

## Day 1 Lab Assignments

### Use MongoDB to do the following assignments:

1. Create database named: FacultySystemDB.
2. Create collection (student) that has:
  - FirstName: string
  - LastName: string
  - Age: Number
  - Faculty: An object that has Name and Address
  - Grades: An array of objects, each object has: CourseName, Grade, Pass (Boolean).
  - IsFired: Boolean
  - {fName:"Mrihan",lName:"Mohamed",age:26,faculty:{name:"FCI",address:"Minia"},grades:[{cname:"c#",grade:60,pass:true},{cname:"JS",grade:100,pass:true}],isFired:false}
3. Insert 3 (at least) documents in Student collection with different values.
  - Try inserting one record each time
  - Try inserting collection
4. Retrieve the following data:
  - All Students.
  - Student with specific First Name.
  - Students who his First Name=Ahmed, or Last Name= Ahmed.
  - Students that their First name isn't "Ahmed".
  - Students with Age less than 21.
  - All fired students.
  - Students with Age more than or equal to 21, and their faculty isn't NULL.
  - Display student with specific First Name, and display his First Name, Last name, IsFired fields only.
5. Update the student with specific FirstName, and change his LastName.
  - Try UpdateOne() statement.
  - Try UpdateMany().
  - Try Replace().
6. Delete Fired students.

7. Delete all students collection.
8. Delete the whole DB.
9. Create new database named: FacultySystemV2.
  - Create student collection that has (FirstName, lastName, IsFired, FacultyID, array of objects, each object has CourseID, grade).
  - Create Faculty collection that has (Faculty Name, Address).
  - Create Course collection, which has (Course Name, Final Mark).
  - Insert some data in previous collections.

### **Bonus:**

1. Install Redis database, and try to insert and select data from it.
2. Retrieve and insert to MongoDB using a C# Desktop / Web application.
3. Display each student along with his grades in course he studied from FacultySystemV2.
4. Add your own key to any collection.

**<Script>document.write("Thank YOU") </Script>**

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