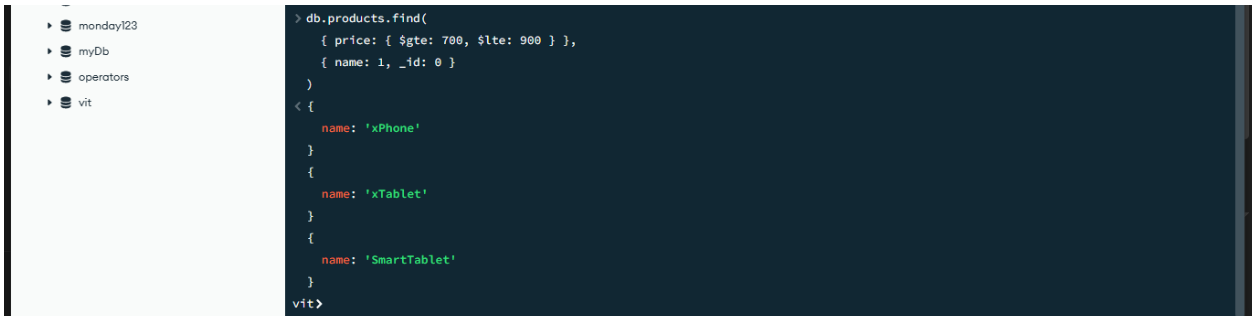
MONGODB

Making a solution in mongodb and verifying it in eclipse:

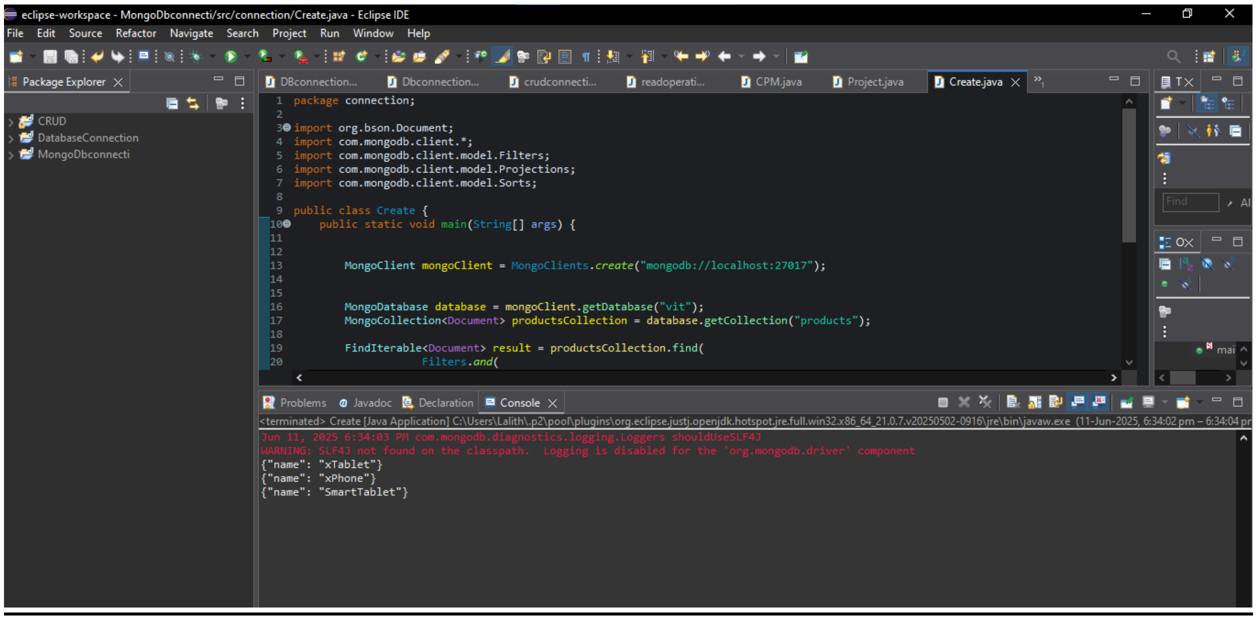
MONGODB:



```
> db.products.find(
    { price: { $gte: 700, $lte: 900 } },
    { name: 1, _id: 0 }
  )
< {
    name: 'xPhone'
  }
  {
    name: 'xTablet'
  }
  {
    name: 'SmartTablet'
  }
vit>
```

Eclipse:

```
package connection;


import org.bson.Document;

import com.mongodb.client.*;

import com.mongodb.client.model.Filters;

import com.mongodb.client.model.Projections;

import com.mongodb.client.model.Sorts;


public class Create {

    public static void main(String[] args) {



        MongoClient mongoClient = MongoClients.create("mongodb://localhost:27017");



        MongoDatabase database = mongoClient.getDatabase("vit");

        MongoCollection<Document> productsCollection = database.getCollection("products");


        FindIterable<Document> result = productsCollection.find(

                Filters.and(
                    Filters.gte("price", 700),
                    Filters.lte("price", 900)
                 ))
                .sort(Sorts.descending("name"))
                .projection(Projections.fields(
                    Projections.include("name"),
                    Projections.excludeId()
                ));

        for (Document doc : result) {
            System.out.println(doc.toJson());
        }

        mongoClient.close();
    }
}
```



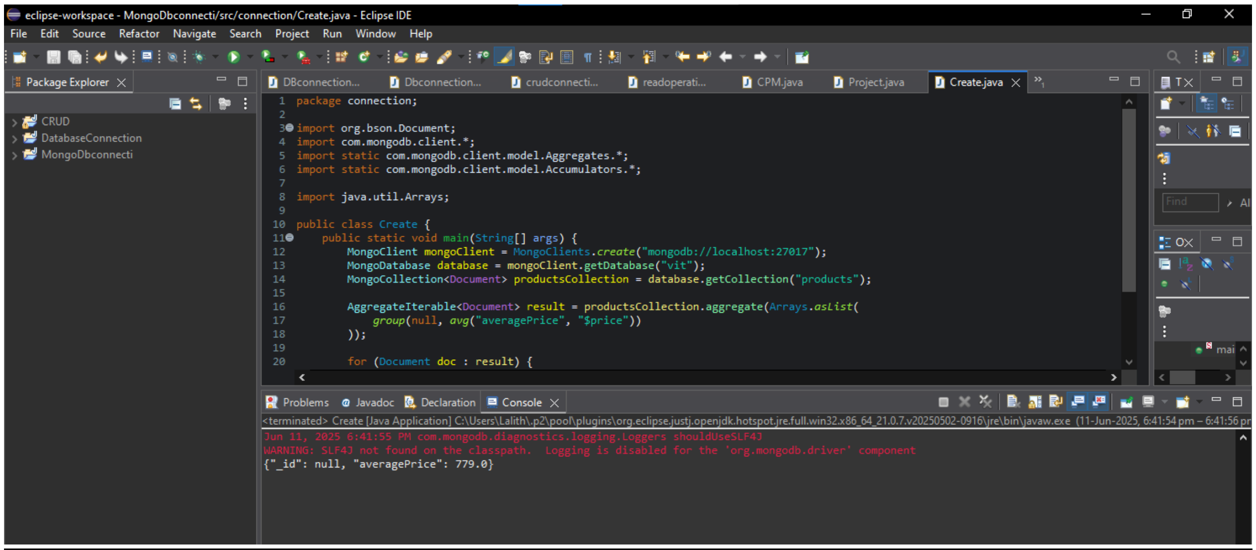
```
package connection;

import org.bson.Document;
import com.mongodb.client.*;
import com.mongodb.client.model.Filters;
import com.mongodb.client.model.Projections;
import com.mongodb.client.model.Sorts;

public class Create {
    public static void main(String[] args) {


        MongoClient mongoClient = MongoClients.create("mongodb://localhost:27017");


        MongoDatabase database = mongoClient.getDatabase("vit");
        MongoCollection<Document> productsCollection = database.getCollection("products");

        FindIterable<Document> result = productsCollection.find(
                Filters.and(
```

```
<terminated> Create [Java Application] C:\Users\Lalith\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-0916\jre\bin\javaw.exe (11-Jun-2025, 6:34:02 pm – 6:34:04 pm
Jun 11, 2025 6:34:03 PM com.mongodb.diagnostics.logging.Loggers shouldUseSLF4J
WARNING: SLF4J not found on the classpath.  Logging is disabled for the 'org.mongodb.driver' component
{"name": "xTablet"}
{"name": "xPhone"}
{"name": "SmartTablet"}
```

AGREEGATE FUNCTION(AVG):

```
package connection;

import org.bson.Document;
import com.mongodb.client.*;
import static com.mongodb.client.model.Aggregates.*;
import static com.mongodb.client.model.Accumulators.*;

import java.util.Arrays;

public class Create {
    public static void main(String[] args) {
        MongoClient mongoClient = MongoClients.create("mongodb://localhost:27017");
        MongoDatabase database = mongoClient.getDatabase("vit");
        MongoCollection<Document> productsCollection = database.getCollection("products");

        AggregateIterable<Document> result = productsCollection.aggregate(Arrays.asList(
            group(null, avg("averagePrice", "$price"))
        ));

        for (Document doc : result) {
            System.out.println(doc.toJson());
        }

        mongoClient.close();
    }
}
```

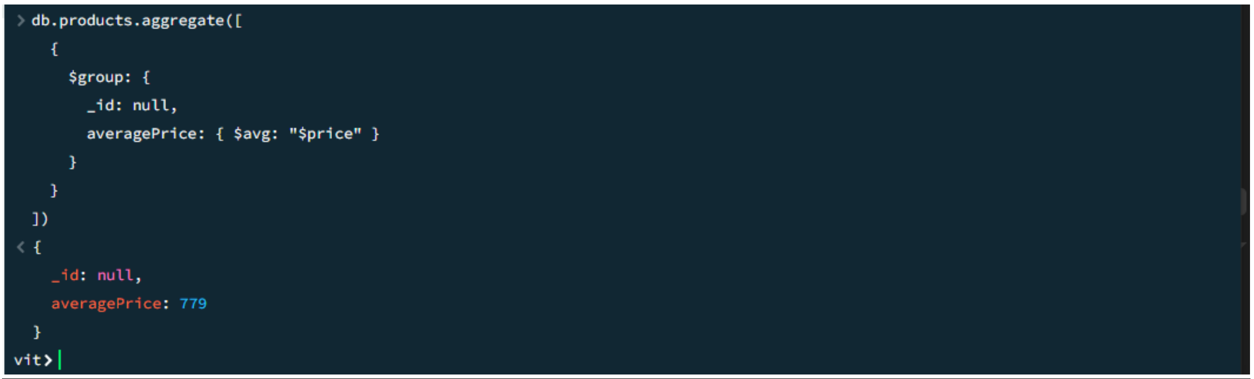
ECLLIPSE:


eclipse-workspace - MongoDbconnecti/src/connection/Create.java - Eclipse IDE

```java
package connection;

import org.bson.Document;
import com.mongodb.client.*;
import static com.mongodb.client.model.Aggregates.*;
import static com.mongodb.client.model.Accumulators.*;

import java.util.Arrays;

public class Create {
    public static void main(String[] args) {
        MongoClient mongoClient = MongoClients.create("mongodb://localhost:27017");
        MongoDatabase database = mongoClient.getDatabase("vit");
        MongoCollection<Document> productsCollection = database.getCollection("products");

        AggregateIterable<Document> result = productsCollection.aggregate(Arrays.asList(
            group(null, avg("averagePrice", "$price"))
        ));

        for (Document doc : result) {
```

```
<terminated> Create [Java Application] C:\Users\Lalith\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-0916\jre\bin\javaw.exe  (11-Jun-2025, 6:41:54 pm – 6:41:56 pr
Jun 11, 2025 6:41:55 PM com.mongodb.diagnostics.logging.Loggers shouldUseSLF4J
WARNING: SLF4J not found on the classpath.  Logging is disabled for the 'org.mongodb.driver' component
{"_id": null, "averagePrice": 779.0}
```

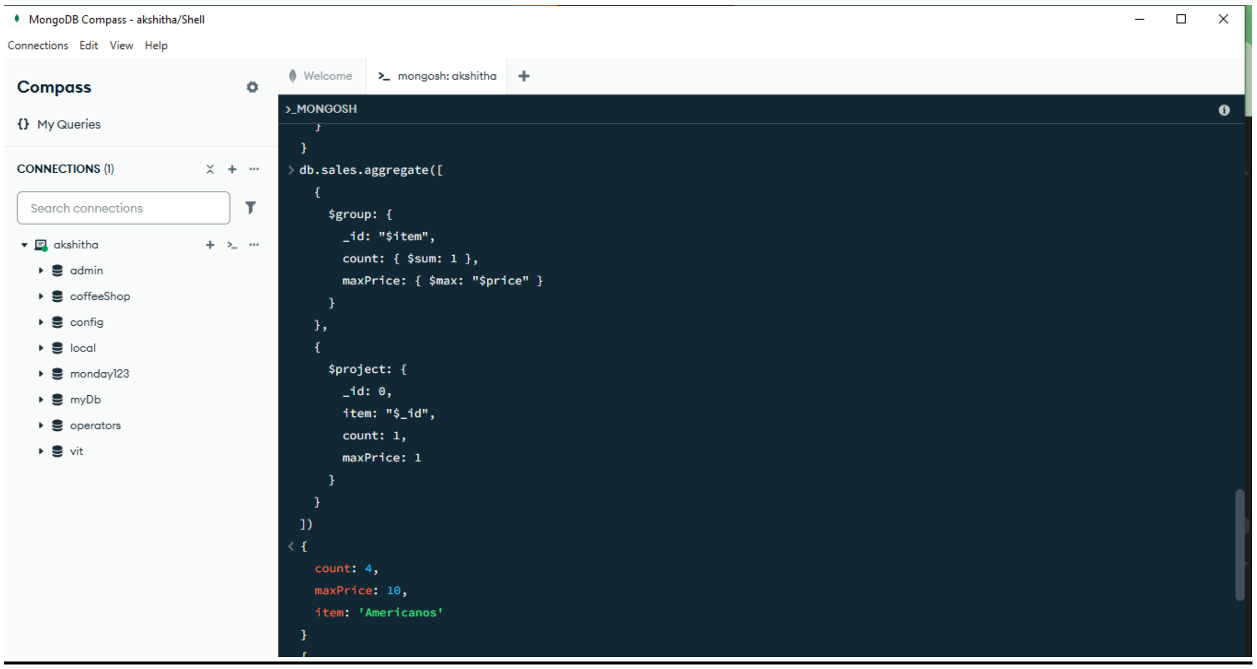
MONGODB:



```
> db.products.aggregate([
    {
      $group: {
        _id: null,
        averagePrice: { $avg: "$price" }
      }
    }
  ])
< {
    _id: null,
    averagePrice: 779
  }
vit>
```

Items and that contains maximum price:

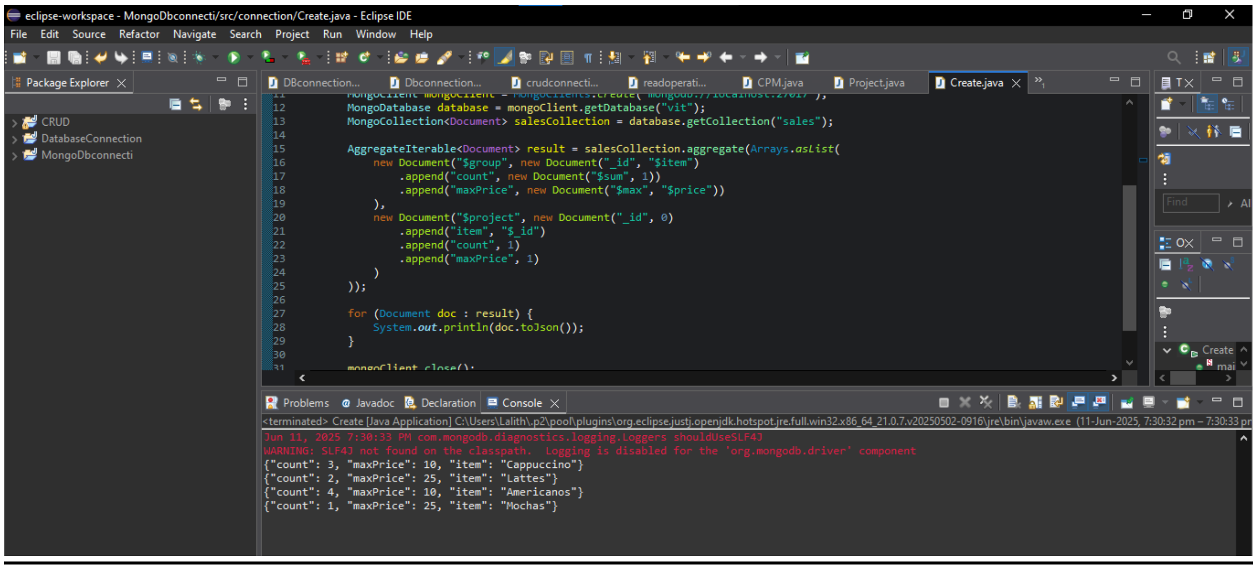
MONGODB:



```
}
> db.sales.aggregate([
    {
      $group: {
        _id: "$item",
        count: { $sum: 1 },
        maxPrice: { $max: "$price" }
      }
    },
    {
      $project: {
        _id: 0,
        item: "$_id",
        count: 1,
        maxPrice: 1
      }
    }
  ])
< {
    count: 4,
    maxPrice: 10,
    item: 'Americanos'
  }
```

ECLLIPSE:

```
package connection;


import com.mongodb.client.*;
import org.bson.Document;


import java.util.Arrays;


public class Create {
    public static void main(String[] args) {


        MongoClient mongoClient = MongoClients.create("mongodb://localhost:27017");
        MongoDatabase database = mongoClient.getDatabase("vit");
        MongoCollection<Document> salesCollection = database.getCollection("sales");


        AggregateIterable<Document> result = salesCollection.aggregate(Arrays.asList(
            new Document("$group", new Document("_id", "$item")
                .append("count", new Document("$sum", 1))
                .append("maxPrice", new Document("$max", "$price"))
            ),
            new Document("$project", new Document("_id", 0)
                .append("item", "$_id")
                .append("count", 1)
                .append("maxPrice", 1)
            )
        ));

        for (Document doc : result) {
            System.out.println(doc.toJson());
        }

        mongoClient.close();
    }
}
```


eclipse-workspace - MongoDbconnecti/src/connection/Create.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer
CRUD
DatabaseConnection
MongoDbconnecti
DBconnection... Dbconnection... crudconnecti... readoperati... CPM.java Project.java Create.java
Problems Javadoc Declaration Console

```
        MongoDatabase database = mongoClient.getDatabase("vit");
        MongoCollection<Document> salesCollection = database.getCollection("sales");

        AggregateIterable<Document> result = salesCollection.aggregate(Arrays.asList(
            new Document("$group", new Document("_id", "$item")
                .append("count", new Document("$sum", 1))
                .append("maxPrice", new Document("$max", "$price"))
            ),
            new Document("$project", new Document("_id", 0)
                .append("item", "$_id")
                .append("count", 1)
                .append("maxPrice", 1)
            )
        ));

        for (Document doc : result) {
            System.out.println(doc.toJson());
        }

        mongoClient.close();
```

```
<terminated> Create [Java Application] C:\Users\Lalith\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_21.0.7.v20250502-0916\jre\bin\javaw.exe (11-Jun-2025, 7:30:32 pm – 7:30:33 pr
Jun 11, 2025 7:30:33 PM com.mongodb.diagnostics.logging.Loggers shouldUseSLF4J
WARNING: SLF4J not found on the classpath.  Logging is disabled for the 'org.mongodb.driver' component
{"count": 3, "maxPrice": 10, "item": "Cappuccino"}
{"count": 2, "maxPrice": 25, "item": "Lattes"}
{"count": 4, "maxPrice": 10, "item": "Americanos"}
{"count": 1, "maxPrice": 25, "item": "Mochas"}
```