

## Assignment No 12

### Problem Statement:

Create Simple Object and Array Objects using JSON.

### Input:

use school // Switch to 'school' database or create it

// Insert a simple JSON object into the 'students' collection

```
db.students.insertOne({
  name: "Alice",
  age: 22,
  major: "Computer Science"
})
```

// Insert a student with an array of course objects

```
db.students.insertOne({
  name: "Bob",
  age: 21,
  major: "Physics",
  courses: [
    { name: "Quantum Mechanics", credits: 3 },
    { name: "Electromagnetism", credits: 4 },
    { name: "Mathematics", credits: 3 }
  ]
})
```

// Find students with courses

```
db.students.find({ courses: { $exists: true } }).pretty()
```

// Find students enrolled in 'Mathematics' course

```
db.students.find({
  courses: { $elemMatch: { name: "Mathematics" } }
}).pretty()
```

// Update credits for 'Mathematics' course

```
db.students.updateOne(
  { name: "Bob", "courses.name": "Mathematics" },
  { $set: { "courses.$.credits": 4 } }
)
```

```

school>
school> ... .. {
  acknowledged: true,
  insertedId: ObjectId('6717ba17c7b034066242f807')
}
school>
school>
school> ... .. {
  acknowledged: true,
  insertedId: ObjectId('6717ba17c7b034066242f808')
}
school>
school>
school> [
  {
    _id: ObjectId('6717ba17c7b034066242f808'),
    name: 'Bob',
    age: 21,
    major: 'Physics',
    courses: [
      { name: 'Quantum Mechanics', credits: 3 },
      { name: 'Electromagnetism', credits: 4 },
      { name: 'Mathematics', credits: 3 }
    ]
  }
]
school>
school>
school> ... .. [
  {
    _id: ObjectId('6717ba17c7b034066242f808'),
    name: 'Bob',
    age: 21,
    major: 'Physics',
    courses: [
      { name: 'Quantum Mechanics', credits: 3 },
      { name: 'Electromagnetism', credits: 4 },
      { name: 'Mathematics', credits: 3 }
    ]
  }
]
school>
school>
school> ... .. {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
school>

```

[Execution complete with exit code 0]