

QUIZ

Download database berikut:

- <https://atlas-education.s3.amazonaws.com/sampledatabackup.zip>

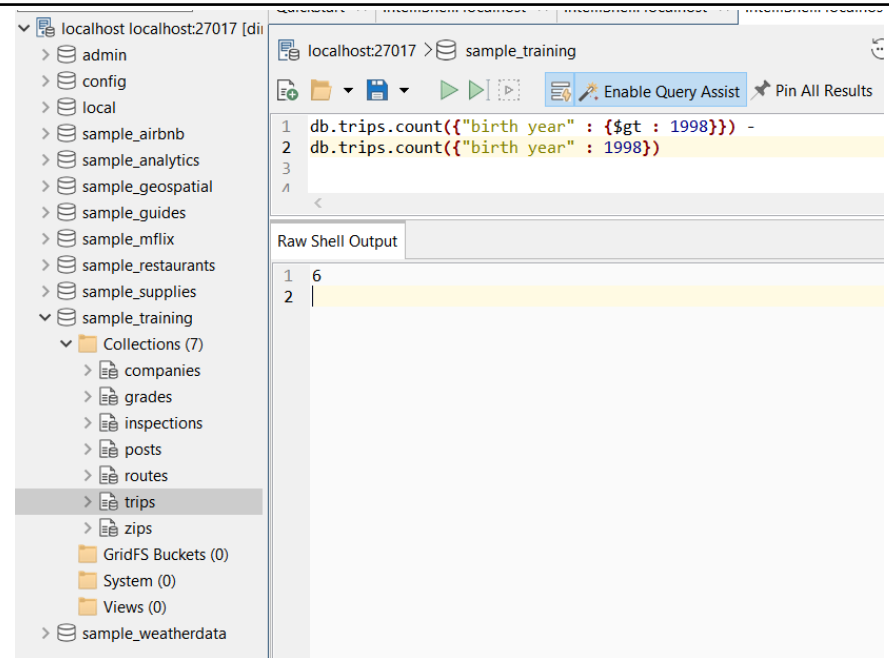
Restore menggunakan

- `mongorestore --archive=sampledatabackup.zip`

SOAL:

1. Simple Comparison

What is the difference between the number of people born in 1998 and the number of people born after 1998 in the sample_training.trips collection?

Answer	6
Query	 <p>The screenshot shows the MongoDB Compass interface. On the left, the database structure is listed, with 'sample_training.trips' selected. The main panel displays a query: <code>db.trips.count({"birth_year" : {"\$gt" : 1998}}) - db.trips.count({"birth_year" : 1998})</code>. The 'Raw Shell Output' tab shows the result: <code>1 6</code>.</p>

2. Simple Logical Expression

Which is the most succinct query to return all documents from the sample_training.inspections collection where the inspection date is either "Feb 20 2015", or "Feb 21 2015" and the company is not part of the "Cigarette Retail Dealer - 127" sector?

Answer

```
db.inspections.find(  
  {  
    date : {$in : ["Feb 20 2015", "Feb 21 2015"]},  
    sector : {$ne : "Cigarette Retail Dealer - 127"},  
  }  
)
```

Query

localhost localhost:27017 [di

admin

config

local

sample_airbnb

sample_analytics

sample_geospatial

sample_guides

sample_mflix

sample_restaurants

sample_supplies

sample_training

Collections (7)

companies

grades

inspections

posts

routes

trips

zips

GridFS Buckets (0)

System (0)

Views (0)

sample_weatherdata

localhost:27017 > sample_training

db.inspections.find(
 {
 date : {\$in : ["Feb 20 2015", "Feb 21 2015"]},
 sector : {\$ne : "Cigarette Retail Dealer - 127"},
 }
)

Raw Shell Output Find Query (line 1) ×

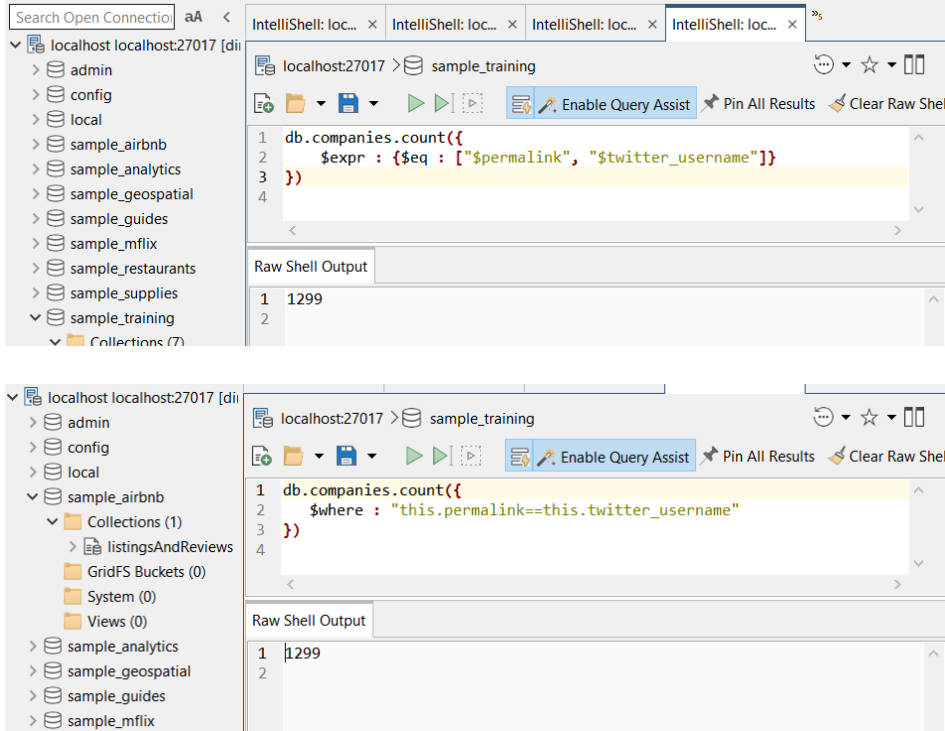
50 Documents 1 to 50

inspections > id

_id	id	certificate_number	business_name	date
56d61033a378ec...	8373-2015-ENFO	9287514	BROADWAY KIT...	Feb
56d61033a378ec...	8719-2015-ENFO	9287179	JONG SUK LEE	Feb
56d61033a378ec...	9028-2015-ENFO	3033647	LEE, CHEON O.	Feb
56d61033a378ec...	9739-2015-ENFO	9283936	LEE, CHEON O.	Feb
56d61033a378ec...	9973-2015-ENFO	3019429	TOSHIBA GLOB...	Feb
56d61033a378ec...	9983-2015-ENFO	3019430	TOSHIBA GLOB...	Feb
56d61033a378ec...	8814-2015-ENFO	9294556	EUS SHOE REPA...	Feb
56d61033a378ec...	8735-2015-ENFO	9287144	JEAN CAFE II C...	Feb
56d61033a378ec...	8877-2015-ENFO	3018611	EL SOLITARIO P...	Feb

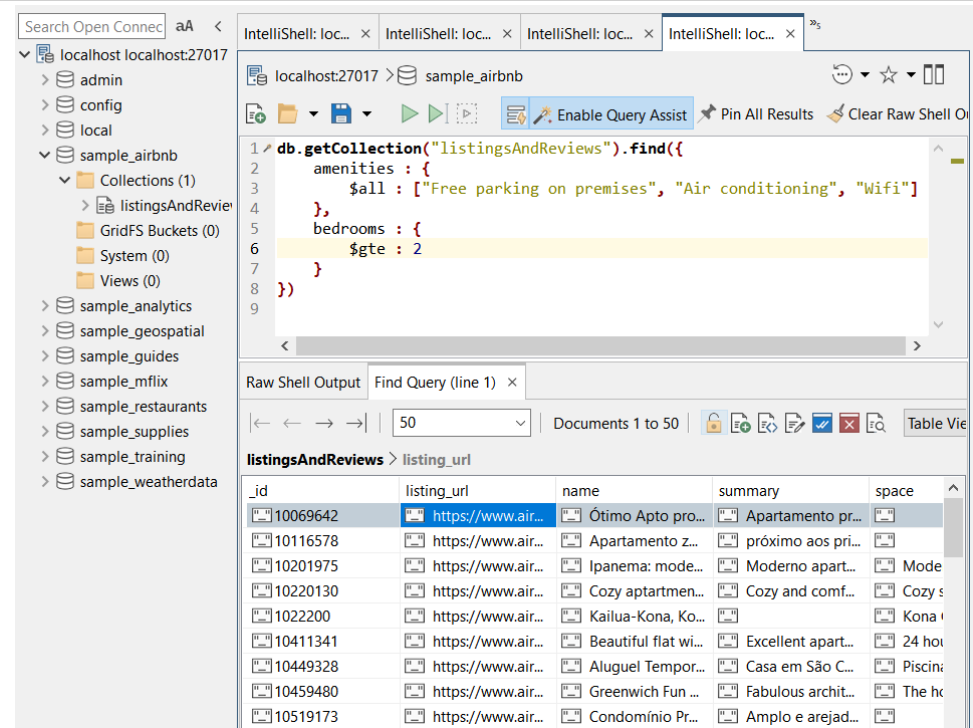
3. Simple \$expr

How many companies in the sample_training.companies collection have the same permalink as their twitter_username?

Answer	1299
Query	 <p>The top screenshot shows the MongoDB Compass interface with the following query: <code>db.companies.count({ \$expr: {\$eq: ['\$permalink', '\$twitter_username']} })</code>. The 'Raw Shell Output' shows the result: <code>1 1299</code>.</p> <p>The bottom screenshot shows the MongoDB Compass interface with the following query: <code>db.companies.count({ \$where: 'this.permalink==this.twitter_username' })</code>. The 'Raw Shell Output' shows the result: <code>1 1299</code>.</p>

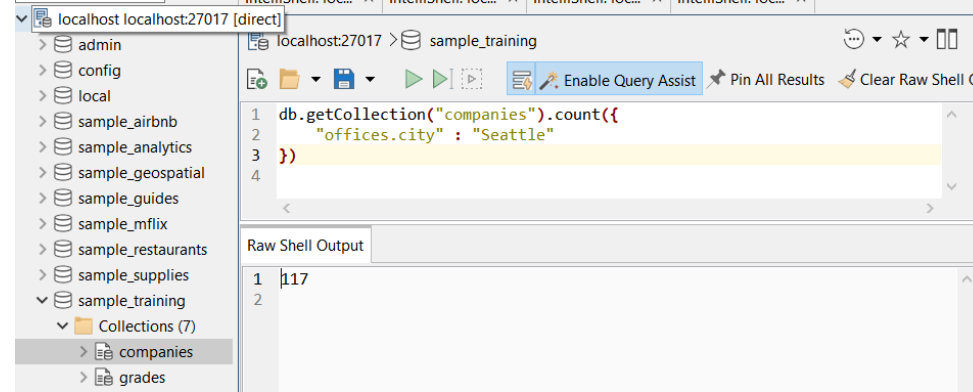
4. Array Operations

Which of the following queries will return all listings that have "Free parking on premises", "Air conditioning", and "Wifi" as part of their amenities, and have at least 2 bedrooms in the sample_airbnb.listingsAndReviews collection?

Answer	<pre>db.getCollection("listingsAndReviews").find({ amenities : { \$all : ["Free parking on premises", "Air conditioning", "Wifi"] }, bedrooms : { \$gte : 2 } })</pre>
Query	 <p>The screenshot shows the MongoDB Compass interface. On the left, the database structure is visible, including the 'sample_airbnb' database and the 'listingsAndReviews' collection. The main panel displays the query: <code>db.getCollection("listingsAndReviews").find({ amenities : { \$all : ["Free parking on premises", "Air conditioning", "Wifi"] }, bedrooms : { \$gte : 2 } })</code>. Below the query, the 'Raw Shell Output' tab shows the results of the query, which is a table with columns: <code>_id</code>, <code>listing_url</code>, <code>name</code>, <code>summary</code>, and <code>space</code>. The table contains 10 rows of data, including listings like 'Ótimo Apto pro...', 'Apartamento z...', 'Ipanema: mode...', 'Cozy aptarmen...', 'Kailua-Kona, Ko...', 'Beautiful flat wi...', 'Casa em São C...', 'Greenwich Fun ...', and 'Condomínio Pr...'. The 'space' column shows values like 'Apartamento pr...', 'próximo aos pri...', 'Moderno apart...', 'Cozy and comf...', 'Kona', 'Excellent apart...', 'Piscina', 'The hc', and 'Ampla e arejad...'.</p>

5. Array Projections

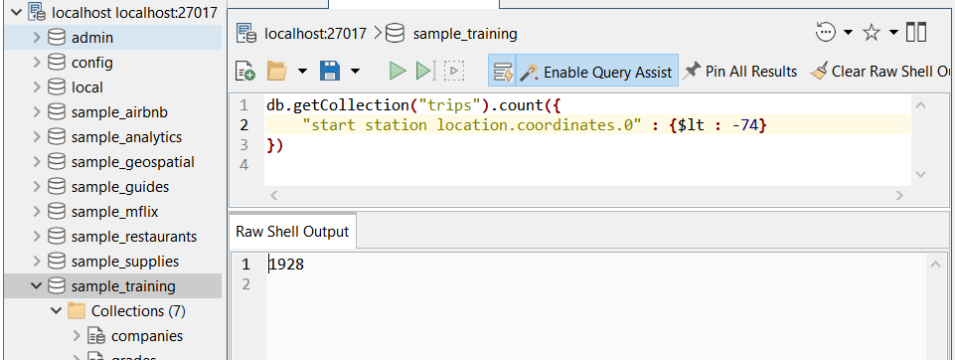
How many companies in the sample_training.companies collection have offices in the city of Seattle?

Answer	117
Query	 <p>The screenshot shows the MongoDB Compass interface. On the left, the database structure is visible, including the 'sample_training' database and the 'companies' collection. The main panel displays the query: <code>db.getCollection("companies").count({ "offices.city" : "Seattle" })</code>. Below the query, the 'Raw Shell Output' tab shows the results of the query, which is a single value: 117.</p>

6. Array Subdocument

How many trips in the sample_training.trips collection started at stations that are to the west of the -74 longitude coordinate? Longitude decreases in values as you move west. Note: We always list the longitude first and then latitude in the coordinate pairs; i.e.

<field_name>: [<longitude>, <latitude>]

Answer	1928
Query	 A screenshot of the MongoDB Compass interface. On the left, a sidebar shows a list of databases and collections. The 'sample_training' database is selected, and the 'trips' collection is highlighted. The main panel shows a query editor with the following code: <pre>1 db.getCollection("trips").count({ 2 "start_station.location.coordinates.0" : { \$lt : -74 } 3 }) 4</pre> Below the query editor, the 'Raw Shell Output' tab is active, displaying the result: <pre>1 1928 2</pre>

7. Aggregation and Pipeline

Use sample_airbnb.listingsAndReviews. Project only the address field value for each document, then group all documents into one document per address.country value, and count one for each document in each group.

Answer	<pre>db.getCollection("listingsAndReviews").aggregate([{ \$project : { address : 1 } }, { \$group : { _id : "\$address.country", count : { \$sum : 1 } } }])</pre>
--------	--

Query

localhost:27017

- admin
- config
- local
- sample_airbnb
 - Collections (1)
 - listingsAndReviews
 - GridFS Buckets (0)
 - System (0)
 - Views (0)
- sample_analytics
- sample_geospatial
- sample_guides
- sample_mflix
- sample_restaurants
- sample_supplies
- sample_training
- sample_weatherdata

IntelliShell: loc...

sample_airbnb

```

1 db.getCollection("listingsAndReviews").aggregate([
2   {
3     $project : {address : 1}
4   },
5   {
6     $group : {
7       _id : "$address.country",
8       count: { $sum:1 }
9     }
10  }
11 ])
12

```

Raw Shell Output

Aggregate Query (line 1)

Documents 1 to 9

Table View

listingsAndReviews > count																				
<table><tr><th>_id</th><th>count</th></tr><tr><td>Spain</td><td>633.0</td></tr><tr><td>Portugal</td><td>555.0</td></tr><tr><td>Turkey</td><td>661.0</td></tr><tr><td>Hong Kong</td><td>600.0</td></tr><tr><td>Canada</td><td>649.0</td></tr><tr><td>Australia</td><td>610.0</td></tr><tr><td>Brazil</td><td>606.0</td></tr><tr><td>United States</td><td>1222.0</td></tr><tr><td>China</td><td>19.0</td></tr></table>	_id	count	Spain	633.0	Portugal	555.0	Turkey	661.0	Hong Kong	600.0	Canada	649.0	Australia	610.0	Brazil	606.0	United States	1222.0	China	19.0
_id	count																			
Spain	633.0																			
Portugal	555.0																			
Turkey	661.0																			
Hong Kong	600.0																			
Canada	649.0																			
Australia	610.0																			
Brazil	606.0																			
United States	1222.0																			
China	19.0																			

8. Sort and Limit

Write a query to find the year was the youngest bike rider from the sample_training.trips collection born?

Answer

```

db.getCollection("trips").find(
{
  "birth year" : {$ne : ""}
},
{
  _id:0,
  "birth year" : 1
}
)
.sort({"birth year" : -1})
.limit(1)

```

Query

localhost:27017

- admin
- config
- local
- sample_airbnb
- sample_analytics
- sample_geospatial
- sample_guides
- sample_mflix
- sample_restaurants
- sample_supplies
- sample_training
 - Collections (7)
 - companies
 - grades
 - inspections
 - posts
 - routes
 - trips
 - zips
 - GridFS Buckets (0)
 - System (0)

localhost:27017 > sample_training

```

1 db.getCollection("trips").find(
2   {
3     "birth year" : {$ne : ""}
4   },
5   {
6     _id:0,
7     "birth year" : 1
8   }
9 )
10 .sort({"birth year" : -1})
11 .limit(1)

```

Raw Shell Output

Find Query (line 1)

Documents 1 to 1

Table View

trips > birth year				
<table><tr><th>_id</th><th>birth year</th></tr><tr><td></td><td>1999</td></tr></table>	_id	birth year		1999
_id	birth year			
	1999			