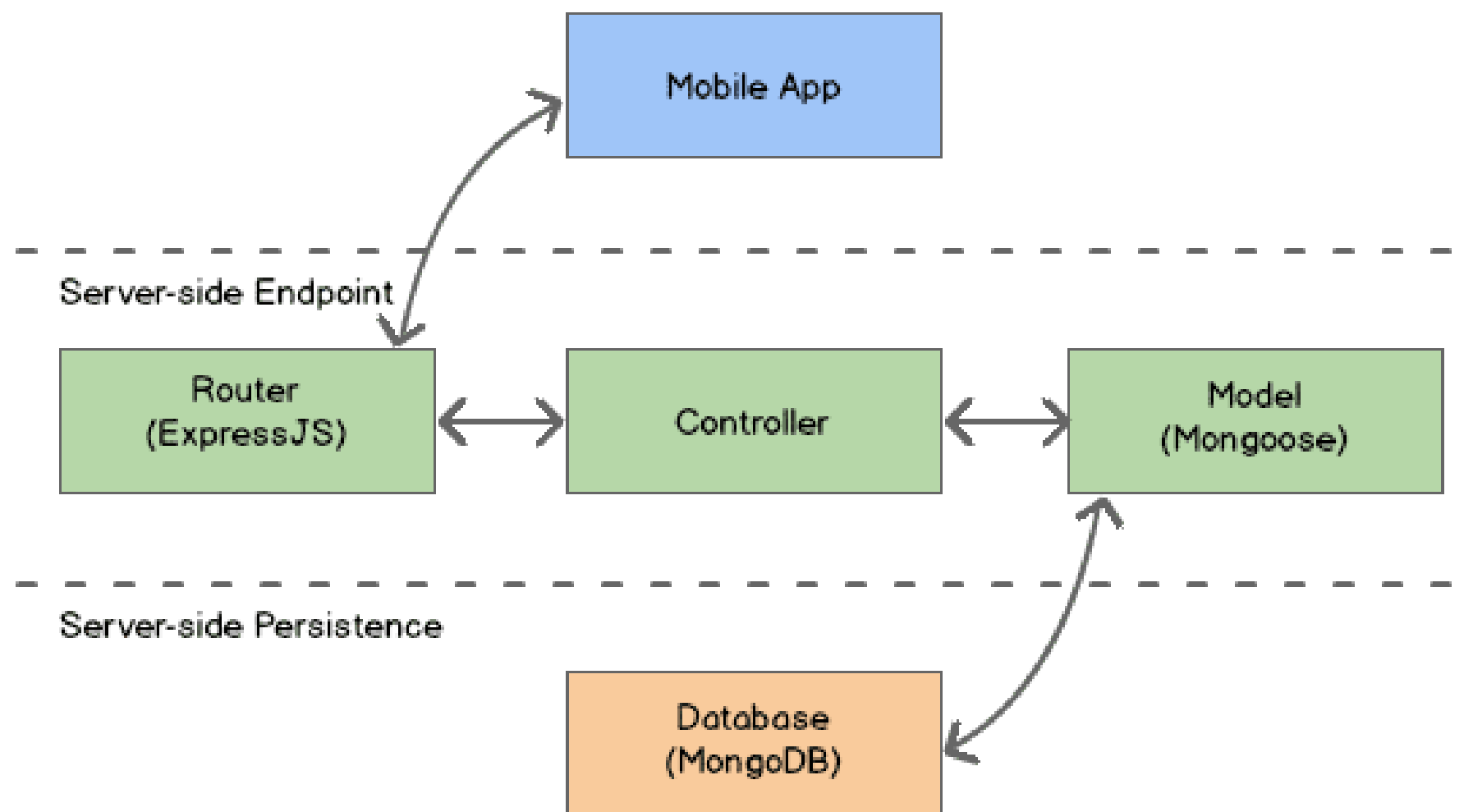


# Mongoose

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# What is Mongoose?

**Mongoose** is an Object Data Modeling (ODM) library for MongoDB and Node.js. It manages relationships between data, provides schema validation, and is used to translate between objects in code and the representation of those objects in **MongoDB**.

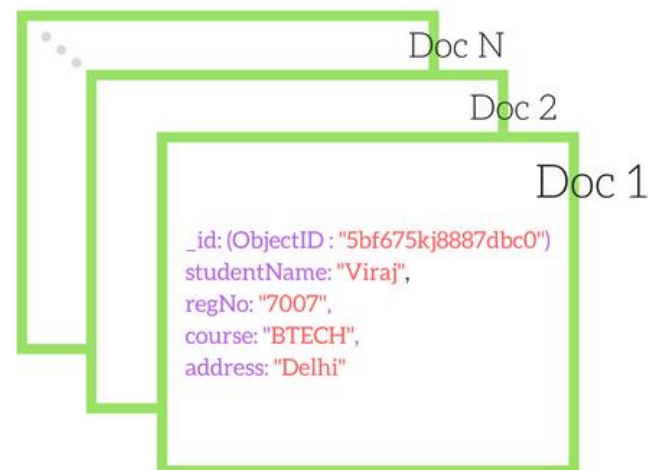


# Mongo Data Structure

**MongoDB** is a schema-less **NoSQL** document database. It means you can store JSON documents in it, and the structure of these documents can vary as it is not enforced like SQL databases. This is one of the advantages of using NoSQL as it speeds up application development and reduces the complexity of deployments.

## Collection

A collection can have multiple documents



```
{
  "_id" : "fred",
  "items" : [
    {
      "id" : "slingshot",
      "type" : "weapon",
      "damage" : 23,
      "ranged" : true
    },
    {
      "id" : "sword",
      "type" : "weapon",
      "damage" : 50,
      "ranged" : false
    }
  ]
}
```

# Installation and Connection

Install and create connection:

```
const mongoose = require('mongoose');  
  
//create mongodb connection  
mongoose.connect(  
  'mongodb://mongo:27017/DatabaseName',  
  {  
    useNewUrlParser: true, useUnifiedTopology: true  
  }  
);
```

app.js



# Schema

While Mongo is schema-less, SQL defines a schema via the table definition. A Mongoose 'schema' is a document data structure (or shape of the document).

```
const mongoose = require('mongoose');  
const Schema = mongoose.Schema;
```

```
const CompanySchema = new Schema({  
  name: {  
    type: String,  
    unique: true,  
    required: true,  
    trim: true  
  }  
});
```

./models/company.js

```
module.exports = mongoose.model('Company', CompanySchema);
```

# CRUD

## 1- Create

```
const Company = require('../models/company.js');
```

```
new Company({  
  name: name,  
}).save((err, newCompany) => {  
  if (err) // handle err  
    // do something  
});
```

./routers/controller.js

# CRUD

## 2- Read

```
const Company = require('../models/company.js');
```

```
Company.find({}, (err, companies) => {  
  if (err) {  
    // handle err  
  };  
  // do something  
});
```

./routers/controller.js

# CRUD

## 3- Update

```
const Company = require('../models/company.js');  
  
Company.findOneAndUpdate(  
  {name: "Maleki airline"},  
  {name: "Iran Khodro"},  
  (err, company) => {  
    if (err) // handle err  
    // do something  
  });
```

./routers/controller.js



# CRUD

## 4- Delete

```
const Company = require('../models/company.js');
```

```
Company.findByIdAndDelete(  
  {name: "Maleki airline"},  
  (err, company) => {  
    if (err) // handle err  
    // do something  
  });
```

./routers/controller.js

# Finished

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