

{ name: "Olivia", email: "olivia@example.com", address: "419 Lane", order_history: [{ product_id: 107, quantity: 2 }, { product_id: 109, quantity: 1 }] },

{ name: "Paul", email: "paul@example.com", address: "278 Drive", order_history: [{ product_id: 110, quantity: 4 }] },

{ name: "Quinn", email: "quinn@example.com", address: "135 Avenue", order_history: [{ product_id: 101, quantity: 1 }, { product_id: 108, quantity: 2 }] },

{ name: "Rachel", email: "rachel@example.com", address: "652 Road", order_history: [{ product_id: 105, quantity: 1 }] },

{ name: "Sam", email: "sam@example.com", address: "823 Street", order_history: [{ product_id: 103, quantity: 3 }, { product_id: 106, quantity: 1 }] },

{ name: "Tina", email: "tina@example.com", address: "490 Place", order_history: [{ product_id: 104, quantity: 1 }, { product_id: 102, quantity: 3 }] },

{ name: "Uma", email: "uma@example.com", address: "777 Drive", order_history: [{ product_id: 107, quantity: 1 }, { product_id: 110, quantity: 2 }] }

)

Output:-

```
>_MONGOSH
< {
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('68dac22fb8ef3cc167694789'),
    '1': ObjectId('68dac22fb8ef3cc16769478a'),
    '2': ObjectId('68dac22fb8ef3cc16769478b'),
    '3': ObjectId('68dac22fb8ef3cc16769478c'),
    '4': ObjectId('68dac22fb8ef3cc16769478d'),
    '5': ObjectId('68dac22fb8ef3cc16769478e'),
    '6': ObjectId('68dac22fb8ef3cc16769478f'),
    '7': ObjectId('68dac22fb8ef3cc167694790'),
    '8': ObjectId('68dac22fb8ef3cc167694791'),
    '9': ObjectId('68dac22fb8ef3cc167694792'),
    '10': ObjectId('68dac22fb8ef3cc167694793'),
    '11': ObjectId('68dac22fb8ef3cc167694794'),
    '12': ObjectId('68dac22fb8ef3cc167694795'),
    '13': ObjectId('68dac22fb8ef3cc167694796'),
    '14': ObjectId('68dac22fb8ef3cc167694797'),
    '15': ObjectId('68dac22fb8ef3cc167694798'),
    '16': ObjectId('68dac22fb8ef3cc167694799'),
    '17': ObjectId('68dac22fb8ef3cc16769479a'),
    '18': ObjectId('68dac22fb8ef3cc16769479b'),
    '19': ObjectId('68dac22fb8ef3cc16769479c')
  }
}
```

3. Create a product collection and stuff multiple products

into collection Command :

```
db.createCollection("product")
```

```
db.product.insertMany([
  { product_id: 101, name: "Laptop", price: 50000, category: "Electronics", order_count: 18 },
  { product_id: 102, name: "Smartphone", price: 25000, category: "Electronics", order_count: 10 },
  { product_id: 103, name: "Shoes", price: 2000, category: "Footwear", order_count: 11 },
  { product_id: 104, name: "Backpack", price: 1500, category: "Accessories", order_count: 3 },
  { product_id: 105, name: "Watch", price: 3000, category: "Accessories", order_count: 7 },
  { product_id: 106, name: "Tablet", price: 20000, category: "Electronics", order_count: 7 },
  { product_id: 107, name: "Jeans", price: 1200, category: "Apparel", order_count: 6 },
  { product_id: 108, name: "T-shirt", price: 800, category: "Apparel", order_count: 4 },
  { product_id: 109, name: "Book", price: 399, category: "Stationery", order_count: 5 },
  { product_id: 110, name: "Umbrella", price: 499, category: "Accessories", order_count: 8 },
  { product_id: 111, name: "Headphones", price: 3500, category: "Electronics", order_count: 4 },
  { product_id: 112, name: "Keyboard", price: 1500, category: "Electronics", order_count: 3 },
  { product_id: 113, name: "Mouse", price: 799, category: "Electronics", order_count: 5 },
])
```

```
{ product_id: 114, name: "Coffee Mug", price: 299, category: "Accessories", order_count: 2 },
{ product_id: 115, name: "Sunglasses", price: 2200, category: "Accessories", order_count: 6 },
{ product_id: 116, name: "Jacket", price: 4000, category: "Apparel", order_count: 2 },
{ product_id: 117, name: "Notebook", price: 150, category: "Stationery", order_count: 3 },
{ product_id: 118, name: "Pen Set", price: 99, category: "Stationery", order_count: 4 },
{ product_id: 119, name: "Bluetooth Speaker", price: 3000, category: "Electronics",
order_count: 7 },
{ product_id: 120, name: "Wallet", price: 1500, category: "Accessories", order_count: 1 }
]
```

Output:-

```
>_ mongosh: Mokshagnya +
>_MONGOSH
])
< {
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('68dac329b8ef3cc16769479d'),
    '1': ObjectId('68dac329b8ef3cc16769479e'),
    '2': ObjectId('68dac329b8ef3cc16769479f'),
    '3': ObjectId('68dac329b8ef3cc1676947a0'),
    '4': ObjectId('68dac329b8ef3cc1676947a1'),
    '5': ObjectId('68dac329b8ef3cc1676947a2'),
    '6': ObjectId('68dac329b8ef3cc1676947a3'),
    '7': ObjectId('68dac329b8ef3cc1676947a4'),
    '8': ObjectId('68dac329b8ef3cc1676947a5'),
    '9': ObjectId('68dac329b8ef3cc1676947a6'),
    '10': ObjectId('68dac329b8ef3cc1676947a7'),
    '11': ObjectId('68dac329b8ef3cc1676947a8'),
    '12': ObjectId('68dac329b8ef3cc1676947a9'),
    '13': ObjectId('68dac329b8ef3cc1676947aa'),
    '14': ObjectId('68dac329b8ef3cc1676947ab'),
    '15': ObjectId('68dac329b8ef3cc1676947ac'),
    '16': ObjectId('68dac329b8ef3cc1676947ad'),
    '17': ObjectId('68dac329b8ef3cc1676947ae'),
    '18': ObjectId('68dac329b8ef3cc1676947af'),
    '19': ObjectId('68dac329b8ef3cc1676947b0')
  }
}
```

4. After fetch the product with maximum

orders. Command :

```
db.product.find().sort({order_count: -1}).limit(1)
```

```
db.product.aggregate([ { $sort: { order_count: -1 } }, { $limit: 1 } ])
```

Output :

```
>_MONGOSH
}
}
> db.product.find().sort({ order_count: -1 }).limit(1)
< {
  _id: ObjectId('68dac329b8ef3cc16769479d'),
  product_id: 101,
  name: 'Laptop',
  price: 50000,
  category: 'Electronics',
  order_count: 18
}
> db.product.aggregate([
  { $sort: { order_count: -1 } },
  { $limit: 1 }
])
< {
  _id: ObjectId('68dac329b8ef3cc16769479d'),
  product_id: 101,
  name: 'Laptop',
  price: 50000,
  category: 'Electronics',
  order_count: 18
}
ecommerce> |
```