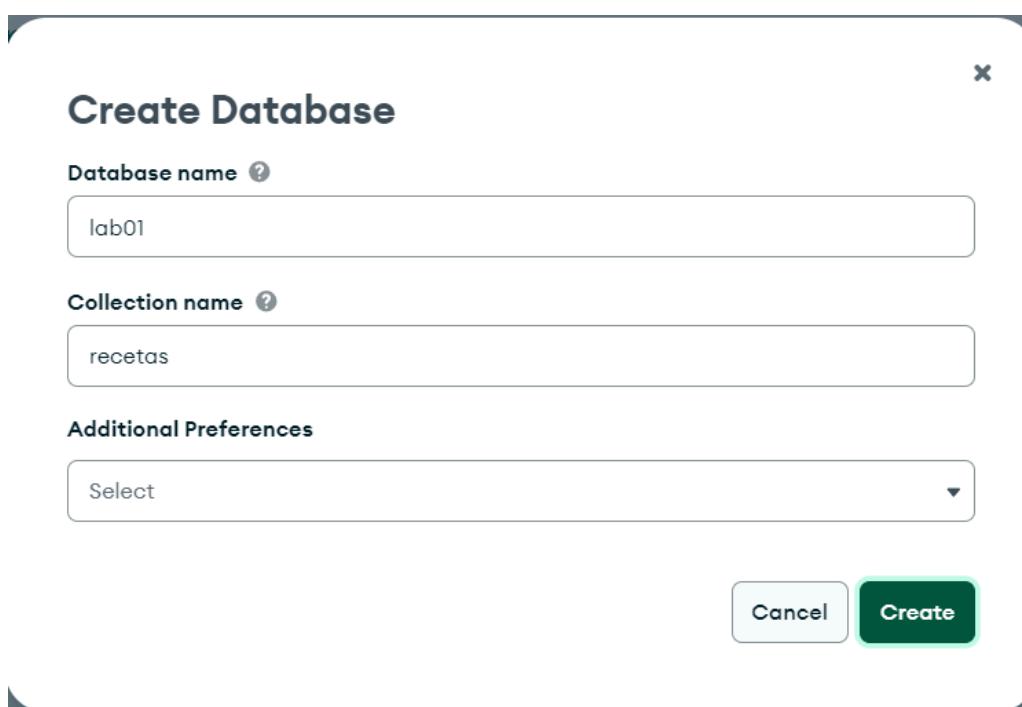


Laboratorio No.01

Introducción a MongoDB

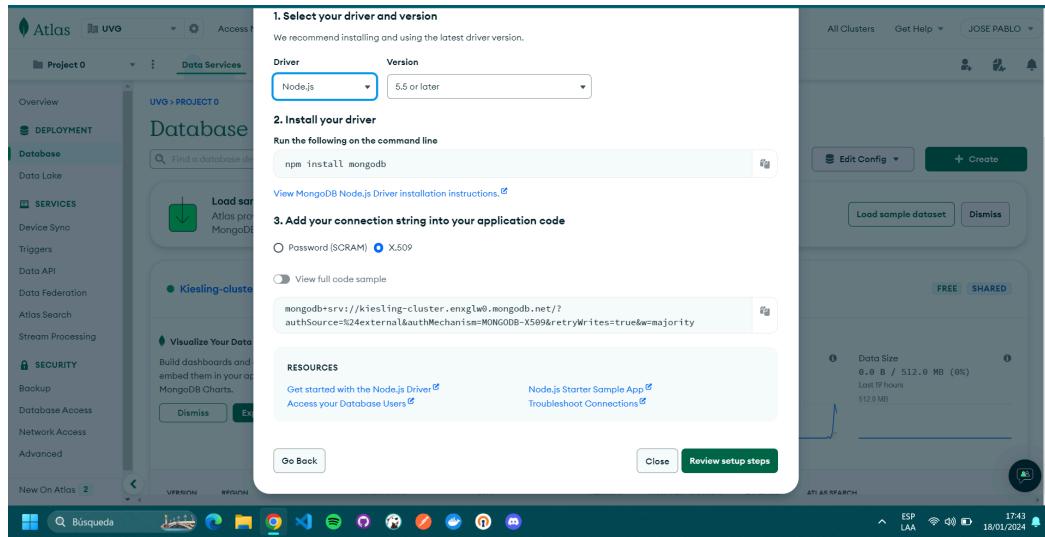
Ejercicio 1 - Preparación de ambiente

1. Ingrese a su cuenta de MongoDB Atlas y desde la GUI de MongoDB Atlas cree la base de datos lab01.



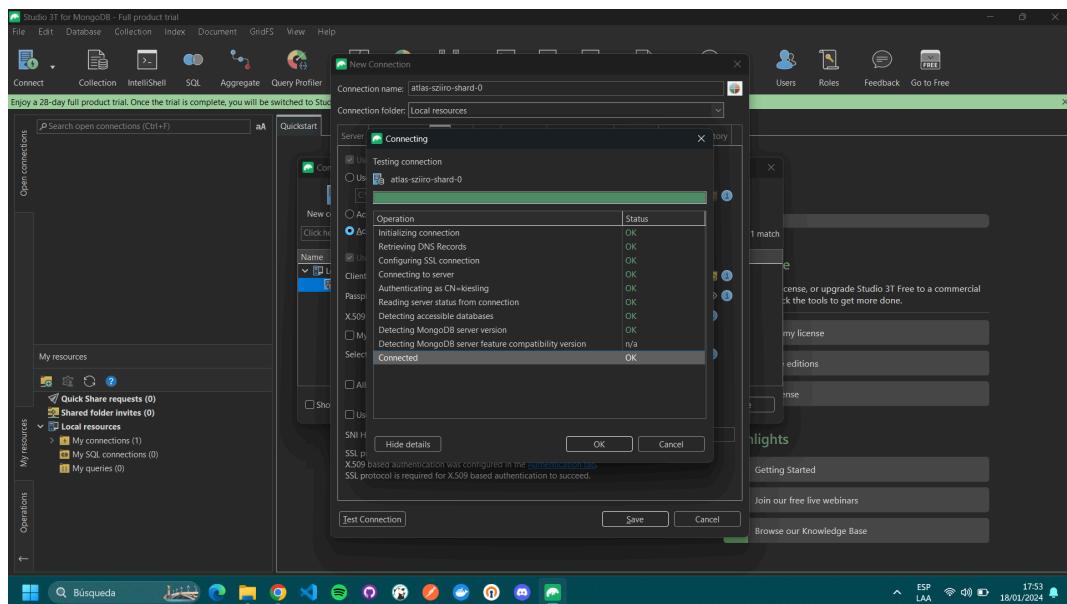
The screenshot shows the MongoDB Atlas Data Services interface. The left sidebar shows 'Project 0' with 'Database' selected, showing 'lab01' and 'recetas'. The main panel shows the 'Kiesling-cluster' database with 'VERSION: 6.0.12' and 'REGION: AWS N. Virginia (us-east-1)'. The 'Collections' tab is active, displaying 'lab01.recetas' with storage details: 'STORAGE SIZE: 4KB', 'LOGICAL DATA SIZE: 0B', 'TOTAL DOCUMENTS: 0', and 'INDEXES TOTAL SIZE: 4KB'. Below it is a search bar and a query builder with 'Type a query: { field: 'value' }' and 'Filter' options. The bottom status bar shows system information like battery level, signal strength, and date/time.

2. Obtenga la URI de conexión de su base de datos, para configurar la conexión en su IDE NoSQL preferido.

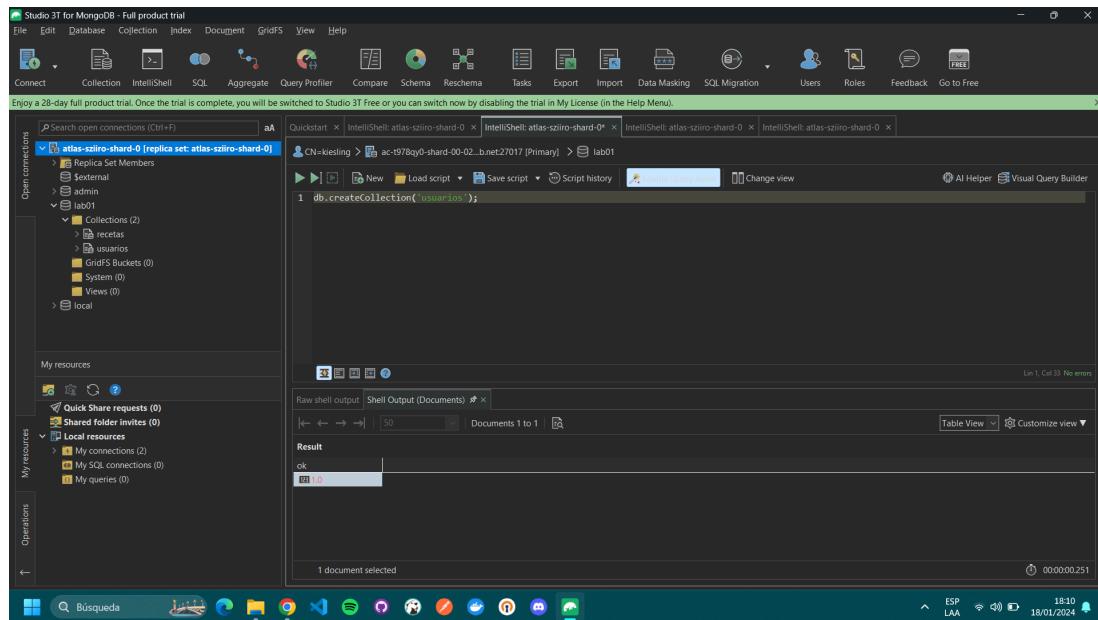


URI:

mongodb+srv://kiesling-cluster.enxglw0.mongodb.net/?authSource=%24external&authMechanism=MONGODB-X509&retryWrites=true&w=majority

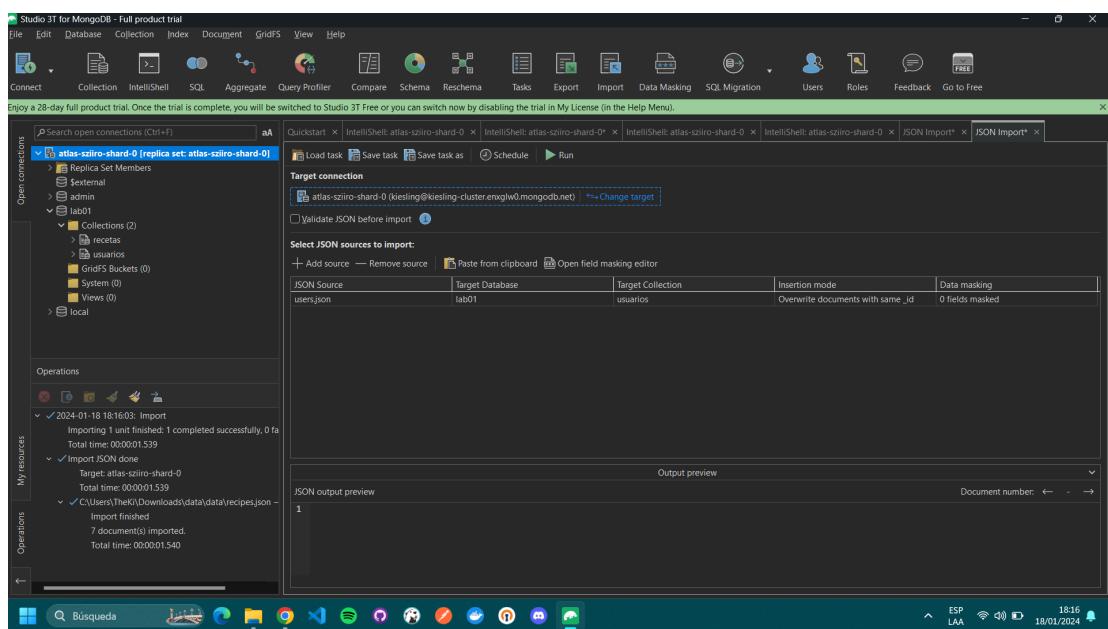
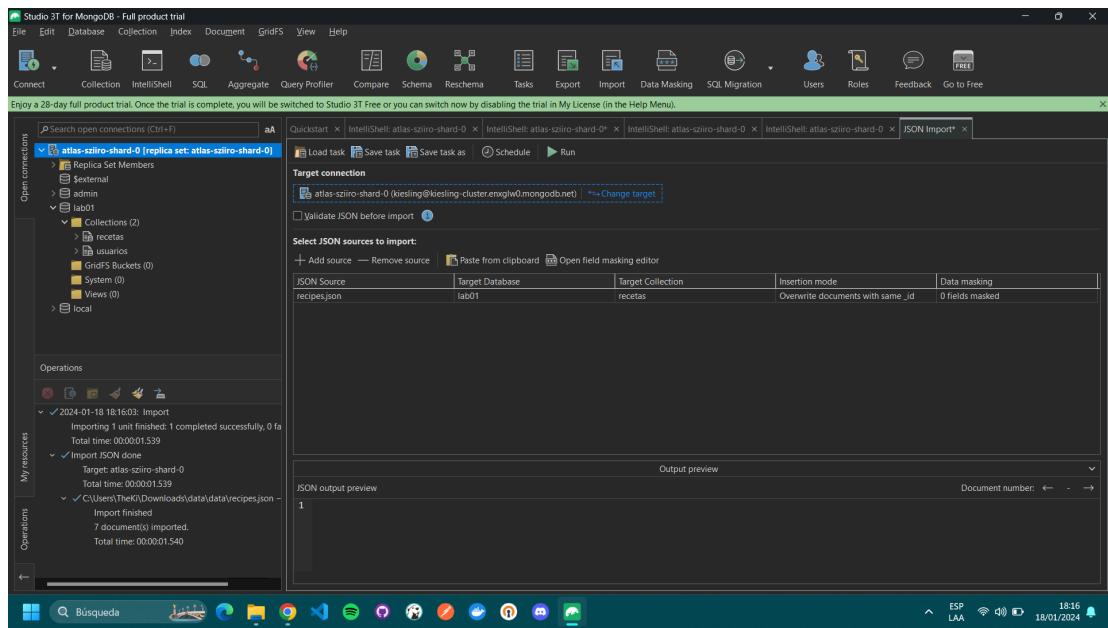


3. Investigue la instrucción createCollection() y desde su IDE cree las colecciones recetas y usuarios.



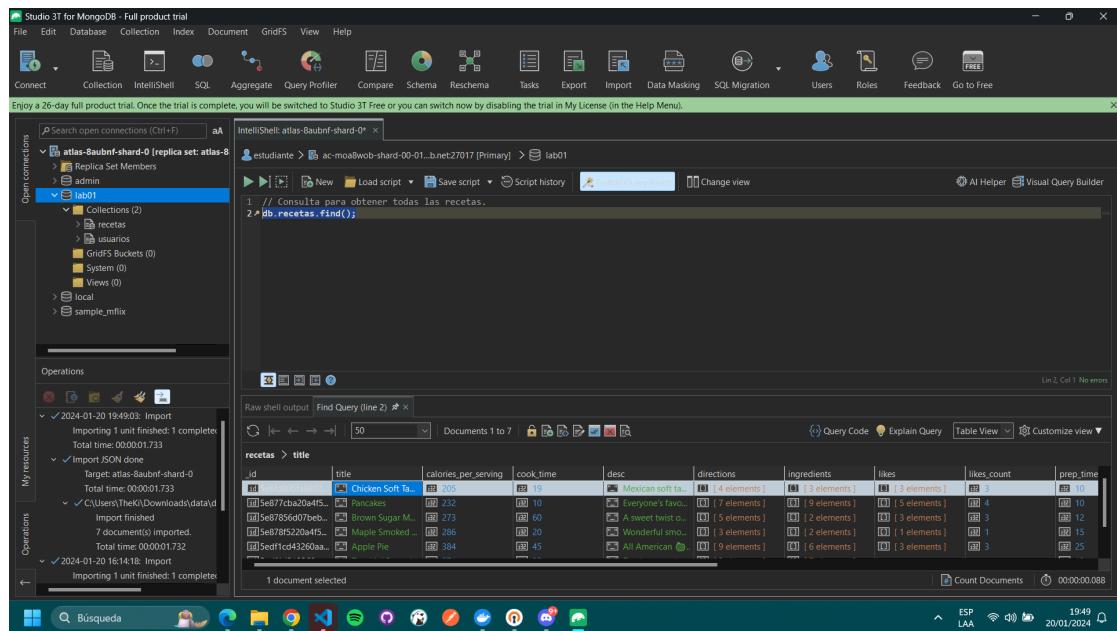
La colección **recetas** se creó desde MongoDB Atlas al crear la DB (inciso 1.1).

4. Desde su IDE, importe los datos de las colecciones recetas y usuarios.



Ejercicio 2 - Exploración y manipulación de datos

1. Cree una consulta para obtener todas las recetas.

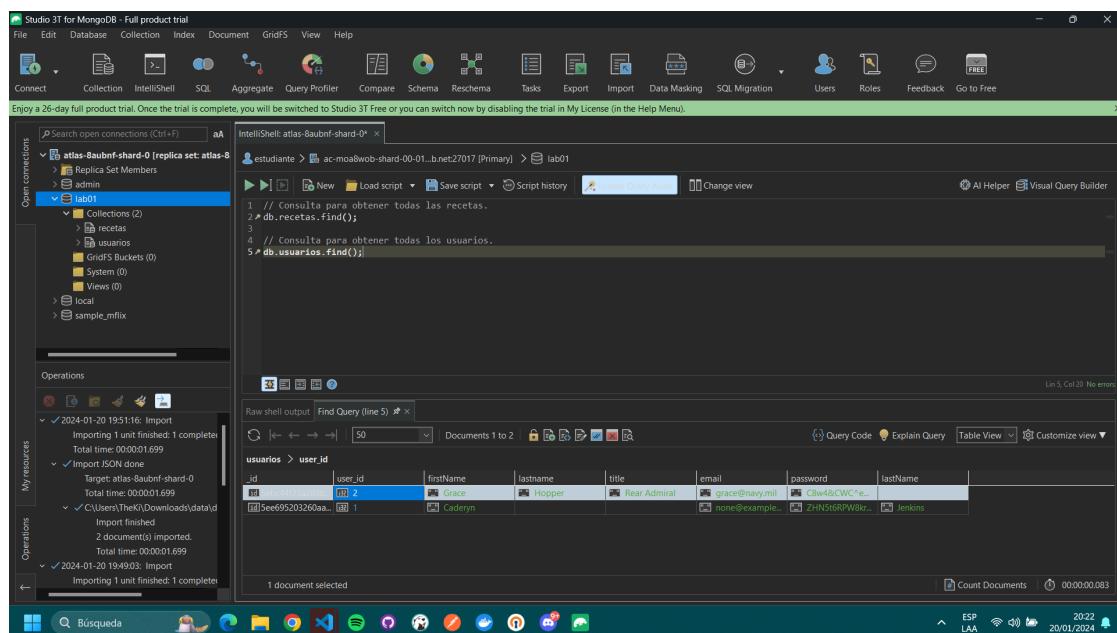


The screenshot shows the Studio 3T interface connected to a MongoDB database named 'atlas-Baubnf-shard-0' (replica set: atlas-8). In the left sidebar, under the 'lab01' database, the 'recetas' collection is selected. The main pane displays a query in the shell:

```
// Consulta para obtener todas las recetas.  
2> db.recetas.find();
```

Below the shell, the results are shown in a table titled 'recetas > title'. The table has the following columns: _id, title, calories_per_serving, cook_time, desc, directions, ingredients, likes, likes_count, and prep_time. The data includes various recipes like Chicken Soft Ta., Pancakes, Brown Sugar M., Maple Smoked ..., and Apple Pie, each with its respective details.

2. Cree una consulta para obtener todos los usuarios.



The screenshot shows the Studio 3T interface connected to the same MongoDB database. In the left sidebar, under the 'lab01' database, the 'usuarios' collection is selected. The main pane displays a query in the shell:

```
1 // Consulta para obtener todas las recetas.  
2  
3  
4 // Consulta para obtener todas los usuarios.  
5> db.usuarios.find();
```

Below the shell, the results are shown in a table titled 'usuarios > user_id'. The table has columns: _id, user_id, firstName, lastName, title, email, password, and lastName. The data includes users like Grace Hopper, Caledyn, and Jenkins, with their respective details.

3. Con base a la estructura observada en la colección de recetas, cree un nuevo documento que contenga los siguientes campos:

- a. Título
- b. Descripción
- c. Tiempo de cocción

The screenshot shows the Studio 3T interface for MongoDB. In the left sidebar, under 'My resources', there is a connection named 'lab01' which is currently selected. The 'Collections' section shows two collections: 'recetas' and 'usuarios'. In the main area, the 'IntelliShell' tab is active, displaying a script window with the following MongoDB code:

```
// Consulta para obtener todas las recetas.
2 db.recetas.find();
3
4 // Consulta para obtener todos los usuarios.
5 db.usuarios.find();
6
7 // Nuevo documento en recetas con titulo, descripción y tiempo de cocción
8 db.recetas.insertOne({
9   title: 'Tomato Pasta',
10  desc: 'Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions',
11  cook_time: 20
12});
```

Below the script, the 'Raw shell output' tab shows the result of the insert operation:

```
Result > InsertedId
acknowledged: true
insertedId: "65ac80a3669a4"
```

The status bar at the bottom right indicates the operation took 0.0000.142 seconds.

4. Cree una consulta que busque la receta que acaba de crear.

The screenshot shows the Studio 3T interface again. The 'lab01' connection is still selected in the left sidebar. In the main area, the 'IntelliShell' tab is active, displaying a script window with the following MongoDB code:

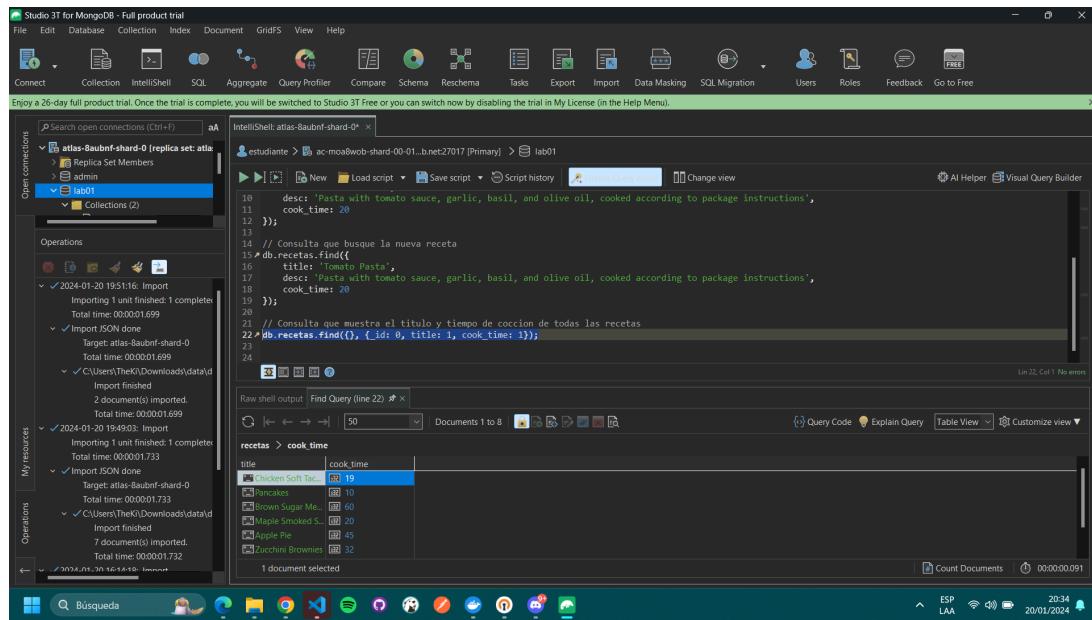
```
5 db.usuarios.find();
6
7 // Nuevo documento en recetas con titulo, descripción y tiempo de cocción
8 db.recetas.insertOne({
9   title: 'Tomato Pasta',
10  desc: 'Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions',
11  cook_time: 20
12});
13
14 // Consulta que busca la nueva receta
15 db.recetas.find({
16   title: 'Tomato Pasta',
17   desc: 'Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions',
18   cook_time: 20
19});
```

Below the script, the 'Raw shell output' tab shows the results of the search query:

recetas _id	title	desc	cook_time
"65ac80a3669a4"	Tomato Pasta	Pasta with tomato...	20

The status bar at the bottom right indicates the operation took 0.0000.086 seconds.

5. Cree una consulta en la que liste las recetas, mostrando únicamente el título y su tiempo de cocción.



The screenshot shows the Studio 3T interface for MongoDB. The left sidebar displays a connection to 'atlas-Baubnf-shard-0' (replica set: atlas) with a database 'lab01' selected. The main pane shows an 'IntelliShell' window with the following MongoDB query:

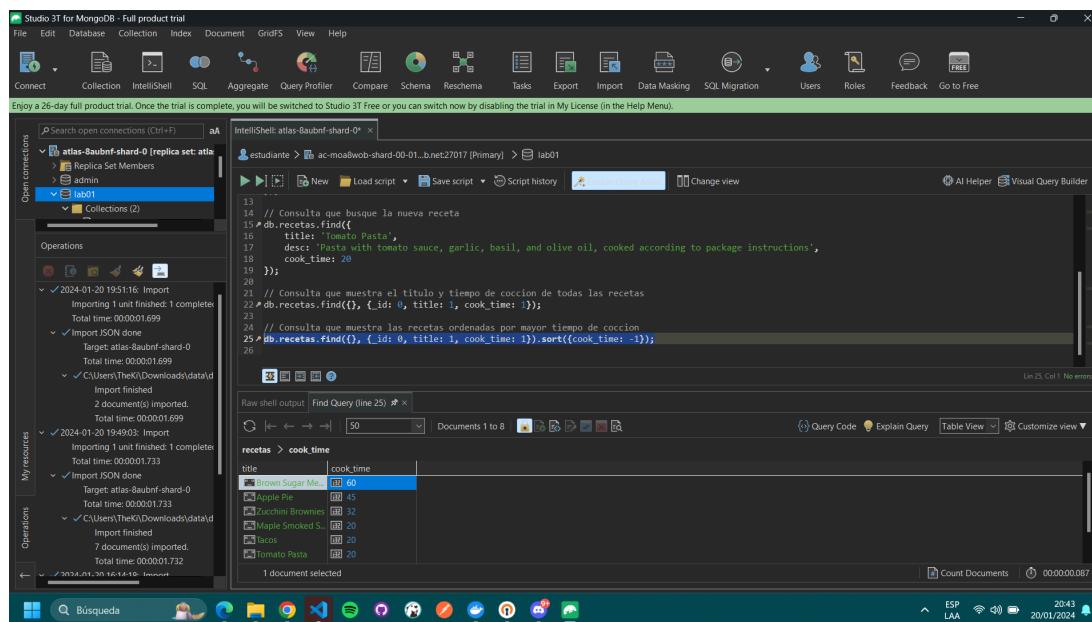
```
10 desc: 'Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions',
11 cook_time: 20
12 }
13 }
14 // Consulta que busca la nueva receta
15 db.recetas.find({
16   title: 'Tomato Pasta',
17   desc: 'Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions',
18   cook_time: 20
19 })
20
21 // Consulta que muestra el titulo y tiempo de coccion de todas las recetas
22 db.recetas.find({}, { _id: 0, title: 1, cook_time: 1 });
23
24
```

The results pane below shows the output of the query:

title	cook_time
Golden Soft Tacos	19
Spaghetti	10
Brown Sugar Muffins	60
Maple Smoked Sausage	20
Apple Pie	45
Zucchini Brownies	32

1 document selected

6. Cree una consulta en la que se listeen las recetas ordenadas por mayor tiempo de cocción.



The screenshot shows the Studio 3T interface for MongoDB. The left sidebar displays a connection to 'atlas-Baubnf-shard-0' (replica set: atlas) with a database 'lab01' selected. The main pane shows an 'IntelliShell' window with the following MongoDB query:

```
13
14 // Consulta que busca la nueva receta
15 db.recetas.find({
16   title: 'Tomato Pasta',
17   desc: 'Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions',
18   cook_time: 20
19 })
20
21 // Consulta que muestra el titulo y tiempo de coccion de todas las recetas
22 db.recetas.find({}, { _id: 0, title: 1, cook_time: 1 });
23
24 // Consulta que muestra las recetas ordenadas por mayor tiempo de coccion
25 db.recetas.find({}, { _id: 0, title: 1, cook_time: 1 }).sort({cook_time: -1});
26
```

The results pane below shows the output of the query:

title	cook_time
Brown Sugar Muffins	60
Apple Pie	45
Zucchini Brownies	32
Maple Smoked Sausage	20
Sausage	20
Tomato Pasta	20

1 document selected

7. Investigue la instrucción update() para poder agregar un rating más a una receta y actualizar el rating promedio.

```

IntelliShell: atlas-8aubnf-shard-0* [replica set: atlas-8aubnf-shard-0]
estudiante > db.recetas.update(
  { title: 'Pancakes' },
  {
    $inc: { 'rating.$': 2 },
    $set: {
      rating_avg: 3.69
    }
  }
)

```

The screenshot shows the Studio 3T interface with the MongoDB shell open. The script pane displays the provided update query. The results pane shows a table with one document inserted, and the raw shell output pane shows the command and its execution details.

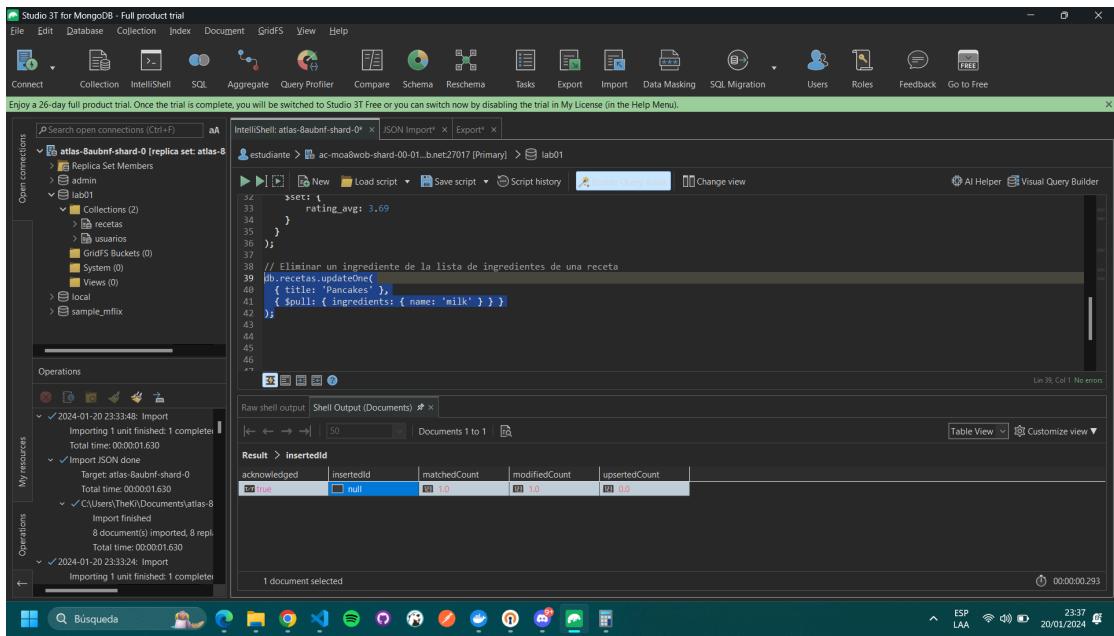
```

IntelliShell: atlas-8aubnf-shard-0* [replica set: atlas-8aubnf-shard-0]
estudiante > db.recetas.insertOne({
  title: 'Tomato Pasta',
  desc: 'Nesta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions',
  cook_time: 20
});

```

The screenshot shows the Studio 3T interface with the MongoDB shell open. The script pane displays the provided insert query. The results pane shows a table with the inserted document, and the raw shell output pane shows the command and its execution details.

8. Cree una consulta en la que elimine un ingrediente de la lista de ingredientes de una receta en específico.

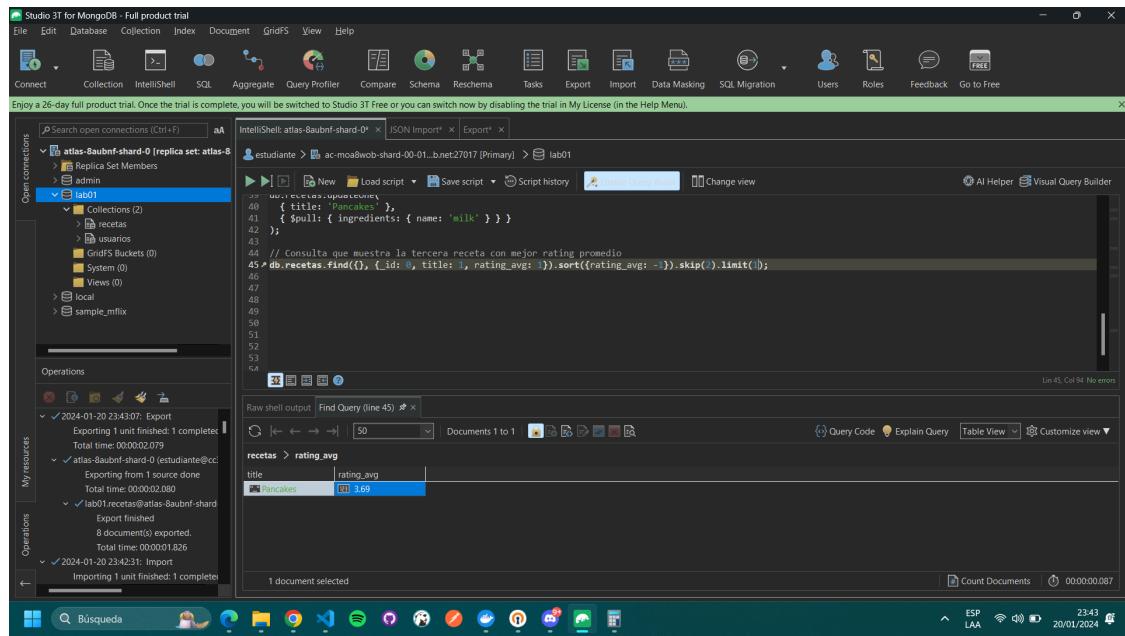


The screenshot shows the Studio 3T interface for MongoDB. The left sidebar displays the database structure under 'Replica Set Members' (atlas-8aunbf-shard-0). The 'Collections' section contains 'recetas' and 'usuarios'. The 'Operations' section shows a recent import of JSON files from 'C:\Users\Theki\Documents\atlas-8' into 'recetas' and 'usuarios' collections. The main area is an 'IntelliShell' window with the following script:

```

32     $set: {
33       rating_avg: 3.69
34     }
35   }
36 }
37
38 // Eliminar un ingrediente de la lista de ingredientes de una receta
39 db.recetas.updateOne(
40   { title: 'Pancakes' },
41   { $pull: { ingredients: { name: 'milk' } } }
42 )
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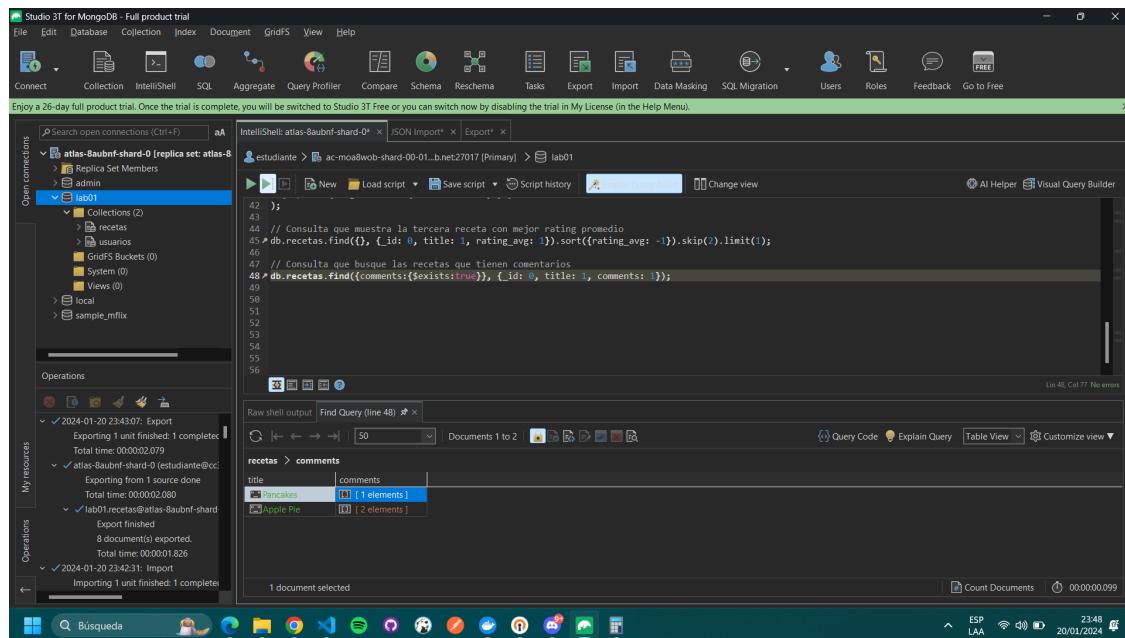
9. Investigue la opción skip de la instrucción find() y cree una consulta en la que obtenga la tercera receta con mejor rating promedio.



```
db.recetas.find({}, {_id: 0, title: 1, rating_avg: 1}).sort({rating_avg: -1}).skip(2).limit(1);
```

title	rating_avg
Pancakes	3.69

10. Cree una consulta que busque las recetas que tienen comentarios.



```
db.recetas.find({comments:{$exists:true}}, {_id: 0, title: 1, comments: 1});
```

title	comments
Pancakes	[{text: "Delicious!", user: "Alice"}, {text: "Great taste!", user: "Bob"}]
Apple Pie	[{text: "Yummy!", user: "Charlie"}, {text: "Love it!", user: "David"}]

11. Cree una consulta en la que liste las recetas que son de postres.

The screenshot shows the Studio 3T interface for MongoDB. The left sidebar displays connection details and operations logs. The main area has a script editor with the following query:

```
42 );
43 // Consulta que muestra la tercera receta con mejor rating promedio
44 db.recetas.find({}).sort({_id: 0, title: 1, rating_avg: 1}).skip(2).limit(1);
45
46 // Consulta que busca las recetas que tienen comentarios
47 db.recetas.find({comments:{$exists:true}}, {_id: 0, title: 1, comments: 1});
48
49 // Consulta con las recetas que son de postres
50 db.recetas.find({type: "Dessert"}, {_id: 0, title: 1, type: 1});
51
52
53
54
55
56
```

The results table below shows two documents:

recetas	type
Apple Pie	Dessert
Zucchini Brownies	Dessert

12. Cree una consulta en la que elimine las recetas que sean difíciles de cocinar.

The screenshot shows the Studio 3T interface for MongoDB. The left sidebar displays the database structure under 'lab01'. The main area contains a script editor with the following code:

```

43 // Consulta que muestra la tercera receta con mejor rating procedio
44 db.recetas.find({}).sort({rating_avg: -1}).skip(2).limit(1);
45 // Consulta que busca las recetas que tienen comentarios
46 db.recetas.find({comments:{$exists:true}}, {id: 0, title: 1, comments: 1});
47 // Consulta con las recetas que son de postres
48 db.recetas.find({type: "Dessert"}, {id: 0, title: 1, type: 1});
49 // Consulta en la que se eliminan las recetas que sean dificiles de cocinar.
50 db.recetas.deleteMany({tags:{$in:[ "easy"]}});
51
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```

The 'Operations' panel on the left shows several export operations completed. The bottom status bar indicates the date and time as 21/01/2024 03:33.

The screenshot shows the Studio 3T interface for MongoDB. The left sidebar displays the database structure under 'lab01'. The main area contains a script editor with the following code:

```

1 // Consulta para obtener todas las recetas.
2 db.recetas.find();
3 // Consulta para obtener todas los usuarios.
4 db.usuarios.find();
5
6 // Nuevo documento en recetas con titulo, descripcion y tiempo de coccion
7 db.recetas.insertOne({
8   title: 'Tomato Pasta',
9   desc: 'Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions',
10  cook_time: 20
11 });
12
13
14 // Consulta que busque la nueva receta
15 db.recetas.find({

```

The 'Operations' panel on the left shows several export operations completed. The bottom status bar indicates the date and time as 21/01/2024 03:34.

Below the script editor, a table titled 'recetas > title' displays the inserted document:

_id	title	calories_per_serving	cook_time	desc	directions	ingredients	likes	likes_count	prep_time
5e67856d07beb...	Chicken Soft Ta...	205	19	Mexican soft ta...	[4 elements]	[3 elements]	[3 elements]	10	10
5e6b1d313260aa...	Brown Sugar Mu...	273	60	A sweet twist o...	[2 elements]	[3 elements]	3	12	
5e6d1fcd0d33e9...	Zucchini Brown...	271	32	Don't worry, the...	[3 elements]	[7 elements]	12	12	
5e5e9c470d33e9...	Tacos	210	20	Classic Mexican...	[5 elements]	[3 elements]	2	10	

13. Con base a la estructura observada en la colección de usuarios, cree 3 nuevos documentos de usuarios en una sola instrucción, que contenga los siguientes campos:

- a. Nombre
- b. Apellido
- c. Correo electrónico
- d. Contraseña

The screenshot shows the MongoDB interface in Studio 3T. The left sidebar lists databases (atlas, lab01) and collections (recetas, usuarios). The right pane shows the MongoDB shell. A script is being run to insert three users into the 'usuarios' collection:

```

db.usuarios.insertMany([
  {
    firstname: 'Jorge',
    lastname: 'Killing',
    email: 'kie1581@uvp.edu.pt',
    password: '123456'
  },
  {
    firstname: 'Cristiano',
    lastname: 'Ronaldo',
    email: 'cr7@gmail.com',
    password: 'siu'
  }
])
    
```

The 'Raw shell output' pane shows the results of the insert operation, indicating 3 fields inserted.

The screenshot shows the MongoDB interface in Studio 3T. The left sidebar lists databases (atlas, lab01) and collections (recetas, usuarios). The right pane shows the MongoDB shell. A script is being run to insert a new recipe into the 'recetas' collection:

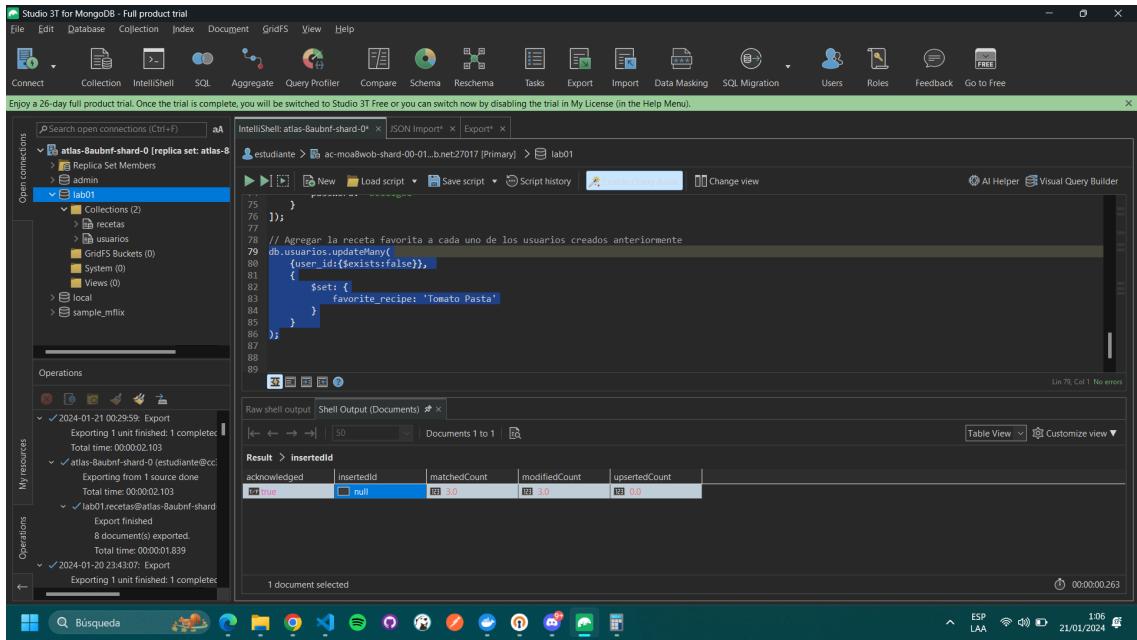
```

1 // Consulta para obtener todas las recetas.
2 db.recetas.find();
3 // Consulta para obtener todas los usuarios.
4 db.usuarios.find();
5 // Nuevo documento en recetas con titulo, descripcion y tiempo de coccion
6 db.recetas.insertOne({
7   title: 'Tomato Pasta',
8   desc: 'Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions',
9   cook_time: 20
10 });
11 // Consulta que busque la nueva receta
12 db.recetas.find();
13
14 // Consulta que busque la nueva receta
15 db.recetas.find();
    
```

The 'Raw shell output' pane shows the results of the insert operation, indicating 1 document selected. Below it, the 'usuarios' collection is shown with its data:

_id	user_id	firstname	lastname	title	email	password	lastName
5e5acbf426694d...	2	Grace	Hopper	Rear Admiral	grace@navy.mil	Gsw4&WC^e...	
5e5acbf426694d...	1	Cadelyn			none@example...	ZHN516RPW8kr...	Jenkins
5e5acbf426694d...	3	Jose	Kiesling		kie1581@uvp...	123456	
5e5acbf426694d...	4	Cristiano	Ronaldo		cr7@gmail.com	siu	
5e5acbf426694d...	5	Jude	Bellingham		j.bellingham@g...	bellingol	

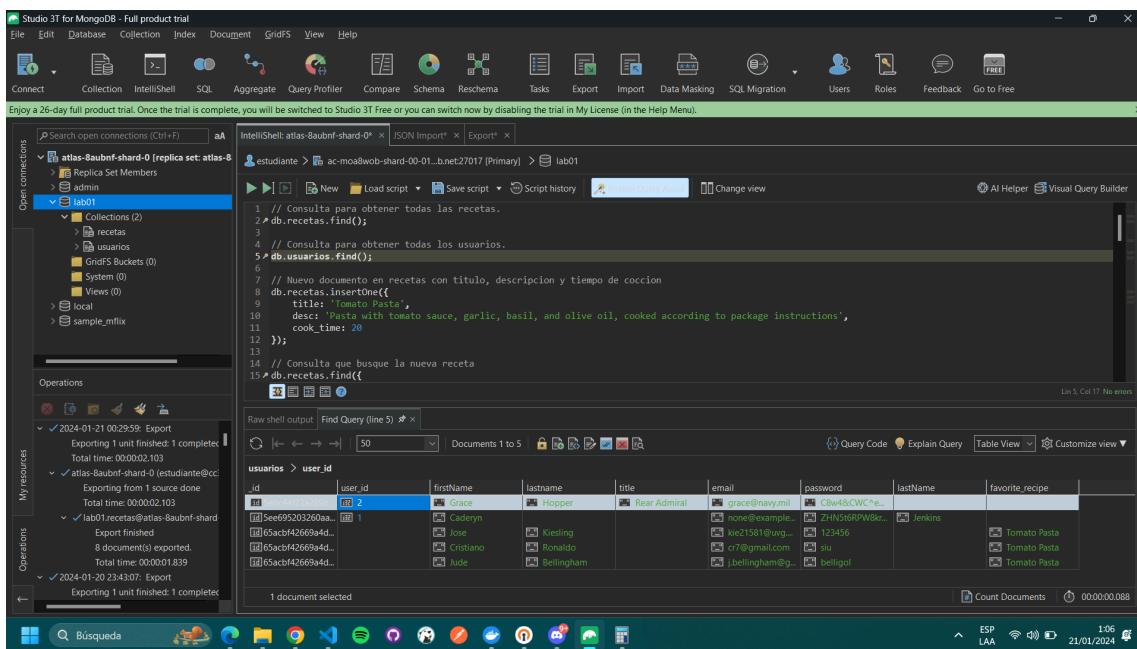
14. Cree las consultas para agregarle la receta favorita a cada uno de los usuarios creados anteriormente.



```

Studio 3T for MongoDB - Full product trial
File Edit Database Collection Index Document GridFS View Help
Connect Collection Intellishell SQL Aggregate Query Profiler Compare Schema Reschema Tasks Export Import Data Masking SQL Migration Users Roles Feedback Go to Free
Enjoy a 26-day full product trial. Once the trial is complete, you will be switched to Studio 3T Free or you can switch now by disabling the trial in My License (in the Help Menu).
IntelliShell: atlas-Baubnf-shard-0 [replica set: atlas-B]
atlas-Baubnf-shard-0 [replica set: atlas-B] > lab01
@estudiante <- ac-moawob-shard-00-01...b.net27017 [Primary] > lab01
Operations
Raw shell output Shell Output (Documents) ×
Result > inserted
Raw shell output Find Query (line 5) ×
1 // Consulta para obtener todas las recetas.
2 db.recetas.find();
3 // Consulta para obtener todos los usuarios.
4 db.usuarios.find();
5 // Nuevo documento en recetas con titulo, descripcion y tiempo de coccion
6 db.recetas.insertOne({
7   title: 'Tomato Pasta',
8   desc: 'Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions',
9   cook_time: 20
10 });
11
12 });
13
14 // Consulta que busque la nueva receta
15 db.recetas.find({ favorite_recipe: 'Tomato Pasta' })
Lin 79, Col 1 No errors
1 document selected
106 LAA 21/01/2024

```

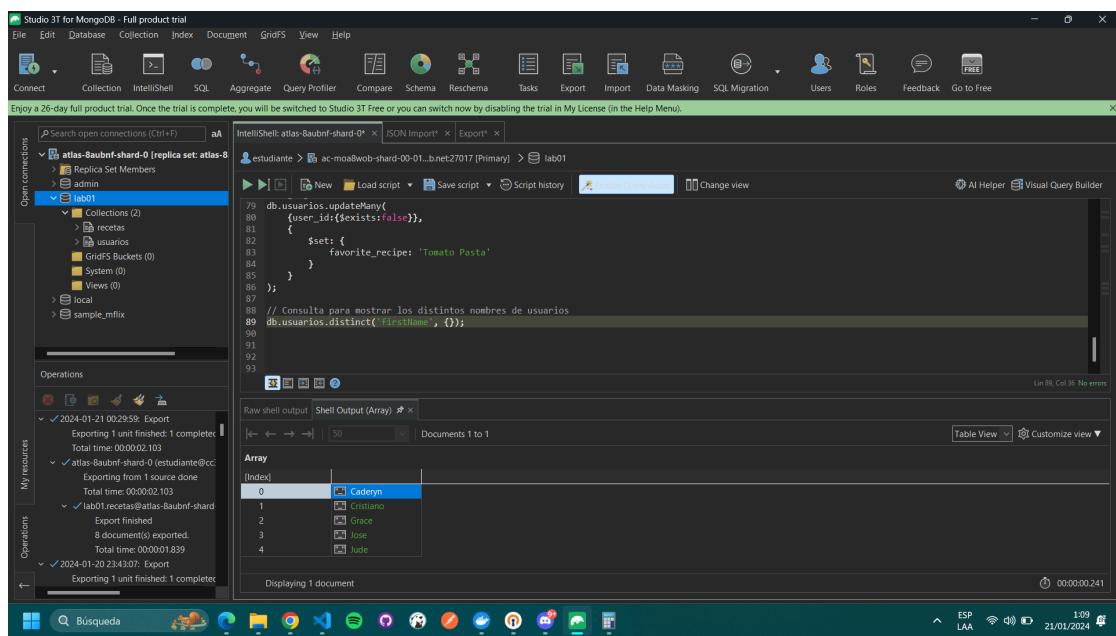


```

Studio 3T for MongoDB - Full product trial
File Edit Database Collection Index Document GridFS View Help
Connect Collection Intellishell SQL Aggregate Query Profiler Compare Schema Reschema Tasks Export Import Data Masking SQL Migration Users Roles Feedback Go to Free
Enjoy a 26-day full product trial. Once the trial is complete, you will be switched to Studio 3T Free or you can switch now by disabling the trial in My License (in the Help Menu).
IntelliShell: atlas-Baubnf-shard-0 [replica set: atlas-B]
atlas-Baubnf-shard-0 [replica set: atlas-B] > lab01
@estudiante <- ac-moawob-shard-00-01...b.net27017 [Primary] > lab01
Operations
Raw shell output Find Query (line 5) ×
1 // Consulta para obtener todas las recetas.
2 db.recetas.find();
3 // Consulta para obtener todos los usuarios.
4 db.usuarios.find();
5 // Nuevo documento en recetas con titulo, descripcion y tiempo de coccion
6 db.recetas.insertOne({
7   title: 'Tomato Pasta',
8   desc: 'Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions',
9   cook_time: 20
10 });
11
12 });
13
14 // Consulta que busque la nueva receta
15 db.recetas.find({ favorite_recipe: 'Tomato Pasta' })
Lin 5, Col 17 No errors
1 document selected
106 LAA 21/01/2024

```

15. Cree una consulta para consultar los distintos nombres de usuarios.

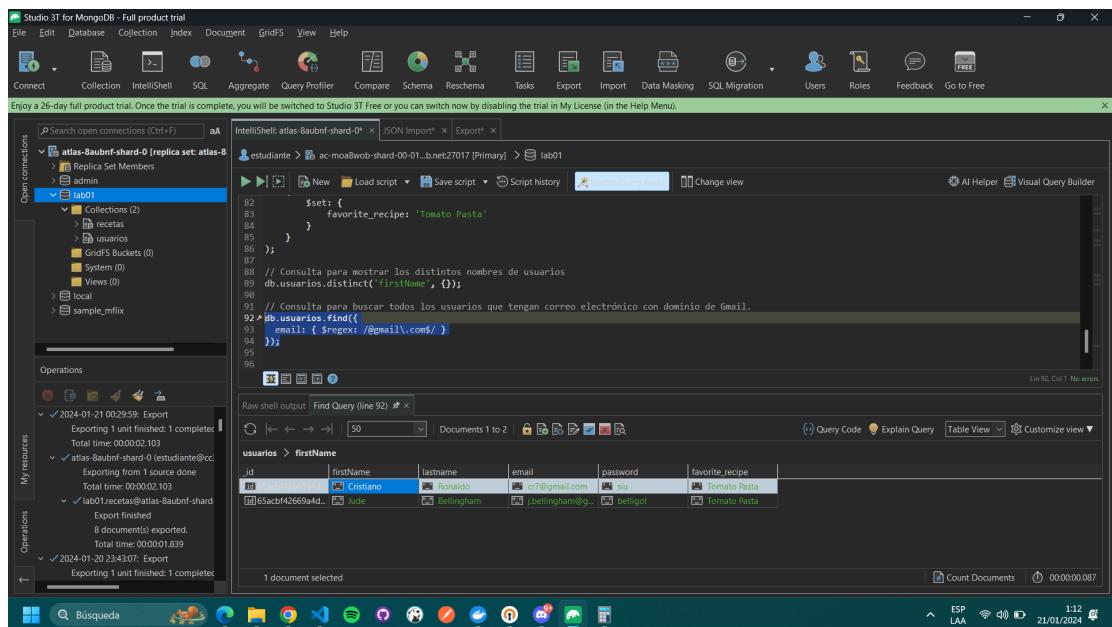


The screenshot shows the Studio 3T interface for MongoDB. The left sidebar lists databases (Replica Set Members, admin, lab01), collections (recetas, usuarios, GridFS Buckets, System, Views), and operations (Exporting, Importing). The main pane displays a query script and its results. The query is:

```
db.usuarios.updateMany({user_id:{$exists:false}}, {$set: {favorite_recipe: 'Tomato Pasta'}});  
db.usuarios.distinct("firstname", {});
```

The results show an array of five distinct first names: Cadelyn, Cristiano, Grace, Jose, and Jude.

16. Investigue el uso de expresiones regulares en la instrucción find() y cree una consulta para buscar todos los usuarios que tengan correo electrónico con dominio de Gmail.



The screenshot shows the Studio 3T interface for MongoDB. The left sidebar lists databases (Replica Set Members, admin, lab01), collections (recetas, usuarios, GridFS Buckets, System, Views), and operations (Exporting, Importing). The main pane displays a query script and its results. The query is:

```
db.usuarios.find({email: {$regex: '/@gmail\\.com$/'}});
```

The results show two users with Gmail email addresses: Cristiano and Jude.

17. Agregar un campo de actividad a los usuarios, para indicar si están activos o inactivos con un valor booleano.

```

db.usuarios.updateMany(
  {
    email: { $regex: '@gmail\\.com$' }
  },
  {
    $set: { active: true }
  }
)

```

The screenshot shows the MongoDB shell interface in Studio 3T. The user is running an `updateMany` command on the `usuarios` collection. The command filters documents where the `email` field matches a regex pattern `@gmail\.com\$` and sets the `active` field to `true`. The results show that 50 documents were modified.

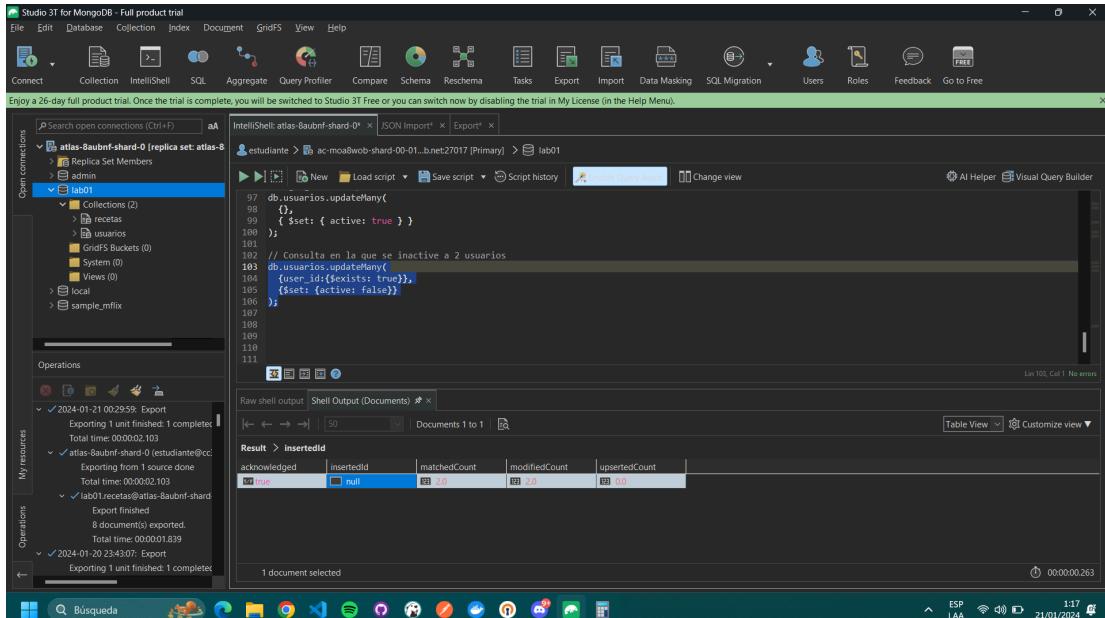
```

db.recetas.insertOne({
  title: 'Tomato Pasta',
  desc: 'Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions',
  cook_time: 20
});

```

The screenshot shows the MongoDB shell interface in Studio 3T. The user is running a `find` command on the `recetas` collection. The command inserts a new document with a title 'Tomato Pasta', description 'Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions', and a cook time of 20 minutes. The results show the insertion of one document.

18. Cree una consulta en la que inactive a 2 usuarios.



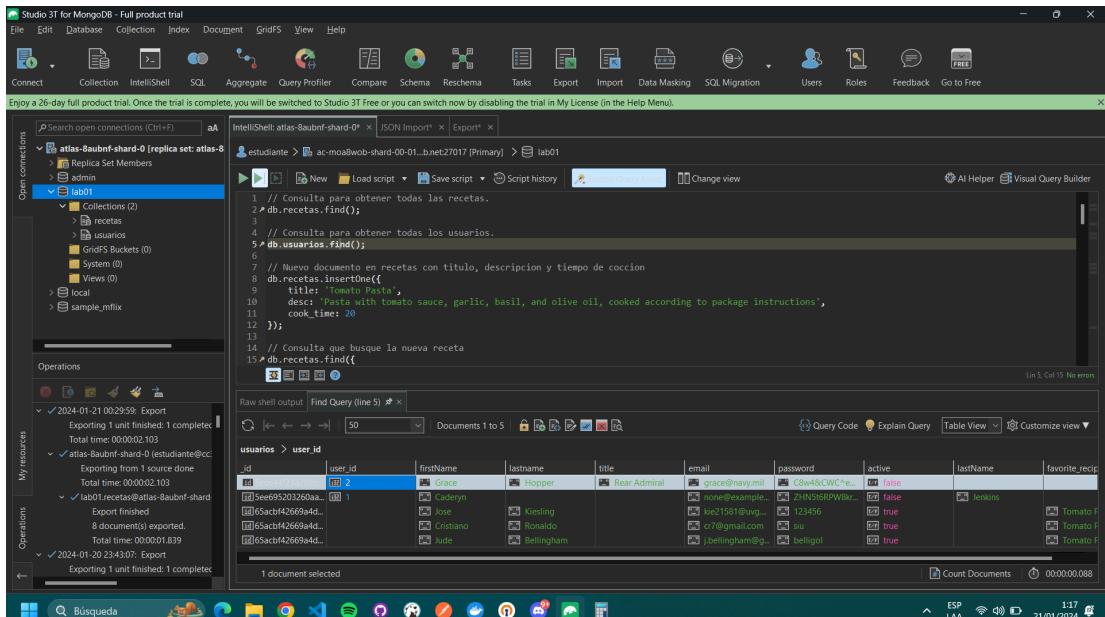
The screenshot shows the Studio 3T interface connected to a MongoDB database named 'lab01'. In the 'Collections' section, the 'recetas' and 'usuarios' collections are visible. The 'usuarios' collection contains documents with fields like '_id', 'user_id', 'firstName', 'lastName', 'title', 'email', 'password', 'active', and 'lastName'. A query is being run in the script editor to update two users:

```

db.usuarios.updateMany(
  {},
  { $set: { active: true } }
);
// Consulta en la que se inactive a 2 usuarios
db.usuarios.updateMany(
  { user_id: { $exists: true } },
  { $set: { active: false } }
);

```

The 'Raw shell output' pane shows the results of the update operation, indicating 2 documents were matched and updated, with 0 new documents inserted. The status bar at the bottom right shows the date and time as 21/01/2024 1:17.



The screenshot shows the Studio 3T interface connected to a MongoDB database named 'lab01'. The 'recetas' collection is selected. A query is being run in the script editor to insert a new document into the 'recetas' collection and then find it:

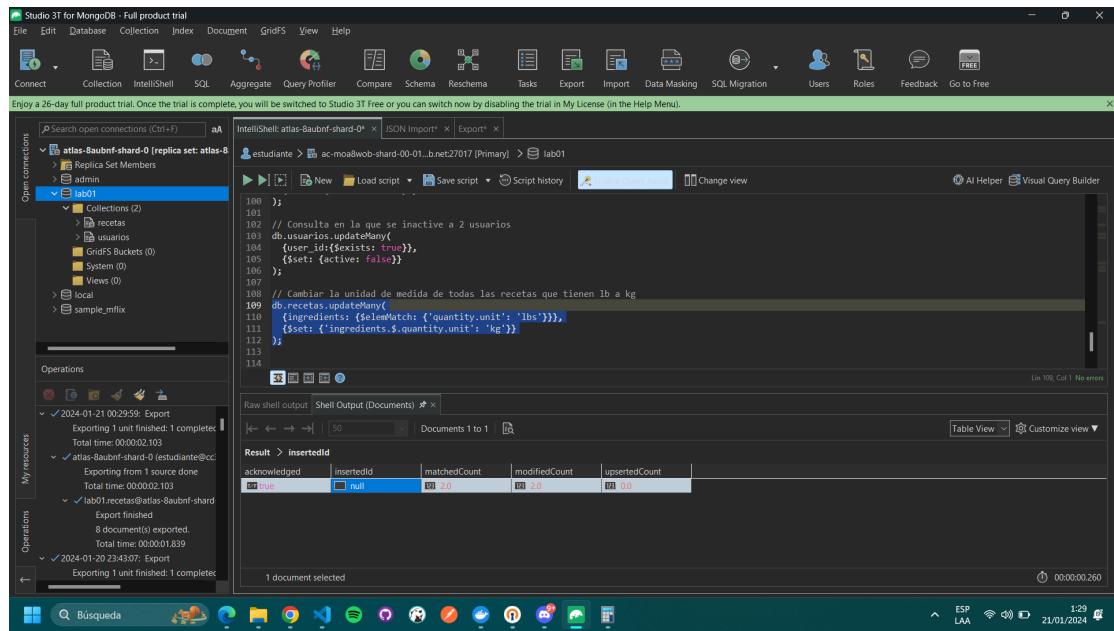
```

// Consulta para obtener todas las recetas.
db.recetas.find();
// Consulta para obtener todas los usuarios.
db.usuarios.find();
// Nuevo documento en recetas con titulo, descripcion y tiempo de coccion
db.recetas.insertOne({
  title: 'Tomato Pasta',
  desc: 'Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions',
  cook_time: 20
});
// Consulta que busque la nueva receta
db.recetas.find();

```

The 'Raw shell output' pane shows the results of the find operation, displaying a table of users from the 'usuarios' collection. The table includes columns: _id, user_id, firstName, lastName, title, email, password, active, and lastName. The status bar at the bottom right shows the date and time as 21/01/2024 1:17.

19. Cree una consulta en la que cambie la unidad de medida de todas las recetas que tienen lb a kg.



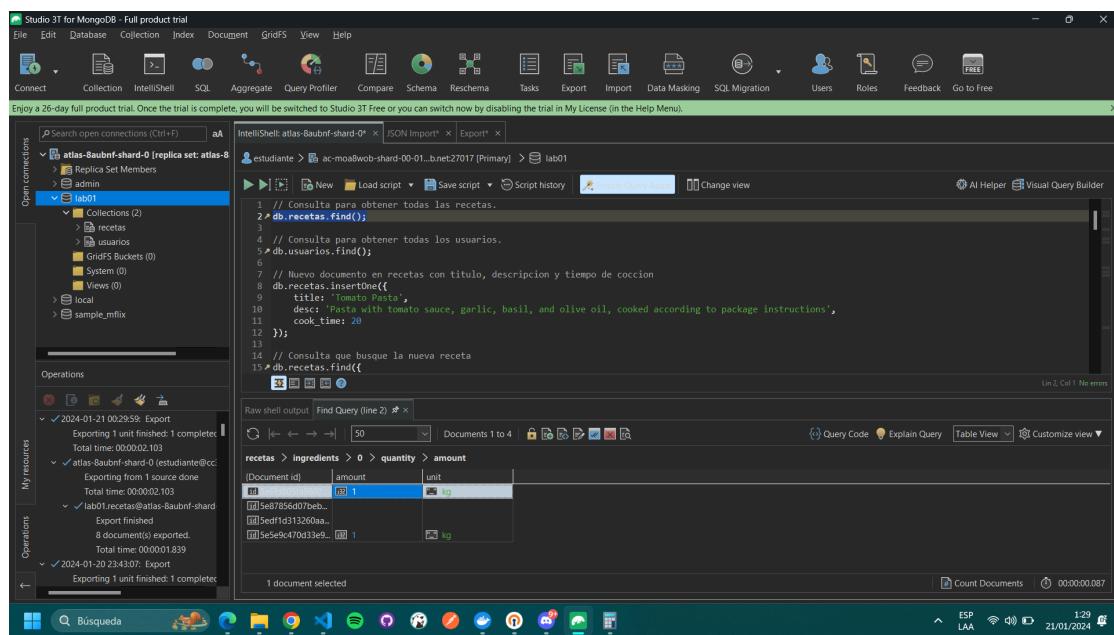
```

db.recetas.updateMany(
  {user_id: {$exists: true}},
  {$set: {active: false}}
)

// Cambiar la unidad de medida de todas las recetas que tienen lb a kg
db.recetas.updateMany(
  {ingredients: {$elemMatch: {'quantity.unit': 'lbs'}}},
  {$set: {'ingredients.$quantity.unit': 'kg'}}
)

```

The screenshot shows the MongoDB shell interface in Studio 3T. The current database is 'estudiante' and the collection is 'lab01'. The code editor contains the provided update query. The raw shell output shows the results of the update operation, indicating 2 documents were matched and updated. The status bar at the bottom right shows the date as 21/01/2024 and the time as 1:20.



```

1 // Consulta para obtener todas las recetas.
2 db.recetas.find();
3
4 // Consulta para obtener todas los usuarios.
5 db.usuarios.find();
6
7 // Nuevo documento en recetas con titulo, descripcion y tiempo de coccion
8 db.recetas.insertOne({
9   title: "Tomato Pasta",
10   desc: "Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions",
11   cook_time: 20
12 });
13
14 // Consulta que busque la nueva receta
15 db.recetas.find({
16   title: "Tomato Pasta"
})

```

The screenshot shows the MongoDB shell interface in Studio 3T. The current database is 'estudiante' and the collection is 'lab01'. The code editor contains a find query to retrieve all documents from the 'recetas' collection. The raw shell output shows the results of the find operation, displaying the first few documents. The status bar at the bottom right shows the date as 21/01/2024 and the time as 1:29.

20. Cree una consulta en la que elimine a los usuarios inactivos.

The screenshot shows the Studio 3T interface for MongoDB. The left sidebar displays the database structure under 'lab01' with collections 'recetas' and 'usuarios'. The main pane shows a script editor with the following code:

```

107 // Cambiar la unidad de medida de todas las recetas que tienen lb a kg
108 db.recetas.updateMany(
109   {ingredients: {$elemMatch: {"quantity.unit": "lbs"}}, 
110    $set: { ingredients.$.quantity.unit: "kg" } }
111 );
112 }
113
114 // Eliminar usuarios inactivos
115 db.usuarios.deleteMany(
116   {active: false}
117 );
118
119
120
121

```

The 'Operations' tab at the bottom indicates a successful export operation from 'lab01.recetas@atlas-Baunbf-shard' on 2024-01-21 00:29:59, with a total time of 00:00:02.103. The 'Raw shell output' tab shows the result of the delete operation with a count of 2.0.

The screenshot shows the Studio 3T interface for MongoDB. The left sidebar displays the database structure under 'lab01' with collections 'recetas' and 'usuarios'. The main pane shows a script editor with the following code:

```

1 // Consulta para obtener todas las recetas.
2 db.recetas.find();
3
4 // Consulta para obtener todas los usuarios.
5 db.usuarios.find();
6
7 // Nueva documento en recetas con titulo, descripcion y tiempo de coccion
8 db.recetas.insertOne({
9   title: "Pasta",
10   desc: "Pasta with tomato sauce, garlic, basil, and olive oil, cooked according to package instructions",
11   cook_time: 20
12 });
13
14 // Consulta que busque la nueva receta
15 db.recetas.find();

```

The 'Operations' tab at the bottom indicates a successful export operation from 'lab01.recetas@atlas-Baunbf-shard' on 2024-01-21 00:29:59, with a total time of 00:00:02.103. The 'Raw shell output' tab shows the results of the find operation, displaying a table of users with columns: id, firstName, lastName, email, password, favorite_recipe, and active. The table contains four rows of data.