

GROUP C ASSIGNMENT 1

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CLASS – TE-IT
BATCH – T2
ROLL NO – 7048

1. Create a database with suitable example using MongoDB and implement
- Inserting and saving document (batch insert, insert validation)
 - Removing document
 - Updating document (document replacement, using modifiers, upserts, updating documents, returning updated documents)

Create Database

```
> use emp_db
switched to db emp_db

> db.createCollection("employees")
{ "ok" : 1 }

> show collections
employees
```

Insert Document

```
> db.employees.insert(
... {
...   "ID" : "1",
...   "Name" : "Mark",
...   "Designation" : "CEO"
... })
WriteResult({ "nInserted" : 1 })

> db.employees.find()
{ "_id" : ObjectId("5d8e4ab54f5e86a76906931a"), "ID" : "1",
  "Name" : "Mark", "Designation" : "CEO" }
```

Batch Insert

```
> db.employees.insert( [ { "ID" : "3", "Name" : "Tyler",
"Designation" : "Product Manager" }, { "ID" : "4", "Name" :
"Rohit", "Designation" : "Vice President"} ] )
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 2,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
```

Remove Document

```
> db.employees.remove({ID:"5"})
WriteResult({ "nRemoved" : 1 })

> db.employees.find({})
{ "_id" : ObjectId("5d8e4ab54f5e86a76906931a"), "ID" : "1",
"Name" : "Mark", "Designation" : "CEO" }
{ "_id" : ObjectId("5d8e4cf44f5e86a76906931b"), "ID" : "2",
"Name" : "Eduardo", "Designation" : "CFO" }
{ "_id" : ObjectId("5d8e4d844f5e86a76906931c"), "ID" : "3",
"Name" : "Tyler", "Designation" : "Product Manager" }
{ "_id" : ObjectId("5d8e4d844f5e86a76906931d"), "ID" : "4",
"Name" : "Rohit", "Designation" : "Vice President" }
```

Update Document

```
> db.employees.update({Designation : "Vice President"}, {$set:
{Designation: "Senior VP"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1
})

> db.employees.find({})
{ "_id" : ObjectId("5d8e4ab54f5e86a76906931a"), "ID" : "1",
"Name" : "Mark", "Designation" : "CEO" }
{ "_id" : ObjectId("5d8e4cf44f5e86a76906931b"), "ID" : "2",
"Name" : "Eduardo", "Designation" : "CFO" }
{ "_id" : ObjectId("5d8e4d844f5e86a76906931c"), "ID" : "3",
"Name" : "Tyler", "Designation" : "Product Manager" }
{ "_id" : ObjectId("5d8e4d844f5e86a76906931d"), "ID" : "4",
"Name" : "Rohit", "Designation" : "Senior VP" }
```

```
{ "_id" : ObjectId("5d8edba14f5e86a76906931f"), "ID" : "5",  
  "Name" : "Vikram", "Designation" : "Product Designer" }  
{ "_id" : ObjectId("5d8edbbba4f5e86a769069320"), "ID" : "6",  
  "Name" : "John", "Designation" : "COO" }
```

Insert field

```
> db.employees.update({Designation : "Software Engineer"},  
  {$set: {Skills: ["Python", "DBMS", "Java"]}})  
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1  
})
```

Delete field

```
> db.employees.update({Designation : "Software Engineer"},  
  {$unset: {Skills: []}})  
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1  
})
```

Update multiple documents

```
> db.employees.update({Designation : "Software Engineer"},  
  {$set: {Skills: ["Python", "DBMS", "Java"]}}, {multi : true})  
WriteResult({ "nMatched" : 2, "nUpserted" : 0, "nModified" : 2  
})
```

```
> db.employees.find({})  
{ "_id" : ObjectId("5d8e4ab54f5e86a76906931a"), "ID" : "1",  
  "Name" : "Mark", "Designation" : "CEO" }  
{ "_id" : ObjectId("5d8e4cf44f5e86a76906931b"), "ID" : "2",  
  "Name" : "Eduardo", "Designation" : "CFO" }  
{ "_id" : ObjectId("5d8e4d844f5e86a76906931c"), "ID" : "3",  
  "Name" : "Tyler", "Designation" : "Product Manager" }  
{ "_id" : ObjectId("5d8e4d844f5e86a76906931d"), "ID" : "4",  
  "Name" : "Rohit", "Designation" : "Senior VP" }  
{ "_id" : ObjectId("5d8edba14f5e86a76906931f"), "ID" : "5",  
  "Name" : "Vikram", "Designation" : "Product Designer" }  
{ "_id" : ObjectId("5d8edbbba4f5e86a769069320"), "ID" : "6",  
  "Name" : "John", "Designation" : "COO" }  
{ "_id" : ObjectId("5d8ede384f5e86a769069321"), "ID" : "7",  
  "Name" : "Bill", "Designation" : "Software Engineer", "Skills" :  
  [ "Python", "DBMS", "Java" ] }  
{ "_id" : ObjectId("5d8ede554f5e86a769069322"), "ID" : "8",  
  "Name" : "Steve", "Designation" : "Software Engineer", "Skills"  
  : [ "Python", "DBMS", "Java" ] }
```

Upsert

```
> db.employees.update({Designation: "Strategist"}, {Designation: "CMO"}, {upsert: true})
```

```
WriteResult({
  "nMatched" : 0,
  "nUpserted" : 1,
  "nModified" : 0,
  "_id" : ObjectId("5d8ee28626dd63ef91974468")
})
```

```
> db.employees.find({}).pretty()
```

```
{
  "_id" : ObjectId("5d8e4ab54f5e86a76906931a"),
  "ID" : "1",
  "Name" : "Mark",
  "Designation" : "CEO"
}
{
  "_id" : ObjectId("5d8e4cf44f5e86a76906931b"),
  "ID" : "2",
  "Name" : "Eduardo",
  "Designation" : "CFO"
}
{
  "_id" : ObjectId("5d8e4d844f5e86a76906931c"),
  "ID" : "3",
  "Name" : "Tyler",
  "Designation" : "Product Manager"
}
{
  "_id" : ObjectId("5d8e4d844f5e86a76906931d"),
  "ID" : "4",
  "Name" : "Rohit",
  "Designation" : "Senior VP"
}
{
  "_id" : ObjectId("5d8edba14f5e86a76906931f"),
  "ID" : "5",
  "Name" : "Vikram",
  "Designation" : "Product Designer"
}
{
  "_id" : ObjectId("5d8edbba4f5e86a769069320"),
```

```

    "ID" : "6",
    "Name" : "John",
    "Designation" : "COO"
  }
  {
    "_id" : ObjectId("5d8ede384f5e86a769069321"),
    "ID" : "7",
    "Name" : "Bill",
    "Designation" : "Software Engineer",
    "Skills" : [
      "Python",
      "DBMS",
      "Java"
    ]
  }
  {
    "_id" : ObjectId("5d8ede554f5e86a769069322"),
    "ID" : "8",
    "Name" : "Steve",
    "Designation" : "Software Engineer",
    "Skills" : [
      "Python",
      "DBMS",
      "Java"
    ]
  }
  { "_id" : ObjectId("5d8ee28626dd63ef91974468"), "Designation" :
    "CMO" }

```