FREE eBook

LEARNING mongodb-csharp

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#mongodb-
csharp

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About

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Chapter 1: Getting started with mongodb-csharp

Remarks

MongoDB C# Driver is a .NET driver that handles requests to MongoDB Server. It allows for fully asychronous calls and handles serialization/deserialazation of objects using the BSON Library.

MongoDB C# .NET Documentation

MongoDB C# API Documentation

Versions

Version	Release Date
2.2.4	2016-05-02
2.2.3	2016-02-02
2.2.2	2016-01-15
2.2.1	2016-01-08
2.2.0	2015-12-08
2.1.1	2015-11-11
2.1.0	2015-10-19
2.0.1	2015-06-08
2.0.0	2015-04-01
1.10.0	2015-01-29

Examples

Installation or Setup

Download driver via nuget. Using this command in the package manager console

```
Install-Package mongocsharpdriver
```

How to connect MongoDb Database from application

Define parameters

```
private static IMongoClient _client;
private static IMongoDatabase _database;
private static IMongoCollection< -collection class name- > _collection;
```

Assign values to parameters

```
_client = new MongoClient("mongodb://localhost:27017");
_database = _client.GetDatabase("database name here");
_collection = _database.GetCollection< -collection class name- >("collection name here");
```

Basic Operations

```
class Program
    {

        static void Main(string[] args)
        {
            string serverName = "INTACT-ETL";
            string databaseName = "SOMEDB";
            string collectionName = "TestCol";

            //Build Connection string
            string connectionString = string.Format("mongodb://{0}", serverName);
            //Create MongoClient and connect in one step
            IMongoClient client = new MongoClient(connectionString);
            //Create database object
            IMongoDatabase database = client.GetDatabase(databaseName);

            //Inserting one object
            UserInfo userObject = new UserInfo {FirstName = "Bob",LastName = "Smith",
DateOfBirth = DateTime.Now };
            IMongoCollection<UserInfo> collection =
database.GetCollection<UserInfo>(collectionName);
            collection.InsertOne(userObject);

            //Retrieving one object
            UserInfo retrievedObject;
            FilterDefinition<UserInfo> theFilter = Builders<UserInfo>.Filter.Eq(p =>
p.FirstName, "Bob");
            retrievedObject = collection.Find<UserInfo>(theFilter).First();
            Console.WriteLine("FirstName: {0}", retrievedObject.FirstName);
            Console.WriteLine("LastName: {0}", retrievedObject.LastName);
            Console.WriteLine("DateOfBirth: {0}", retrievedObject.DateOfBirth);

            //Delete one object
            DeleteResult result =  collection.DeleteOne<UserInfo>(p => p.FirstName == "Bob");
            Console.WriteLine("Is Acked : {0}",result.IsAcknowledged);
            Console.WriteLine("Press Enter to exit...");
            Console.ReadLine();


        }
        public class UserInfo
        {
            [MongoDB.Bson.Serialization.Attributes.BsonId]
            public ObjectId? _id { get { return ObjectId.GenerateNewId(); } set { } }
            public string FirstName { get; set; }
            public string LastName { get; set; }
            public DateTime DateOfBirth { get; set; }
        }
    }
```

Read Getting started with mongodb-csharp online: https://riptutorial.com/mongodb-csharp/topic/2610/getting-started-with-mongodb-csharp

Chapter 2: CRUD Operations in MongoDB C#

Remarks

namespaces:

```
using System.Collections.Generic;
using System.Linq;

using MongoDB.Bson;
using MongoDB.Bson.Serialization.Attributes;
using MongoDB.Driver;

using IAggregateFluentExtensions = MongoDB.Driver.IAggregateFluentExtensions;
using IMongoCollectionExtensions = MongoDB.Driver.IMongoCollectionExtensions;
using MongoClient = MongoDB.Driver.MongoClient;
```

Class used in examples:

```
    public class Interactions
    {
        public ObjectId Id { get; set; }
        public string ChannelId { get; set; }
        public string ContactId { get; set; }
        public string Language { get; set; }
        public List<Pages> Pages { get; set; }
        public string SiteName { get; set; }
        public int Value { get; set; }
        public int VisitPageCount { get; set; }
    }


    public class Pages
    {
        public string Url { get; set; }
        public int VisitPageIndex { get; set; }
    }
```

Examples

Insert a Document

```
var client = new MongoClient("mongodb://localhost:27017");
var database = client.GetDatabase("test");
var collection = database.GetCollection < Interactions > ("Interactions");

var newItem = new Interactions{
    SiteName = "Example",
    Pages = new List < Pages > {
        new Pages {
            Url =  @ "http://stackoverflow.com/documentation/mongodb-csharp",
            VisitPageIndex = 4
        },
        new Pages {
            Url =  @ "https://github.com/",
            VisitPageIndex = 2
        },
    }
};
collection.InsertOne(newItem);
```

Select a Document (Linq)

```
var client = new MongoClient("mongodb://localhost:27017");
var database = client.GetDatabase("test");
var collection = database.GetCollection < Interactions > ("Interactions");
var result = IMongoCollectionExtensions
            .AsQueryable(collection)
            .FirstOrDefault(s => s.SiteName == "Example");
```

Update a Document

var client = new MongoClient("mongodb://localhost:27017"); var database = client.GetDatabase("test"); var collection = database.GetCollection < Interactions > ("Interactions");

var update = MongoDB.Driver .Builders .Update.Set(s => s.SiteName, "New Example");

collection.FindOneAndUpdate(s => s.SiteName == "Example", update);

Delete a Document

```
var client = new MongoClient("mongodb://localhost:27017");
var database = client.GetDatabase("test");
var collection = database.GetCollection < Interactions > ("Interactions");

collection.DeleteOne(s => s.SiteName == "New Example");
```

Read CRUD Operations in MongoDB C# online: https://riptutorial.com/mongodb-csharp/topic/4862/crud-operations-in-mongodb-csharp

Credits

S. No	Chapters	Contributors
1	Getting started with mongodb-csharp	Behzad, Brad Larson, Community, Ekin Yücel, Peter4499
2	CRUD Operations in MongoDB C#	Peter4499, profesor79