

BSc (Hons) in Information Technology
Specializing in Software Engineering
Year 3 - 2022
SE3040 – Application Frameworks
Lab 04 – MongoDB [New]

Objective: Teach set of basic concepts in MongoDB

1. Add the Following document to the 'Students' database.

```
{  
  "name": "John",  
  "dateOfBirth": "1990-01-01T00:00:00Z",  
  "subjects": ["Application frameworks", "Software architecture"],  
  "marks": [65,85,70,90]  
}
```

2. Find document by "name".
3. Add 'Distributed Computing' to the subjects list.
4. Add the following 2 document to the same collection.

```
{  
  
  "name": "Smith",  
  "dateOfBirth": "1990-01-15T00:00:00Z",  
  "subjects": ["Application frameworks", " Software architecture"],  
  "marks": [80,75,60,45],  
  "isActive": true  
}  
  
{  
  "name": "Jane",  
  "dateOfBirth": "1990-02-15T00:00:00Z",  
  "subjects": ["Application frameworks", "Software architecture"],  
  "marks": [90,85,60,55],  
  "isActive": false  
}
```

5. Find the document with the name 'Smith' and isActive flag is true and add Distributed computing to subjects.
6. Find documents having 'isActive' as true and have 'Distributed computing' in the subjects list.
7. Update the first document 'isActive' to false.
8. Remove the first document created.
9. Add a new field 'GPA' to all the documents and initialize it to 0.
10. Add a new field with the average of 'marks' for all students.