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**Class :** TE-A

**Roll no :** 13165

**Batch :** A3

**Aim :** Design and Develop MongoDB Queries using CRUD operations. (Use CRUD operations, SAVE method, logical operators)

Microsoft Windows [Version 10.0.22631.4169]

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C:\Users\hulaw>mongosh

Current Mongosh Log ID: 670ff012bda345f59986b01c

Connecting to:

mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.3.2

Using MongoDB: 8.0.1

Using Mongosh: 2.3.2

For mongosh info see: <https://www.mongodb.com/docs/mongodb-shell/>

-----

The server generated these startup warnings when booting

2024-10-16T20:29:40.756+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted

-----

test> show dbs

admin 40.00 KiB

config 60.00 KiB

local 40.00 KiB

test> use book

switched to db book

```
book> show collections;
```

**\*Create a Collection:**

```
book> db.createCollection("library");
```

```
{ ok: 1 }
```

**\*Insert Documents:**

```
book> db.library.insert({"bid":1,"name":"C++"});
```

DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite.

```
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('670ff056bda345f59986b01d') }
}
```

```
book> db.library.insert({"bid":2,"name":"SEPM","author":"Pressman"});
```

```
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('670ff056bda345f59986b01e') }
}
```

```
book> db.library.insert({"bid":3,"name":"CN","author":"Forouzan","cost":700});
```

```
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('670ff056bda345f59986b01f') }
}
```

**\*Find All Documents:**

```
book> db.library.find().pretty();
```

```
[
  { _id: ObjectId('670ff056bda345f59986b01d'), bid: 1, name: 'C++' },
  {
    _id: ObjectId('670ff056bda345f59986b01e'),
    bid: 2,
    name: 'SEPM',
    author: 'Pressman'
  },
]
```

```
{
  _id: ObjectId('670ff056bda345f59986b01f'),
  bid: 3,
  name: 'CN',
  author: 'Forouzan',
  cost: 700
}
]
```

**\*Remove Documents:**

```
book> db.library.remove({"bid":1});
```

DeprecationWarning: Collection.remove() is deprecated. Use deleteOne, deleteMany, findOneAndDelete, or bulkWrite.

```
{ acknowledged: true, deletedCount: 1 }
```

**\*Count Documents:**

```
book> db.library.count();
```

DeprecationWarning: Collection.count() is deprecated. Use countDocuments or estimatedDocumentCount.

```
2
```

**\*Find All Documents:**

```
book> db.library.find().pretty();
```

```
[
  {
    _id: ObjectId('670ff056bda345f59986b01e'),
    bid: 2,
    name: 'SEPM',
    author: 'Pressman'
  },
  {
    _id: ObjectId('670ff056bda345f59986b01f'),
    bid: 3,
    name: 'CN',
    author: 'Forouzan',
```

```
    cost: 700
  }
]
```

#### **\*Insert Documents:**

```
book> db.library.insert({"bid":1,"name":"C++"});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('670ff056bda345f59986b020') }
}
```

#### **\*Find All Documents:**

```
book> db.library.find().pretty();
[
  {
    _id: ObjectId('670ff056bda345f59986b01e'),
    bid: 2,
    name: 'SEPM',
    author: 'Pressman'
  },
  {
    _id: ObjectId('670ff056bda345f59986b01f'),
    bid: 3,
    name: 'CN',
    author: 'Forouzan',
    cost: 700
  },
  { _id: ObjectId('670ff056bda345f59986b020'), bid: 1, name: 'C++' }
]
```

#### **\*Sort Documents:**

```
book> db.library.find().sort({"bid":1})
[
  { _id: ObjectId('670ff056bda345f59986b020'), bid: 1, name: 'C++' },
```

```
{
  _id: ObjectId('670ff056bda345f59986b01e'),
  bid: 2,
  name: 'SEPM',
  author: 'Pressman'
},
{
  _id: ObjectId('670ff056bda345f59986b01f'),
  bid: 3,
  name: 'CN',
  author: 'Forouzan',
  cost: 700
}
]
```

**\*Insert Documents:**

```
book> db.library.insert({"bid":4,"name":"SPOS","author":"Pearson","cost":500});
```

```
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('670ff056bda345f59986b021') }
}
```

**\*Find All Documents:**

```
book> db.library.find().pretty();
```

```
[
  {
    _id: ObjectId('670ff056bda345f59986b01e'),
    bid: 2,
    name: 'SEPM',
    author: 'Pressman'
  },
  {
    _id: ObjectId('670ff056bda345f59986b01f'),
```

```
    bid: 3,
    name: 'CN',
    author: 'Forouzan',
    cost: 700
  },
  { _id: ObjectId('670ff056bda345f59986b020'), bid: 1, name: 'C++' },
  {
    _id: ObjectId('670ff056bda345f59986b021'),
    bid: 4,
    name: 'SPOS',
    author: 'Pearson',
    cost: 500
  }
]
```

**\*Sort Documents:**

```
book> db.library.find().sort({"bid":1})
[
  { _id: ObjectId('670ff056bda345f59986b020'), bid: 1, name: 'C++' },
  {
    _id: ObjectId('670ff056bda345f59986b01e'),
    bid: 2,
    name: 'SEPM',
    author: 'Pressman'
  },
  {
    _id: ObjectId('670ff056bda345f59986b01f'),
    bid: 3,
    name: 'CN',
    author: 'Forouzan',
    cost: 700
  },
]
```

```
{
  _id: ObjectId('670ff056bda345f59986b021'),
  bid: 4,
  name: 'SPOS',
  author: 'Pearson',
  cost: 500
}
]
```

**\*Find a specific document:**

```
book> db.library.find({$and:[{"name":"CN"}, {"cost":700}]}).pretty()
```

```
[
  {
    _id: ObjectId('670ff056bda345f59986b01f'),
    bid: 3,
    name: 'CN',
    author: 'Forouzan',
    cost: 700
  }
]
```

**\*Insert Documents:**

```
book> db.library.insert({"bid":5,"name":"TOC","author":"Addison-Wesley","cost":600});
```

```
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('670ff056bda345f59986b022') }
}
```

```
book> db.library.insert({"bid":6,"name":"AI","author":"McGraw Hill Education","cost":800});
```

```
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('670ff056bda345f59986b023') }
}
```

**\*Find All Documents:**

```
book> db.library.find().pretty();
```

```
[
  {
    _id: ObjectId('670ff056bda345f59986b01e'),
    bid: 2,
    name: 'SEPM',
    author: 'Pressman'
  },
  {
    _id: ObjectId('670ff056bda345f59986b01f'),
    bid: 3,
    name: 'CN',
    author: 'Forouzan',
    cost: 700
  },
  { _id: ObjectId('670ff056bda345f59986b020'), bid: 1, name: 'C++' },
  {
    _id: ObjectId('670ff056bda345f59986b021'),
    bid: 4,
    name: 'SPOS',
    author: 'Pearson',
    cost: 500
  },
  {
    _id: ObjectId('670ff056bda345f59986b022'),
    bid: 5,
    name: 'TOC',
    author: 'Addison-Wesley',
    cost: 600
  },
]
```



```
{
  _id: ObjectId('670ff056bda345f59986b023'),
  bid: 6,
  name: 'AI',
  author: 'McGraw Hill Education',
  cost: 800
}
]
```

**\*Find documents with cost equal to 500 or 800:**

```
book> db.library.find({$or:[{"cost":500},{"cost":800}]}).pretty()
```

```
[
  {
    _id: ObjectId('670ff056bda345f59986b021'),
    bid: 4,
    name: 'SPOS',
    author: 'Pearson',
    cost: 500
  },
  {
    _id: ObjectId('670ff056bda345f59986b023'),
    bid: 6,
    name: 'AI',
    author: 'McGraw Hill Education',
    cost: 800
  }
]
```

**\*Find documents where cost is not 500:**

```
book> db.library.find({"cost":{"$ne:500}})
```

```
[
  {
    _id: ObjectId('670ff056bda345f59986b01e'),
```

```

    bid: 2,
    name: 'SEPM',
    author: 'Pressman'
  },
  {
    _id: ObjectId('670ff056bda345f59986b01f'),
    bid: 3,
    name: 'CN',
    author: 'Forouzan',
    cost: 700
  },
  { _id: ObjectId('670ff056bda345f59986b020'), bid: 1, name: 'C++' },
  {
    _id: ObjectId('670ff056bda345f59986b022'),
    bid: 5,
    name: 'TOC',
    author: 'Addison-Wesley',
    cost: 600
  },
  {
    _id: ObjectId('670ff056bda345f59986b023'),
    bid: 6,
    name: 'AI',
    author: 'McGraw Hill Education',
    cost: 800
  }
]

```

**\*Find documents that do not match specified criteria:**

```
book> db.library.find({$nor:[{"cost":500},{"author":"Forouzan"}]})
```

```

[
  {

```

```

    _id: ObjectId('670ff056bda345f59986b01e'),
    bid: 2,
    name: 'SEPM',
    author: 'Pressman'
  },
  { _id: ObjectId('670ff056bda345f59986b020'), bid: 1, name: 'C++' },
  {
    _id: ObjectId('670ff056bda345f59986b022'),
    bid: 5,
    name: 'TOC',
    author: 'Addison-Wesley',
    cost: 600
  },
  {
    _id: ObjectId('670ff056bda345f59986b023'),
    bid: 6,
    name: 'AI',
    author: 'McGraw Hill Education',
    cost: 800
  }
]

```

**\*Find documents with cost not greater than 800:**

```
book> db.library.find({"cost":{$not:{$gt:800}}})
```

```

[
  {
    _id: ObjectId('670ff056bda345f59986b01e'),
    bid: 2,
    name: 'SEPM',
    author: 'Pressman'
  },
  {

```

```

    _id: ObjectId('670ff056bda345f59986b01f'),
    bid: 3,
    name: 'CN',
    author: 'Forouzan',
    cost: 700
  },
  { _id: ObjectId('670ff056bda345f59986b020'), bid: 1, name: 'C++' },
  {
    _id: ObjectId('670ff056bda345f59986b021'),
    bid: 4,
    name: 'SPOS',
    author: 'Pearson',
    cost: 500
  },
  {
    _id: ObjectId('670ff056bda345f59986b022'),
    bid: 5,
    name: 'TOC',
    author: 'Addison-Wesley',
    cost: 600
  },
  {
    _id: ObjectId('670ff056bda345f59986b023'),
    bid: 6,
    name: 'AI',
    author: 'McGraw Hill Education',
    cost: 800
  }
]

```

**\*Insert Documents:**

```
book> db.library.insert({"bid":7,"name":"CC","author":"Wiley Publications","cost":400})
```

```
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('670ff057bda345f59986b024') }
}
```

**\*Find All Documents:**

```
book> db.library.find()
```

```
[
  {
    _id: ObjectId('670ff056bda345f59986b01e'),
    bid: 2,
    name: 'SEPM',
    author: 'Pressman'
  },
  {
    _id: ObjectId('670ff056bda345f59986b01f'),
    bid: 3,
    name: 'CN',
    author: 'Forouzan',
    cost: 700
  },
  { _id: ObjectId('670ff056bda345f59986b020'), bid: 1, name: 'C++' },
  {
    _id: ObjectId('670ff056bda345f59986b021'),
    bid: 4,
    name: 'SPOS',
    author: 'Pearson',
    cost: 500
  },
  {
    _id: ObjectId('670ff056bda345f59986b022'),
    bid: 5,
```

```

    name: 'TOC',
    author: 'Addison-Wesley',
    cost: 600
  },
  {
    _id: ObjectId('670ff056bda345f59986b023'),
    bid: 6,
    name: 'AI',
    author: 'McGraw Hill Education',
    cost: 800
  },
  {
    _id: ObjectId('670ff057bda345f59986b024'),
    bid: 7,
    name: 'CC',
    author: 'Wiley Publications',
    cost: 400
  }
]

```

**\*Update the cost of the book with bid 7:**

```
book> db.library.update({'cost':400},{ $set: {'cost':600}})
```

DeprecationWarning: Collection.update() is deprecated. Use updateOne, updateMany, or bulkWrite.

```

{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}

```

**\*Update the cost of the book with bid 6:**

```
book> db.library.update({'cost':800},{ $set: {'cost':1200}})
```

```
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

**\*Find All Documents:**

```
book> db.library.find().pretty();
```

```
[
  {
    _id: ObjectId('670ff056bda345f59986b01e'),
    bid: 2,
    name: 'SEPM',
    author: 'Pressman'
  },
  {
    _id: ObjectId('670ff056bda345f59986b01f'),
    bid: 3,
    name: 'CN',
    author: 'Forouzan',
    cost: 700
  },
  { _id: ObjectId('670ff056bda345f59986b020'), bid: 1, name: 'C++' },
  {
    _id: ObjectId('670ff056bda345f59986b021'),
    bid: 4,
    name: 'SPOS',
    author: 'Pearson',
    cost: 500
  },
]
```

```
{
  _id: ObjectId('670ff056bda345f59986b022'),
  bid: 5,
  name: 'TOC',
  author: 'Addison-Wesley',
  cost: 600
},
{
  _id: ObjectId('670ff056bda345f59986b023'),
  bid: 6,
  name: 'AI',
  author: 'McGraw Hill Education',
  cost: 1200
},
{
  _id: ObjectId('670ff057bda345f59986b024'),
  bid: 7,
  name: 'CC',
  author: 'Wiley Publications',
  cost: 600
}
]
```