

Języki skryptowe w aplikacjach internetowych Lab 1

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1. Adding new data

- a. Create a new database.
- b. Create a collection named "Student" in the database

```
Please enter a MongoDB connection string (Default: mongodb://localhost/): mongodb+srv://mirosslav11:1122334455@cluster.gf74hku.mongodb.net/
Please enter a MongoDB connection string (Default: mongodb://localhost/): mongodb+srv://mirosslav11:1122334455@cluster.gf74hku.mongodb.net/
Current Mongosh Log ID: 6608261c25f1b316039f9909
Connecting to:      mongodb+srv://<credentials>@cluster.gf74hku.mongodb.net/?appName=mongosh+2.2.2
Using MongoDB:      7.0.7
Using Mongosh:       2.2.2

For mongosh info see: https://docs.mongodb.com/mongodb-shell/

To help improve our products, anonymous usage data is collected and sent to MongoDB periodically (https://www.mongodb.com/legal/privacy-policy).
You can opt-out by running the disableTelemetry() command.

Atlas atlas-5n308p-shard-0 [primary] test> show database
MongoshInvalidInputError: [COMMON-10001] 'database' is not a valid argument for "show".
Atlas atlas-5n308p-shard-0 [primary] test> show database
MongoshInvalidInputError: [COMMON-10001] 'database' is not a valid argument for "show".
Atlas atlas-5n308p-shard-0 [primary] test> show databases
lab1          40.00 KiB
sample_mflix 112.11 MiB
test          80.00 KiB
admin         336.00 KiB
local         981.31 MiB
Atlas atlas-5n308p-shard-0 [primary] test> use test
already on db test
Atlas atlas-5n308p-shard-0 [primary] test> show collections
Kolekcja
testowa
Atlas atlas-5n308p-shard-0 [primary] test> db.createCollection('Student')
TypeError: db.createCollection is not a function
Atlas atlas-5n308p-shard-0 [primary] test> db.createCollection('Student')
{ ok: 1 }
```

- c. Add documents to the collection describing five students, please include information about name,surname, age, index number and field of study.

```

Atlas atlas-5n308p-shard-0 [primary] test> db.Student.insertMany([
...   {
...     name: "Piotr",
...     surname: "Nowak",
...     age: 20,
...     index_number: "12345",
...     field_of_study: "Informatyka"
...   },
...   {
...     name: "Anna",
...     surname: "Kowalska",
Atlas atlas-5n308p-shard-0 [primary] test>
...     index_number: "23456",
...     field_of_study: "Ekonomia"
...   },
...   {
...     name: "Michał",
...     surname: "Wiśniewski",
...     age: 19,
...     index_number: "34567",
...     field_of_study: "Matematyka"
...   },
...   {
...     name: "Agnieszka",
...     surname: "Dąbrowska",
...     age: 22,
...     index_number: "45678",
...     field_of_study: "Lingwistyka"
...   },
...   {
...     name: "Krzysztof",
...     surname: "Lewandowski",
...     age: 20,
...     index_number: "56789",
...     field_of_study: "Fizyka"
...   }
... ]);
{
  acknowledged: true,

```

```

...   }
... ]);
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('660827f725f1b316039f990a'),
    '1': ObjectId('660827f725f1b316039f990b'),
    '2': ObjectId('660827f725f1b316039f990c'),
    '3': ObjectId('660827f725f1b316039f990d'),
    '4': ObjectId('660827f725f1b316039f990e')
  }
}

```

2. Inquiries

a. Please display all students

```
Atlas atlas-5n308p-shard-0 [primary] test> db.Student.find({})
[
  {
    _id: ObjectId('660827f725f1b316039f990a'),
    name: 'Piotr',
    surname: 'Nowak',
    age: 20,
    index_number: '12345',
    field_of_study: 'Informatyka'
  },
  {
    _id: ObjectId('660827f725f1b316039f990b'),
    name: 'Anna',
    surname: 'Kowalska',
    age: 21,
    index_number: '23456',
    field_of_study: 'Ekonomia'
  },
  {
    _id: ObjectId('660827f725f1b316039f990c'),
    name: 'Michał',
    surname: 'Wiśniewski',
    age: 19,
    index_number: '34567',
    field_of_study: 'Matematyka'
  },
  {
    _id: ObjectId('660827f725f1b316039f990d'),
    name: 'Agnieszka',
    surname: 'Dąbrowska',
    age: 22,
    index_number: '45678',
    field_of_study: 'Lingwistyka'
  },
  {
    _id: ObjectId('660827f725f1b316039f990e'),
    name: 'Krzysztof',
    surname: 'Lewandowski',
    age: 20,
    index_number: '56789',
    field_of_study: 'Fizyka'
  }
]
```

b. Find documents that meet certain criteria:

- i. age greater than 24 years,
- ii. name containing the letter "a",
- iii. having a specific index number,

```
]
Atlas atlas-5n308p-shard-0 [primary] test> db.Student.find({ age: { $gt: 24 } })

Atlas atlas-5n308p-shard-0 [primary] test> db.Student.find({ name: { $regex: /a/i}})
[
  {
    _id: ObjectId('660827f725f1b316039f990b'),
    name: 'Anna',
    surname: 'Kowalska',
    age: 21,
    index_number: '23456',
    field_of_study: 'Ekonomia'
  },
  {
    _id: ObjectId('660827f725f1b316039f990c'),
    name: 'Michał',
    surname: 'Wiśniewski',
    age: 19,
    index_number: '34567',
    field_of_study: 'Matematyka'
  },
  {
    _id: ObjectId('660827f725f1b316039f990d'),
    name: 'Agnieszka',
    surname: 'Dąbrowska',
    age: 22,
    index_number: '45678',
    field_of_study: 'Lingwistyka'
  }
]
Atlas atlas-5n308p-shard-0 [primary] test> db.Student.find({ index_number: "45678"})
[
  {
    _id: ObjectId('660827f725f1b316039f990d'),
    name: 'Agnieszka',
    surname: 'Dąbrowska',
    age: 22,
    index_number: '45678',
    field_of_study: 'Lingwistyka'
  }
]
]
```

iv. all those who do not have the letter "b" in their surname"

```
Atlas atlas-5n308p-shard-0 [primary] test> db.Student.find({ surname: { $not: /b/i } })
[
  {
    _id: ObjectId('660827f725f1b316039f990a'),
    name: 'Piotr',
    surname: 'Nowak',
    age: 20,
    index_number: '12345',
    field_of_study: 'Informatyka'
  },
  {
    _id: ObjectId('660827f725f1b316039f990b'),
    name: 'Anna',
    surname: 'Kowalska',
    age: 21,
    index_number: '23456',
    field_of_study: 'Ekonomia'
  },
  {
    _id: ObjectId('660827f725f1b316039f990c'),
    name: 'Michał',
    surname: 'Wiśniewski',
    age: 19,
    index_number: '34567',
    field_of_study: 'Matematyka'
  },
  {
    _id: ObjectId('660827f725f1b316039f990e'),
    name: 'Krzysztof',
    surname: 'Lewandowski',
    age: 20,
    index_number: '56789',
    field_of_study: 'Fizyka'
  }
]
```

3. Data update:

a. Add new fields to existing documents. For the first one, please add a field describing an additional field of study, for the second one, two individual subjects. For the third one, information about a research scholarship.

```
Atlas atlas-5n308p-shard-0 [primary] test> db.Student.updateOne( { name: "Piotr" } , { $set: {additional_field_of_study:
... " Psychology" }}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}

Atlas atlas-5n308p-shard-0 [primary] test> db.Student.updateOne( { name: "Anna"}, { $set: { subject1: "History", subject
2: "Literature" } } )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
Atlas atlas-5n308p-shard-0 [primary] test>
```

```
Atlas atlas-5n308p-shard-0 [primary] test> db.Student.updateOne({ name: "Michał" }, { $set : {research_scholarship: true } })
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

b. Change the name of the first student and the surname of the second.

```
Atlas atlas-5n308p-shard-0 [primary] test> db.Student.updateOne( { name: "Piotr" }, { $set: {name: "Marek" } })
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}

Atlas atlas-5n308p-shard-0 [primary] test> db.Student.updateOne( { name: "Anna" }, { $set: {surname: "Nowakowska" } })
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

c. Delete any 3 fields from existing documents.

4. Data deletion:

- Remove individual documents from the collection.
- Delete multiple documents that meet the specified criteria.
- Delete the entire collection.

```
Atlas atlas-5n308p-shard-0 [primary] test> db.Student.updateOne( {name: "Marek" }, { $unset: {additional_field_of_study: "", field_of_study: "", research_scholarship: ""}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}

Atlas atlas-5n308p-shard-0 [primary] test> db.Student.updateOne(
...   { name: "Anna" },
...   { $unset: { subject1: "", subject2: "", age: "" } }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}

Atlas atlas-5n308p-shard-0 [primary] test> db.Student.updateOne(
...   { name: "Michał" },
...   { $unset: { index_number: "", surname: "", field_of_study: "" } }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}

Atlas atlas-5n308p-shard-0 [primary] test> db.Student.deleteOne({name:"Marek"})
{ acknowledged: true, deletedCount: 1 }

Atlas atlas-5n308p-shard-0 [primary] test> db.Student.deleteMany({age: { $gt: 22 } })
{ acknowledged: true, deletedCount: 0 }

Atlas atlas-5n308p-shard-0 [primary] test> db.Student.drop()
Atlas atlas-5n308p-shard-0 [primary] test> _
```

