

Lesson 01 Demo 08

Deleting Documents Using MongoDB CRUD Operations

Objective: To delete documents from the MongoDB collection using delete operation with try catch blocks

Tools required: Eclipse IDE

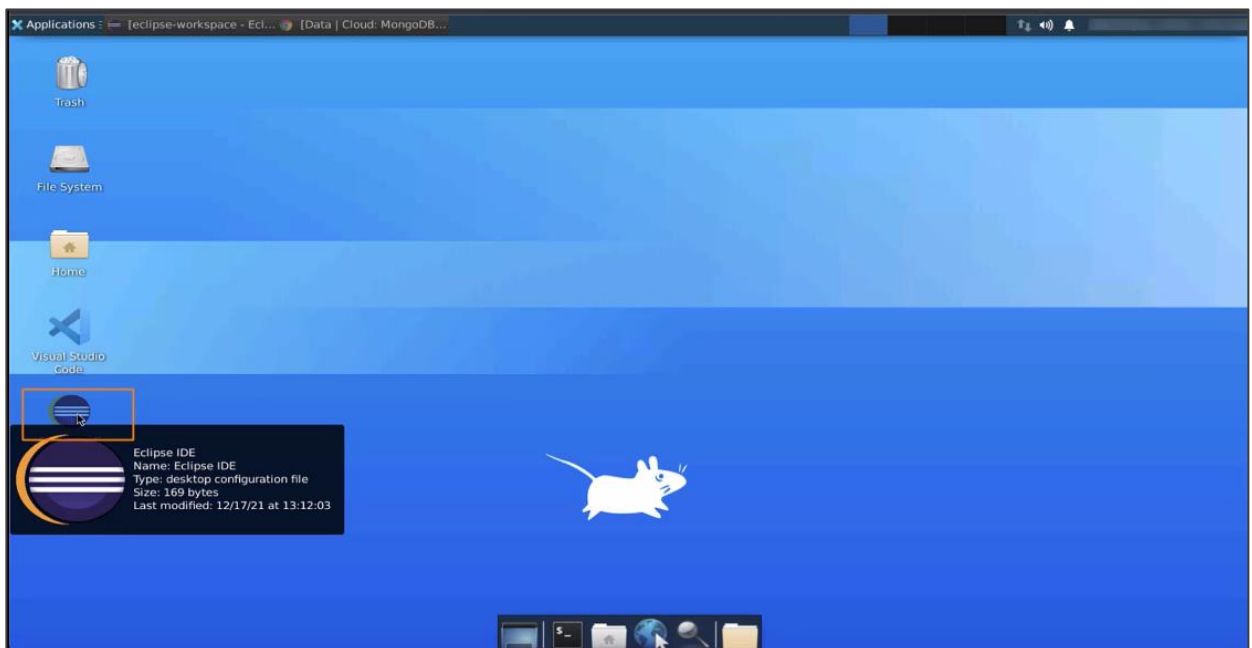
Prerequisites: None

Steps to be followed:

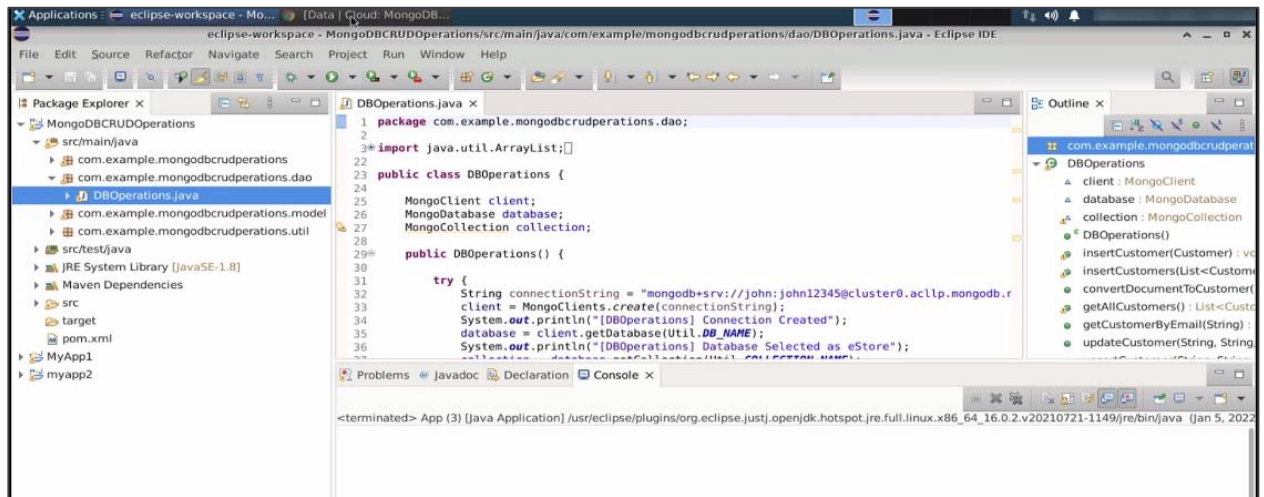
1. Create methods to delete customers
2. Handle exceptions

Step 1: Create methods to delete customers

1.1 Open the Eclipse IDE

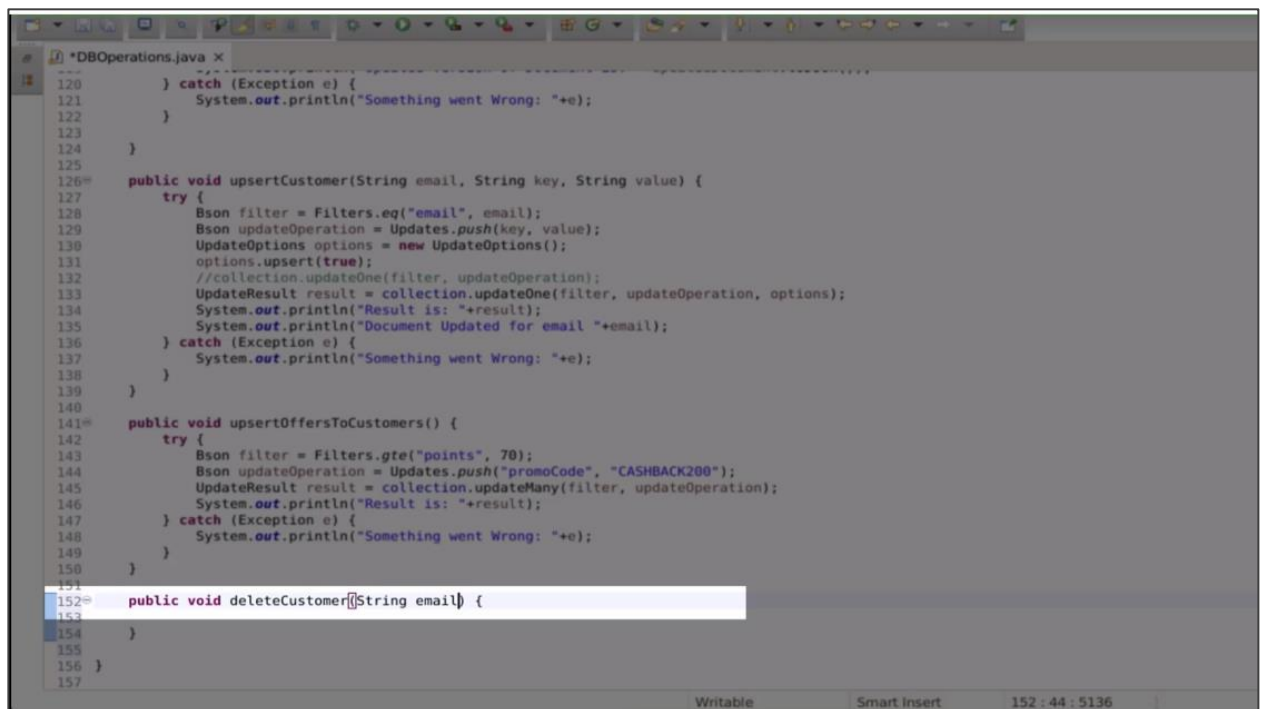


1.2 Go the project **MongoDBCRUDOperations** and open the file **DBOperations.java** file



Note: Please refer to the previous demo on how to create the **MongoDBCRUDOperations** project

1.3 Create a new method named **deleteCustomer**



1.4 Add a try catch block and write the code to delete the document if the count is greater than 0

```

132     options.upsert(true);
133     //collection.updateOne(filter, updateOperation);
134     UpdateResult result = collection.updateOne(filter, updateOperation, options);
135     System.out.println("Result is: "+result);
136     System.out.println("Document Updated for email "+email);
137 } catch (Exception e) {
138     System.out.println("Something went Wrong: "+e);
139 }
140 }
141
142 public void upsertOffersToCustomers() {
143     try {
144         Bson filter = Filters.gte("points", 70);
145         Bson updateOperation = Updates.push("promoCode", "CASHBACK200");
146         UpdateResult result = collection.updateMany(filter, updateOperation);
147         System.out.println("Result is: "+result);
148     } catch (Exception e) {
149         System.out.println("Something went Wrong: "+e);
150     }
151 }
152
153 public void deleteCustomer(String email) {
154     try {
155         Bson filter = Filters.eq("email", email);
156         DeleteResult result = collection.deleteOne(filter);
157
158         if(result.getDeletedCount() > 0) {
159             System.out.println("Document Deleted: "+result);
160         } else {
161             System.out.println("Document Not Found");
162         }
163     } catch (Exception e) {
164         System.out.println("Something went Wrong: "+e);
165     }
166 }
167
168 }
169

```

1.5 Navigate back to the App.java file and write the delete operation

```

26
27 /*List<Customer> customers = new ArrayList<Customer>();
28 customers.add(new Customer("Fionna", "+91 999999 22222", "fionna@example.com", 98.6f, new Date()));
29 customers.add(new Customer("Mike", "+91 999999 33333", "mike@example.com", 98.7f, new Date(), new Date()));
30 customers.add(new Customer("Anna", "+91 999999 44444", "anna@example.com", 98.2f, new Date(), new Date()));
31
32 operations.insertCustomers(customers);*/
33
34 List<Customer> customers = operations.getAllCustomers();
35 /*for(Customer customer : customers) {
36     System.out.println(customer);
37 }*/
38 customers.forEach(customer -> {
39     System.out.println(customer);
40 });
41
42 /*System.out.println("-----");
43 System.out.println("Fetching customer with email: fionna@example.com");
44 Customer customer = operations.getCustomerByEmail("fionna@example.com");
45 System.out.println(customer);*/
46
47 //operations.updateCustomer("fionna@example.com", "points", 100);
48 //operations.updateCustomer("fionna@example.com", "phone", "+91 99999 12345");
49 //operations.updateCustomer("fionna@example.com", "address", "2144 B20, ABC, Bangalore");
50 //operations.upsertCustomer("leo@example.com", "feedback", "A wonderful learning experience");
51 //operations.upsertOffersToCustomers();
52 //operations.updateCustomer("fionna@example.com", "promoCode", "JUMBO");
53
54 operations.deleteCustomer("fionna@example.com");
55
56 }

```

1.6 Save the file and run the code

```

Eclipse-workspace - MongoDBCRUDOperations/src/main/java/com/example/mongodbcrudoperations/App.java - Eclipse IDE
Search Project Run Window Help

ions = new DBOperations();

= new Customer("John Watson", "+91 999999 11111", "john@example.com", 98.4f, new Date(), new Date());
"Customer Details: ";
customer);
stomer(customer);*/

stomers = new ArrayList<Customer>();
ustomer("Fionna", "+91 999999 22222", "fionna@example.com", 98.6f, new Date(), new Date());
ustomer("Mike", "+91 999999 33333", "mike@example.com", 98.7f, new Date(), new Date());
ustomer("Anna", "+91 999999 44444", "anna@example.com", 98.2f, new Date(), new Date());

stomers(customer);*/

omers = operations.getAllCustomers();
omer : customers) {
tln(customer);

ustomer -> {
tln(customer);

n("-----");
"Fetching customer with email: fionna@example.com";
operations.getCustomerByEmail("fionna@example.com");
customer);*/

Customer("fionna@example.com", "points", 100);
Customer("fionna@example.com", "phone", "+91 99999 12345");
Customer("fionna@example.com", "address", "2144 B20, ABC, Bangalore");
Customer("leo@example.com", "feedback", "A wonderful learning exeprience");
OffersToCustomers();
Customer("fionna@example.com", "promoCode", "JUMBO");
    
```

```

Eclipse-workspace - MongoDBCRUDOperations/src/main/java/com/example/mongodbcrudoperations/App.java - Eclipse IDE
Search Project Run Window Help

ions = new DBOperations();

= new Customer("John Watson", "+91 999999 11111", "john@example.com", 98.4f, new Date(), new Date());
"Customer Details: ";
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stomer(customer);*/

stomers = new ArrayList<Customer>();
ustomer("Fionna", "+91 999999 22222", "fionna@example.com", 98.6f, new Date(), new Date());
ustomer("Mike", "+91 999999 33333", "mike@example.com", 98.7f, new Date(), new Date());
ustomer("Anna", "+91 999999 44444", "anna@example.com", 98.2f, new Date(), new Date());

stomers(customer);*/

omers = operations.getAllCustomers();
omer : customers) {
tln(customer);

ustomer -> {
tln(customer);

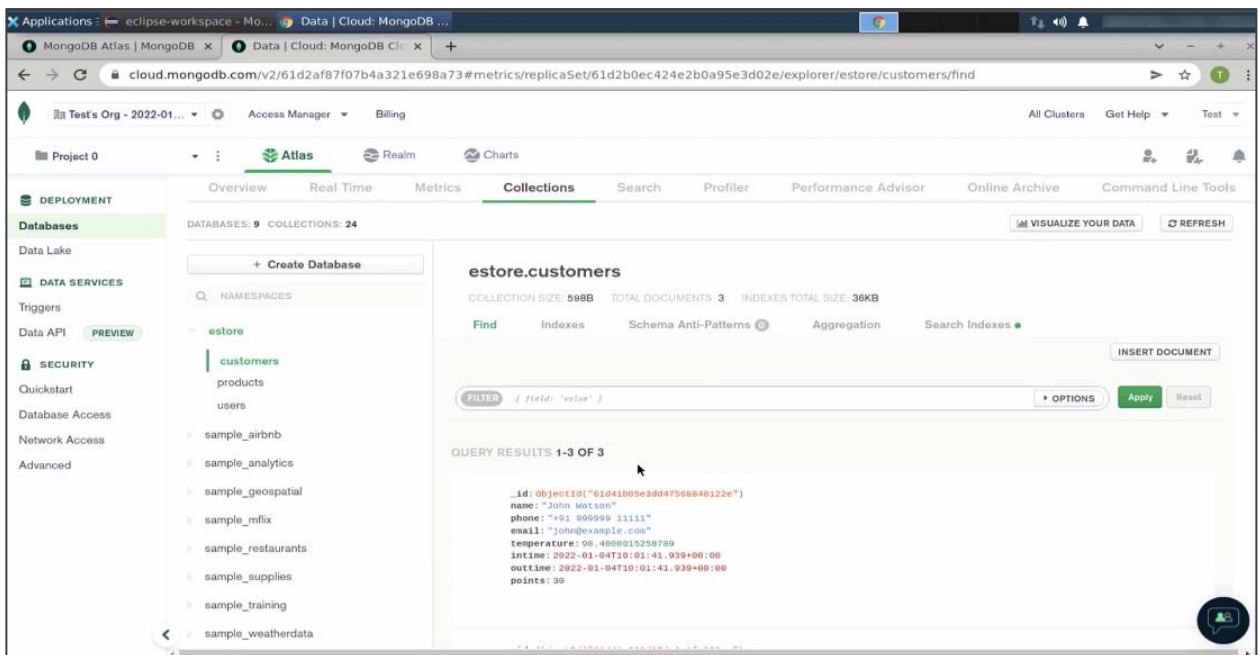
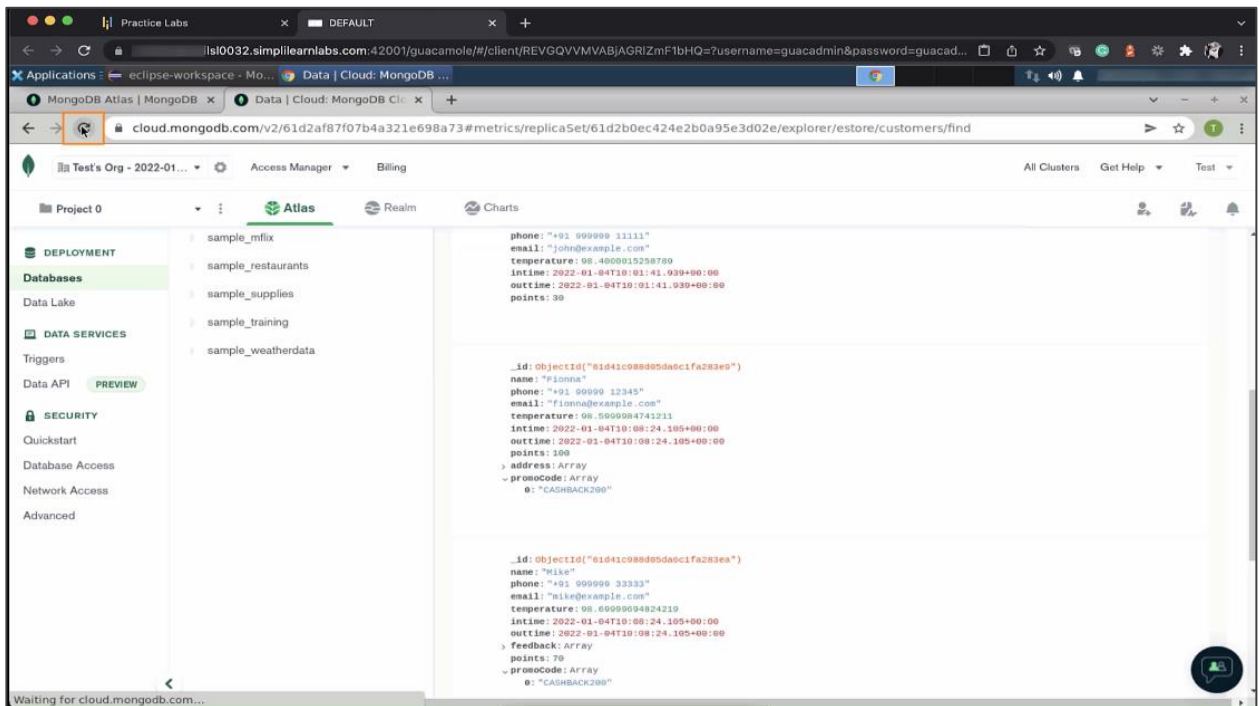
n("-----");
"Fetching customer with email: fionna@example.com";
operations.getCustomerByEmail("fionna@example.com");
customer);*/

Customer("fionna@example.com", "points", 100);
Customer("fionna@example.com", "phone", "+91 99999 12345");
Customer("fionna@example.com", "address", "2144 B20, ABC, Bangalore");
Customer("leo@example.com", "feedback", "A wonderful learning exeprience");
OffersToCustomers();
Customer("fionna@example.com", "promoCode", "JUMBO");

<terminated> App [3] [Java Application] /usr/eclipse/plugins/org.eclipse.justj.openjdk.hotspot...
MongoDB CRUD Operations App
Jan 05, 2022 11:03:31 AM com.mongodb.diagnostics.logging.Loggers shouldUse
WARNING: SLF4J not found on the classpath. Logging is disabled for the 'o
[DBOperations] Connection Created
[DBOperations] Database Selected as eStore
[DBOperations] Collection from eStore selected as customers
Customer {name=Anna, phone=+91 999999 44444, email=anna@example.com, tempe
Customer {name=Fionna, phone=+91 99999 12345, email=fionna@example.com, te
Customer {name=John Watson, phone=+91 999999 11111, email=john@example.com,
Customer {name=Mike, phone=+91 999999 33333, email=mike@example.com, tempe
Document Deleted: AcknowledgedDeleteResult{deletedCount=1}
    
```

You should see the deleted count as 1.

1.7 Return to the database and refresh



You should see only three documents now, compared to four previously.

1.8 Go back to **App.java** and write a new operation **deleteCustomers** to delete the customers with points less than 100

```

DBOperations.java x App.java
146         UpdateResult result = collection.updateMany(filter, updateOperation);
147         System.out.println("Result is: "+result);
148     } catch (Exception e) {
149         System.out.println("Something went Wrong: "+e);
150     }
151 }
152
153 public void deleteCustomer(String email) {
154     try {
155         Bson filter = Filters.eq("email", email);
156         /*DeleteResult result = collection.deleteOne(filter);
157
158         if(result.getDeletedCount() > 0) {
159             System.out.println("Document Deleted: "+result);
160         }else {
161             System.out.println("Document Not Found");
162         }*/
163
164         Document deletedDocument = (Document) collection.findOneAndDelete(filter);
165         System.out.println(deletedDocument.toJson());
166     } catch (Exception e) {
167         System.out.println("Something went Wrong: "+e);
168     }
169 }
170
171 public void deleteCustomers() {
172     try {
173         Bson filter = Filters.lte("points", 100);
174         DeleteResult result = collection.deleteMany(filter);
175         System.out.println("Result is: "+result);
176     } catch (Exception e) {
177         System.out.println("Something went Wrong: "+e);
178     }
179 }
180
181

```

1.9 Save the file and run the code

```

Applications : eclipse-workspace - Mo... Data | Cloud: MongoDB ...
eclipse-workspace - MongoDBCRUDOperations/src/main/java/com/example/mongodbcrudoperations/App.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
DBOperations.java App.java x
19 DBOperations operations = new DBOperations();
20
21 /*Customer customer = new Customer("John Watson", "+91 999999 11111", "john@example.com", 98.4f, new Date(), new Date());
22 System.out.println("Customer Details: ");
23 operations.insertCustomer(customer);*/
24
25
26
27 /*List<Customer> customers = new ArrayList<Customer>();
28 customers.add(new Customer("Fionna", "+91 999999 22222", "fionna@example.com", 98.6f, new Date(), new Date()));
29 customers.add(new Customer("Mike", "+91 999999 33333", "mike@example.com", 98.7f, new Date(), new Date()));
30 customers.add(new Customer("Anna", "+91 999999 44444", "anna@example.com", 98.2f, new Date(), new Date()));
31
32 operations.insertCustomers(customers);*/
33
34 List<Customer> customers = operations.getAllCustomers();
35 /*for(Customer customer : customers) {
36     System.out.println(customer);
37 }*/
38 customers.forEach(customer -> {
39     System.out.println(customer);
40 });
41
42 /*System.out.println("-----");
43 System.out.println("Fetching customer with email: fionna@example.com");
44 Customer customer = operations.getCustomerByEmail("fionna@example.com");
45 System.out.println(customer);*/
46
47 //operations.updateCustomer("fionna@example.com", "points", 100);
48 //operations.updateCustomer("fionna@example.com", "phone", "+91 99999 12345");
49 //operations.updateCustomer("fionna@example.com", "address", "2144 B20, ABC, Bangalore");
50 //operations.upsertOffersToCustomers();
51 //operations.updateCustomer("leo@example.com", "feedback", "A wonderful learning experience");
52
53 //operations.updateCustomer("fionna@example.com", "promoCode", "JUMBO");
54
55 //operations.deleteCustomer("fionna@example.com");
56 operations.deleteCustomers();
57

```

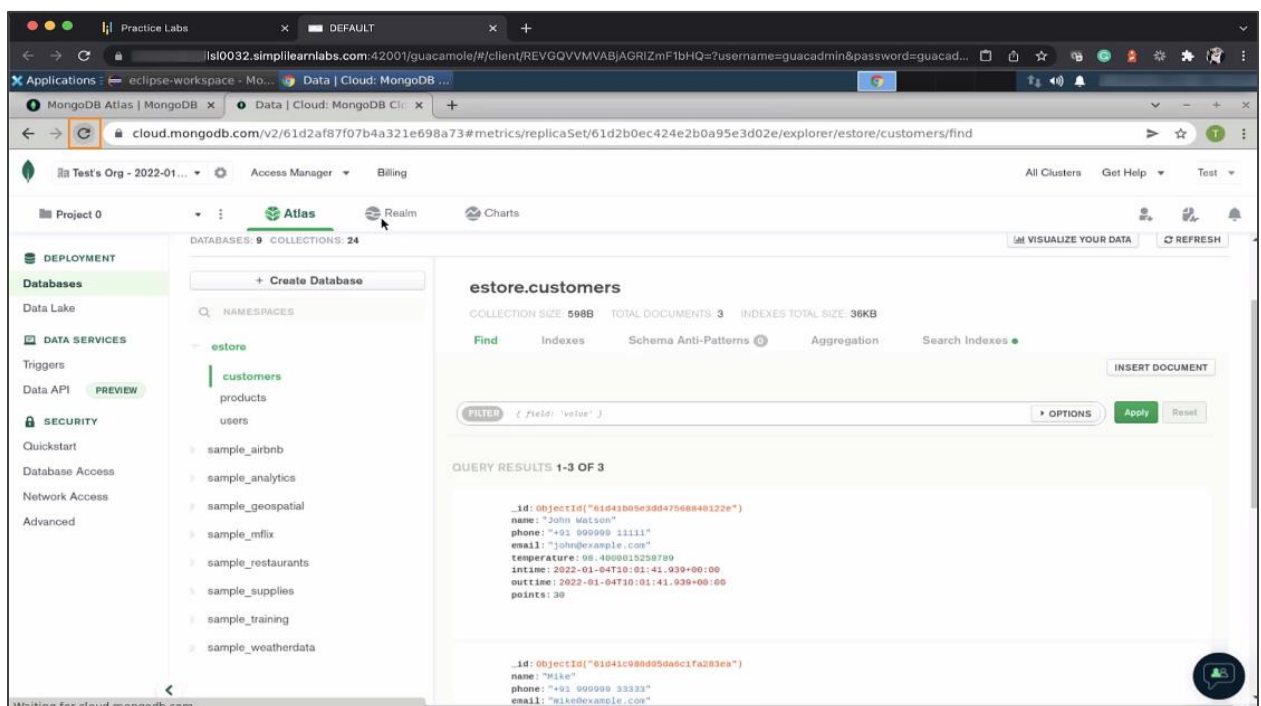
Writable Smart Insert 55:38 [6]

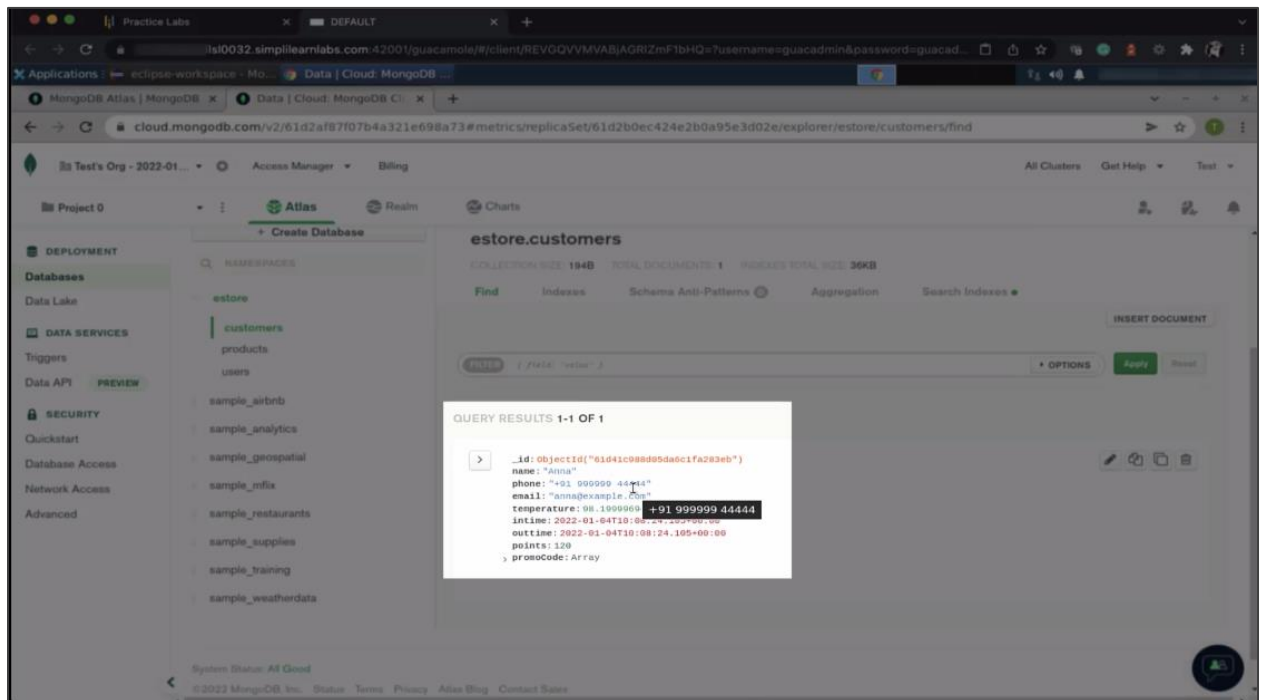
The screenshot shows the Eclipse IDE with a Java application window titled "MongoDB CRUD Operations App" and a console window. The console output shows the application's execution, including database connection details and a successful delete operation. The final line of the console output is highlighted with a red box:

```
Result is: AcknowledgedDeleteResult{deletedCount=2}
```

You should see two other documents deleted and the **deletedCount=2**

1.10 Go to the database and refresh





You should see only one record remaining and the others deleted.

1.11 Navigate back to **DBOperations.java** and create a new method to delete the collection

```

148     } catch (Exception e) {
149         System.out.println("Something went Wrong: "+e);
150     }
151 }
152
153 public void deleteCustomer(String email) {
154     try {
155         Bson filter = Filters.eq("email", email);
156         /*DeleteResult result = collection.deleteOne(filter);
157
158         if(result.getDeletedCount() > 0) {
159             System.out.println("Document Deleted: "+result);
160         }else {
161             System.out.println("Document Not Found");
162         }*/
163
164         Document deletedDocument = (Document) collection.findOneAndDelete(filter);
165         System.out.println(deletedDocument.toJson());
166     } catch (Exception e) {
167         System.out.println("Something went Wrong: "+e);
168     }
169 }
170
171 public void deleteCustomers() {
172     try {
173         Bson filter = Filters.lte("points", 100);
174         DeleteResult result = collection.deleteMany(filter);
175         System.out.println("Result is: "+result);
176     } catch (Exception e) {
177         System.out.println("Something went Wrong: "+e);
178     }
179 }
180
181 public void deleteCollection(String collection) {
182
183

```


Step 2: Handle exceptions

2.1 In the **DBOperations.java** file, write a try catch block to handle the exception:

```

155      Bson filter = Filters.eq("email", email);
156      /*DeleteResult result = collection.deleteOne(filter);
157
158      if(result.getDeletedCount() > 0) {
159          System.out.println("Document Deleted: "+result);
160      }else {
161          System.out.println("Document Not Found");
162      }*/
163
164      Document deletedDocument = (Document) collection.findOneAndDelete(filter);
165      System.out.println(deletedDocument.toJson());
166  } catch (Exception e) {
167      System.out.println("Something went Wrong: "+e);
168  }
169  }
170
171  public void deleteCustomers() {
172      try {
173          Bson filter = Filters.lte("points", 100);
174          DeleteResult result = collection.deleteMany(filter);
175          System.out.println("Result is: "+result);
176      } catch (Exception e) {
177          System.out.println("Something went Wrong: "+e);
178      }
179  }
180
181  public void deleteCollection(String collectionName) {
182      try {
183          collection = database.getCollection(collectionName);
184          collection.drop();
185          System.out.println(collectionName+" has been dropped");
186      } catch (Exception e) {
187          System.out.println("Something went Wrong: "+e);
188      }
189  }
190
191
192

```

2.2 Navigate back to **App.java** and call the **deleteCollection** method

```

22      System.out.println("Customer Details: ");
23      System.out.println(customer);
24      operations.insertCustomer(customer);*/
25
26
27      /*List<Customer> customers = new ArrayList<Customer>();
28      customers.add(new Customer("Fionna", "+91 999999 22222", "fionna@example.com", 98.6f, new Date(), new Date()));
29      customers.add(new Customer("Mike", "+91 999999 33333", "mike@example.com", 98.7f, new Date(), new Date()));
30      customers.add(new Customer("Anna", "+91 999999 44444", "anna@example.com", 98.2f, new Date(), new Date()));
31
32      operations.insertCustomers(customers);*/
33
34      List<Customer> customers = operations.getAllCustomers();
35      /*for(Customer customer : customers) {
36          System.out.println(customer);
37      }*/
38      customers.forEach(customer -> {
39          System.out.println(customer);
40      });
41
42      /*System.out.println("-----");
43      System.out.println("Fetching customer with email: fionna@example.com");
44      Customer customer = operations.getCustomerByEmail("fionna@example.com");
45      System.out.println(customer);*/
46
47      //operations.updateCustomer("fionna@example.com", "points", 100);
48      //operations.updateCustomer("fionna@example.com", "phone", "+91 99999 12345");
49      //operations.updateCustomer("fionna@example.com", "address", "2144 B20, ABC, Bangalore");
50      //operations.upsertCustomer("leo@example.com", "feedback", "A wonderful learning experience");
51      //operations.upsertOffersToCustomers();
52      //operations.updateCustomer("fionna@example.com", "promoCode", "JUMBO");
53
54      //operations.deleteCustomer("fionna@example.com");
55      //operations.deleteCustomers();
56      operations.deleteCollection("customers");
57  }
58  }
59  }

```

2.3 Save the file and run the code

```

22 System.out.println("Customer Details: ");
23 System.out.println(customer);
24 operations.insertCustomer(customer);*/
25
26
27
28 //List<Customer> customers = new ArrayList<Customer>();
29 customers.add(new Customer("Fionna", "+91 999999 22222", "fionna@example.com", 98.6f, new Date(), new Date()));
30 customers.add(new Customer("Mike", "+91 999999 33333", "mike@example.com", 98.7f, new Date(), new Date()));
31 customers.add(new Customer("Anna", "+91 999999 44444", "anna@example.com", 98.2f, new Date(), new Date()));
32
33 operations.insertCustomers(customers);*/
34
35 List<Customer> customers = operations.getAllCustomers();
36 /*for(Customer customer : customers) {
37     System.out.println(customer);
38 }*/
39 customers.forEach(customer -> {
40     System.out.println(customer);
41 });
42
43 /*System.out.println("-----");
44 System.out.println("Fetching customer with email: fionna@example.com");
45 Customer customer = operations.getCustomerByEmail("fionna@example.com");
46 System.out.println(customer);*/
47
48 //operations.updateCustomer("fionna@example.com", "points", 100);
49 //operations.updateCustomer("fionna@example.com", "phone", "+91 99999 12345");
50 //operations.updateCustomer("fionna@example.com", "address", "2144 B20, ABC, Bangalore");
51 //operations.upsertOffersToCustomers();
52 //operations.updateCustomer("fionna@example.com", "promoCode", "JUMBO");
53
54 //operations.deleteCustomer("fionna@example.com");
55 //operations.deleteCustomers();
56 operations.deleteCollection("customers");
57
58 }
59 }

```

```

<terminated> App (3) [Java Application] /usr/eclipse/plugins/org.eclipse.justi.openjdk.hotspot...
MongoDB CRUD Operations App
Jan 05, 2022 11:10:54 AM com.mongodb.diagnostics.logging.Loggers shouldUse
WARNING: SLF4J not found on the classpath. Logging is disabled for the 'o
[DBOperations] Connection Created
[DBOperations] Database Selected as eStore
[DBOperations] Collection from eStore selected as customers
Customer [name=Anna, phone=+91 999999 44444, email=anna@example.com, tempe
customers has been dropped

```

You should see the message **customers have been dropped**.

2.4 Go back to the database and refresh

The screenshot shows the MongoDB Atlas interface. On the left, the 'Databases' section is expanded, showing the 'estore' database. The 'customers' collection is selected. The main panel displays the 'estore.customers' collection with a single document in the 'QUERY RESULTS' section. The document is a JSON object with fields: _id, name, phone, email, temperature, inttime, outtime, points, and prosoCode.

The screenshot shows the MongoDB Atlas interface. On the left, the 'Databases' section is expanded, showing the 'estore' database. The 'collections' tab is selected. The main panel displays a table of collections for the 'estore' database. The table has columns: Collection Name, Documents, Documents Size, Documents Avg, Indexes, Index Size, and Index Avg. The collections listed are 'products', 'users', 'sample_airbnb', 'sample_analytics', 'sample_geospatial', 'sample_mflix', 'sample_restaurants', 'sample_supplies', and 'sample_weatherdata'.

Collection Name	Documents	Documents Size	Documents Avg	Indexes	Index Size	Index Avg
products	1	101B	101B	1	20KB	20KB
users	4	870B	218B	1	36KB	36KB

You should see the products and collections listed.

2.5 Navigate back to **App.java** and change the input to **products**

```

25
26
27      /*List<Customer> customers = new ArrayList<Customer>();
28      customers.add(new Customer("Fionna", "+91 999999 22222", "fionna@example.com", 98.6f, new Date(), new Date()));
29      customers.add(new Customer("Mike", "+91 999999 33333", "mike@example.com", 98.7f, new Date(), new Date()));
30      customers.add(new Customer("Anna", "+91 999999 44444", "anna@example.com", 98.2f, new Date(), new Date()));
31
32      operations.insertCustomers(customers);*/
33
34      List<Customer> customers = operations.getAllCustomers();
35      /*for(Customer customer : customers) {
36          System.out.println(customer);
37      }*/
38      customers.forEach(customer -> {
39          System.out.println(customer);
40      });
41
42      /*System.out.println("-----");
43      System.out.println("Fetching customer with email: fionna@example.com");
44      Customer customer = operations.getCustomerByEmail("fionna@example.com");
45      System.out.println(customer);*/
46
47      //operations.updateCustomer("fionna@example.com", "points", 100);
48      //operations.updateCustomer("fionna@example.com", "phone", "+91 99999 12345");
49      //operations.updateCustomer("fionna@example.com", "address", "2144 B20, ABC, Bangalore");
50      //operations.upsertCustomer("leo@example.com", "feedback", "A wonderful learning expeience");
51      //operations.upsertOffersToCustomers();
52      //operations.updateCustomer("fionna@example.com", "promoCode", "JUMB0");
53
54      //operations.deleteCustomer("fionna@example.com");
55      //operations.deleteCustomers();
56      operations.deleteCollection("products");
57
58  }
59  }

```

2.6 Rerun the code

```

ce - Mo... Data | Cloud: MongoDB ...
eclipse-workspace - MongoDBCRUDOperations/src/main/java/com/example/mongodbcrudperations/App.java - Eclipse IDE
vigate Search Project Run Window Help

App.java X
println("Customer Details: ");
println(customer);
println(customer);
println(customer);

/*> customers = new ArrayList<Customer>();
new Customer("Fionna", "+91 999999 22222", "fionna@example.com", 98.6f, new Date(), new Date());
new Customer("Mike", "+91 999999 33333", "mike@example.com", 98.7f, new Date(), new Date());
new Customer("Anna", "+91 999999 44444", "anna@example.com", 98.2f, new Date(), new Date());

insertCustomers(customers);*/

- customers = operations.getAllCustomers();
- customer : customers) {
- .println(customer);

each(customer -> {
- .println(customer);

println("-----");
println("Fetching customer with email: fionna@example.com");
mer = operations.getCustomerByEmail("fionna@example.com");
println(customer);*/

updateCustomer("fionna@example.com", "points", 100);
updateCustomer("fionna@example.com", "phone", "+91 99999 12345");
updateCustomer("fionna@example.com", "address", "2144 B20, ABC, Bangalore");
psertCustomer("leo@example.com", "feedback", "A wonderful learning expeience");
psertOffersToCustomers();
updateCustomer("fionna@example.com", "promoCode", "JUMB0");

deleteCustomer("fionna@example.com");
deleteCustomers();
eteCollection("products");

```



```

Run Window Help
: ");
*/
ayList<Customer>();
"+91 999999 22222", "fionna@example.com", 98.6f
+91 999999 33333", "mike@example.com", 98.7f, neu
+91 999999 44444", "anna@example.com", 98.2f, neu
);*/
s.getAllCustomers();
{
};
r with email: fionna@example.com");
stomerByEmail("fionna@example.com");

example.com", "points", 100);
example.com", "phone", "+91 99999 12345");
example.com", "address", "2144 B20, ABC, Bangalore");
mple.com", "feedback", "A wonderful learning expeerience");
{});
example.com", "promoCode", "JUMB0");
  
```

```

<terminated> App (3) [Java Application] /usr/eclipse/plugins/org.eclipse.justj.openjdk.hotsp
MongoDB CRUD Operations App
Jan 05, 2022 11:11:26 AM com.mongodb.diagnostics.logging.Loggers shouldUse
WARNING: SLF4J not found on the classpath. Logging is disabled for the 'o
[DBOperations] Connection Created
[DBOperations] Database Selected as eStore
[DBOperations] Collection from eStore selected as customers
products has been dropped
  
```

You should see the message **products has been dropped**.

2.7 Go back to the database and refresh

cloud.mongodb.com/v2/61d2af87f07b4a321e698a73#metrics/replicaSet/61d2b0ec424e2b0a95e3d02e/explorer/estore

TEST'S ORG - 2022-01-03 > PROJECT 0 > DATABASES

Cluster0

VERSION: 4.4.10 REGION: AWS Mumbai (ap-south-1)

DATABASES: 9 COLLECTIONS: 23

+ Create Database

estore

products

users

sample_airbnb

sample_analytics

sample_geospatial

sample_mflix

sample_restaurants

sample_supplies

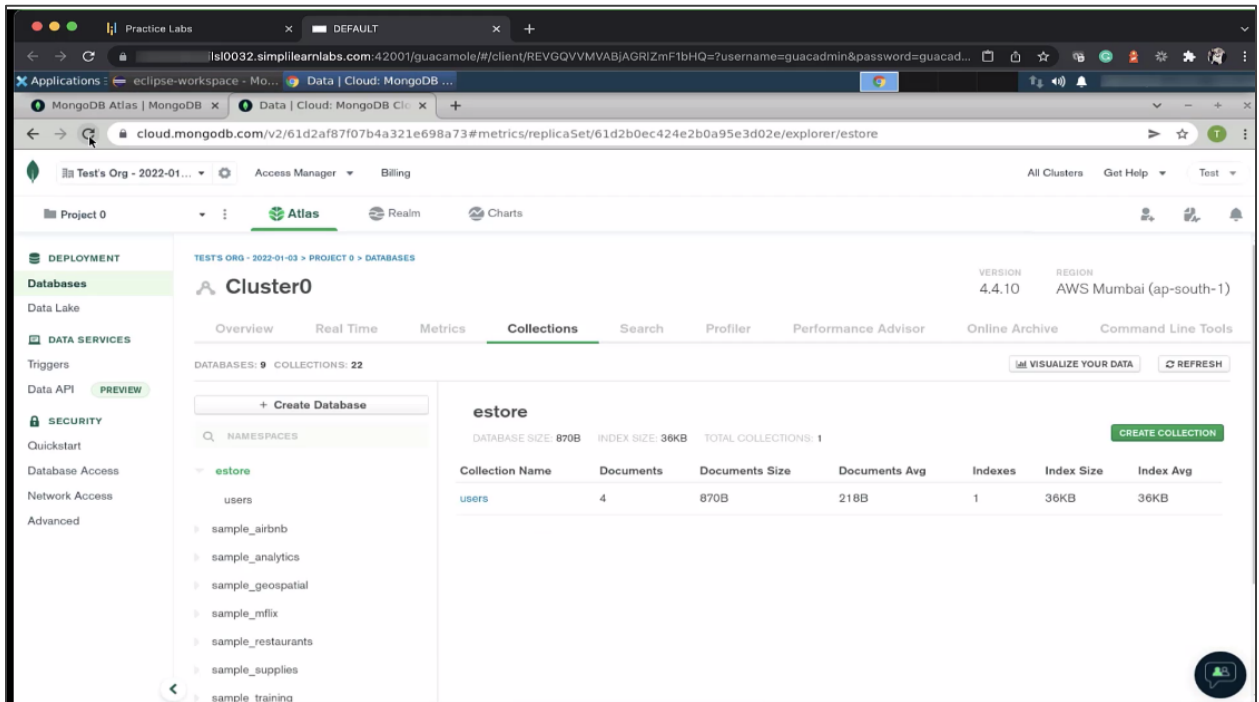
estore

DATABASE SIZE: 971B INDEX SIZE: 56KB TOTAL COLLECTIONS: 2

CREATE COLLECTION

Collection Name	Documents	Documents Size	Documents Avg	Indexes	Index Size	Index Avg
products	1	101B	101B	1	20KB	20KB
users	4	870B	218B	1	36KB	36KB

You should see that the **products** collection has been deleted.



The **deleteOne** operation can be used to delete a single document. The **deleteMany** operation can be used to delete multiple documents based on a condition.

By following these steps, you have successfully deleted documents from the MongoDB collection using the delete operation with try catch blocks.