

## MongoDB Lab2

1- run following queries:

- a- Display all documents in instructors collection
- b- Display all instructors with salaries greater than 4000 (only show firstName and salary)
- c- Display all instructors with ages less than or equal 25.
- d- Display all instructors with city mansoura and street number 10 or 14 only display (firstname,address,salary).
- e- Display all instructors that have js **and** jquery in their courses (both of them not one of them).
- f- Display number of courses for each instructor and display first name with number of courses.

```
mona 4
mazen 3
badr 4
ebtesam 6
noha 4
mona 4
mazen 3
ebtesam 5
```

- 2
- g- Write mongodb query to get all instructors that have firstName and lastName properties, sort them by firstName ascending then by lastName descending and finally display their data FullName and age

```
FullName : badr ahmed , Age: 22
FullName : ebtesam hesham , Age: 21
FullName : ebtesam ahmed , Age: 28
FullName : mazen mohammed , Age: 21
FullName : mazen ali , Age: 30
FullName : mona mohammed , Age: 21
FullName : mona ahmed , Age: 21
FullName : noha hesham , Age: 21
```

**Note:** use mongoDB **sort** function

- h- Delete instructor with first name "ebtesam" and **has only 5** courses in courses array
- i- Add active property to all instructors and set its value to true.
- j- Change "EF" course to "jquery" for "mazen mohammed" instructor (without knowing EF Index in courses array)
- k- Add jquery course for "noha hesham".
- l- Remove courses property for "ahmed mohammed" instructor

- m- Decrease salary by 500 for all instructors that has only 3 courses in their list (\$inc)
- n- Rename address field for all instructors to fullAddress.
- o- Change street number for noha hesham to 20

2- Create workers collection with the following Schema validation (JsonSchema Validation )

**Required Fields:** fullName ,salary and age

**Optional Fields:** locations

No additional properties allowed

- a- fullName should be string
- b- Age should be number between 25 and 45 ,
- c- Salary is required and should be greater than 2000
- d- Locations is optional and should be array of string , array length can't be zero (worker has at least one location to work ), locations should be unique in array

Check your Schema