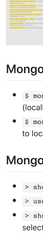
MongoDB and Mongoose Cheatsheet

Beautifully-designed print-ready PDF



MongoDB

- `$ mongod` : start MongoDB server (localhost:27017)
- `$ mongo` : open MongoDB console (connect to local server by default)

MongoDB Console

- `> show dbs` : show databases on the server
- `> use DB_NAME` : select database `DB_NAME`
- `> show collections` : show collections in the selected database
- `> db.COLLECTION_NAME.find()` : perform the find query on collection with the COLLECTION_NAME name to find any items
- `> db.COLLECTION_NAME.find({"_id": ObjectId("549a3081d0f07866fdaac6")})` : perform the find query on collection with the COLLECTION_NAME name to find item with ID 549d9a3081d0f07866fdaac6
- `> db.COLLECTION_NAME.find({"email": /gmail/})` : perform the find query on collection with the COLLECTION_NAME name to find items with email property matching `/gmail`
- `> db.COLLECTION_NAME.update(QUERY_OBJECT, SET_OBJECT)` : perform the update query on collection with the COLLECTION_NAME name to update items that match QUERY_OBJECT with SET_OBJECT
- `> db.COLLECTION_NAME.remove(QUERY_OBJECT)` : perform remove query for items matching QUERY_OBJECT criteria on the COLLECTION_NAME collection
- `> db.COLLECTION_NAME.insert(OBJECT)` : add OBJECT to the collection with the COLLECTION_NAME name

Mongoose Installation

- `$ sudo npm install mongoose` : install the latest Mongoose locally
- `$ sudo npm install mongoose@3.8.20 --save` : install Mongoose v3.8.20 locally and save to `package.json`

Mongoose Basic Usage

```
var mongoose = require('mongoose')
var dbUri = 'mongodb://localhost:27017/api
var dbConnection = mongoose.createConnecti
var Schema = mongoose.Schema
var postSchema = new Schema ({
  title: String,
  text: String
})
var Post = dbConnection.model('Post', post
Post.find({},function(error, posts){
  console.log(posts)
  process.exit(1)
})
```

Mongoose Schema

- `String`
- `Boolean`
- `Number`
- `Date`
- Array
- `Buffer`
- `Schema.Types.Mixed`
- `Schema.Types.ObjectId`

Create, Read, Update, Delete (CRUD) Mongoose Example

```
// Create
var post = new Post({title: 'a', text: 'b'
post.save(function(error, document){
  ...
})


// Read
Post.findOne(criteria, function(error, pos
  ...
})

// Update
Post.findOne(criteria, function(error, pos
  post.set()
  post.save(function(error, document){
    ...
  })
})

// Delete
Post.findOne(criteria, function(error, pos
  post.remove(function(error){
    ...
  })
})
```

Mongoose Model Methods

- `find(criteria, [fields], [options], [callback])` : find document; callback has error and documents arguments
- `count(criteria, [callback])` : return a count; callback has error and count arguments
- `findById(id, [fields], [options], [callback])` : return a single document by ID; callback has error and document arguments
- `findByIdAndUpdate(id, [update], [options], [callback])` : executes MongoDB's findAndModify to update by ID
- `findByIdAndRemove(id, [options], [callback])` : executes MongoDB's findAndModify to remove
- `findOne(criteria, [fields], [options], [callback])` : return a single document; callback has error and document arguments
- `findOneAndUpdate([criteria], [update], [options], [callback])` : executes MongoDB's findAndModify to update
- `findOneAndRemove(id, [update], [options], [callback])` : executes MongoDB's findAndModify to remove
- `update(criteria, update, [options], [callback])` : update documents; callback has error, and count arguments
- `create(doc(s), [callback])` : create document object and save it to database; callback has error and doc(s) arguments
- `remove(criteria, [callback])` : remove documents; callback has error argument

Mongoose Document Methods

- `save([callback])` : save the document; callback has error, doc and count arguments
- `set(path, val, [type], [options])` : set value on the doc's property
- `get(path, [type])` : get the value
- `isModified([path])` : check if the property has been modified
- `populate([path], [callback])` : populate reference
- `toJSON(options)` : get JSON from document
- `validate(callback)` : validate the document

Query Helpers

```
animalSchema.query.byName = function(name)
    return this.where({ name: new RegExp(n
};

var Animal = mongoose.model('Animal', an

Animal.find().byName('fido').exec(functi
    console.log(animals);
});

Animal.findOne().byName('fido').exec(fun
    console.log(animal);
});
```

Indexes

```
var animalSchema = new Schema({
  name: String,
  type: String,
  tags: { type: [String], index: true } /
});

animalSchema.index({ name: 1, type: -1 })
```