MONGODB

Basic Questions

Dataset – Students

"_id" : 1,

"std_name" : "Mukesh",

"Gender" : "Male",

"class" : "VI",

"age" : 11,

"grd_point" : 33

"_id" : 2,

"std_name" : "Dechamma",

"Gender" : "Female",

"class" : "VI",

"age" : 13,

"grd_point" : 30

"_id" : 3,

"std_name" : "Akash",

"Gender" : "Male",

"class" : "V",

"age" : 14,

"grd_point" : 35.1257

"_id" : 4,

"std_name" : "Geetha",

"Gender" : "Female",

"class" : "X",

"age" : 17,

"grd_point" : 36.2514

"_id" : 5,

"std_name" : "Bhomika",

"Gender" : "Female",

"class" : "X",

"age" : 19,

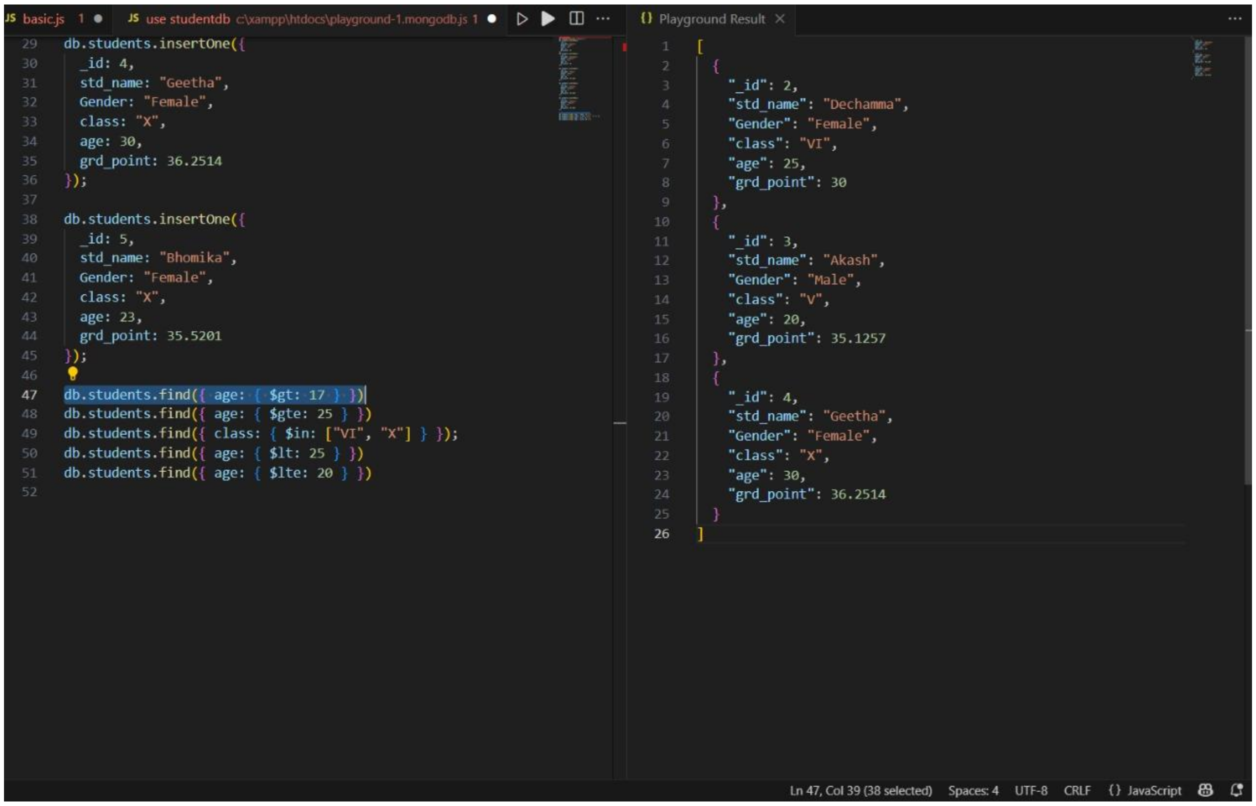
"grd_point" : 35.5201

>**Using Comparison Operator perform the following questions**

1.Display Student Details Where Age>17

    db.students.find({ age: { $gt: 17 } }

Output:


basic.js 1
use studentdb c:\xampp\htdocs\playground-1.mongodb.js 1
Playground Result
Ln 47, Col 39 (38 selected)
Spaces: 4
UTF-8
CRLF
{} JavaScript

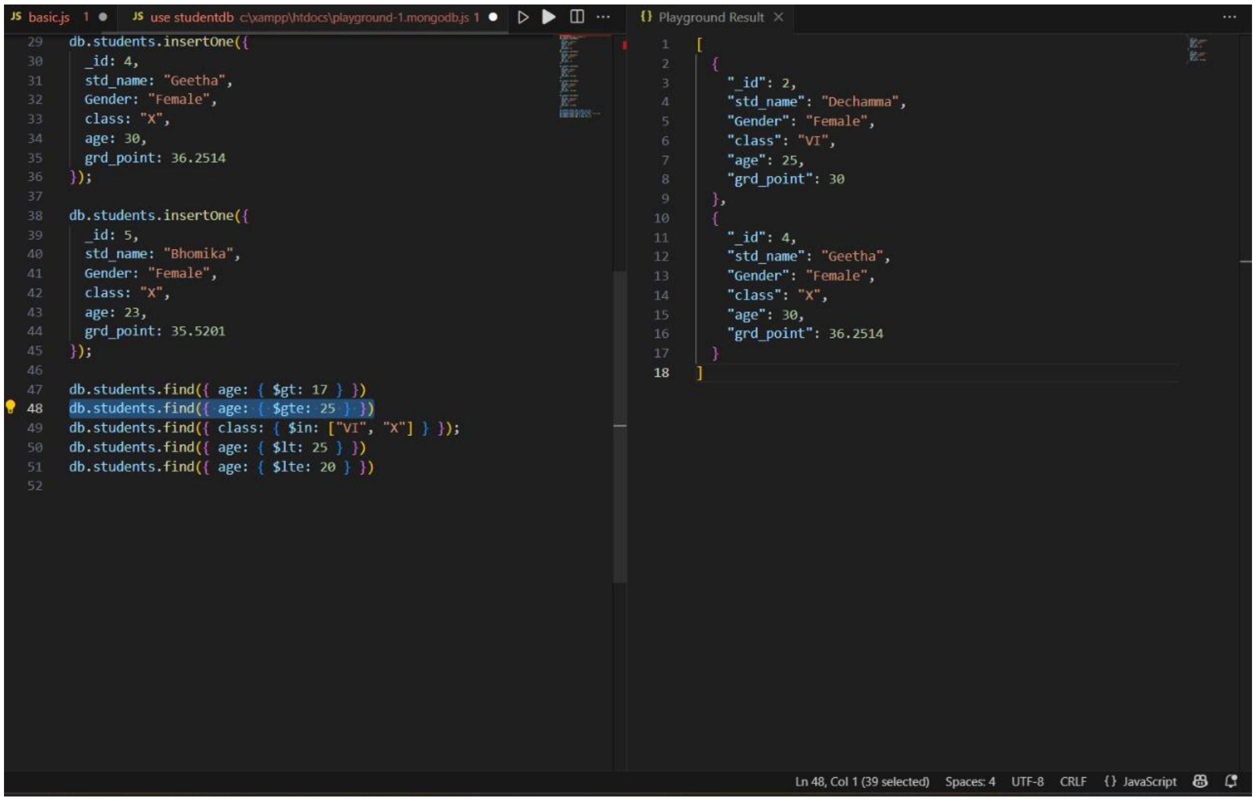
```
db.students.insertOne({
  _id: 4,
  std_name: "Geetha",
  Gender: "Female",
  class: "X",
  age: 30,
  grd_point: 36.2514
});

db.students.insertOne({
  _id: 5,
  std_name: "Bhomika",
  Gender: "Female",
  class: "X",
  age: 23,
  grd_point: 35.5201
});

db.students.find({ age: { $gt: 17 } })
db.students.find({ age: { $gte: 25 } })
db.students.find({ class: { $in: ["VI", "X"] } });
db.students.find({ age: { $lt: 25 } })
db.students.find({ age: { $lte: 20 } })
```

```
[
  {
    "_id": 2,
    "std_name": "Dechamma",
    "Gender": "Female",
    "class": "VI",
    "age": 25,
    "grd_point": 30
  },
  {
    "_id": 3,
    "std_name": "Akash",
    "Gender": "Male",
    "class": "V",
    "age": 20,
    "grd_point": 35.1257
  },
  {
    "_id": 4,
    "std_name": "Geetha",
    "Gender": "Female",
    "class": "X",
    "age": 30,
    "grd_point": 36.2514
  }
]
```

2.Display Student Details Where Age>=25

    db.students.find({ age: { $gte: 25 } })

Output:



basic.js
use studentdb c:\xampp\htdocs\playground-1.mongodb.js
Playground Result
Ln 48, Col 1 (39 selected) Spaces: 4 UTF-8 CRLF {} JavaScript

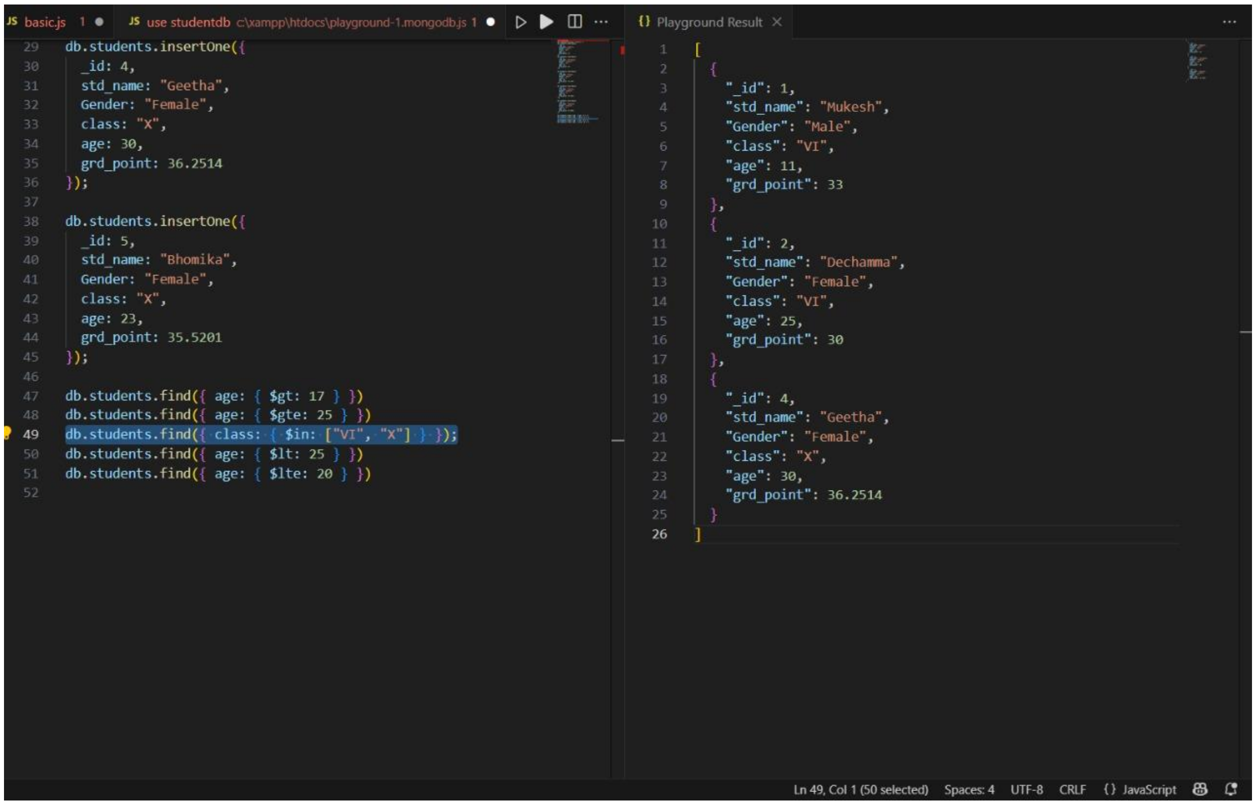
```
db.students.insertOne({
  _id: 4,
  std_name: "Geetha",
  Gender: "Female",
  class: "X",
  age: 30,
  grd_point: 36.2514
});

db.students.insertOne({
  _id: 5,
  std_name: "Bhomika",
  Gender: "Female",
  class: "X",
  age: 23,
  grd_point: 35.5201
});

db.students.find({ age: { $gt: 17 } })
db.students.find({ age: { $gte: 25 } })
db.students.find({ class: { $in: ["VI", "X"] } });
db.students.find({ age: { $lt: 25 } })
db.students.find({ age: { $lte: 20 } })
```

```
[
  {
    "_id": 2,
    "std_name": "Dechamma",
    "Gender": "Female",
    "class": "VI",
    "age": 25,
    "grd_point": 30
  },
  {
    "_id": 4,
    "std_name": "Geetha",
    "Gender": "Female",
    "class": "X",
    "age": 30,
    "grd_point": 36.2514
  }
]
```

3.Demonstrate Use of in Operation Along with in MongoDB with 2 Array Values

db.students.find({ class: { $in: [“VI”, “X”] } });

Output:


basic.js 1
use studentdb c:\xampp\htdocs\playground-1.mongodb.js 1
Playground Result
Ln 49, Col 1 (50 selected) Spaces: 4 UTF-8 CRLF {} JavaScript

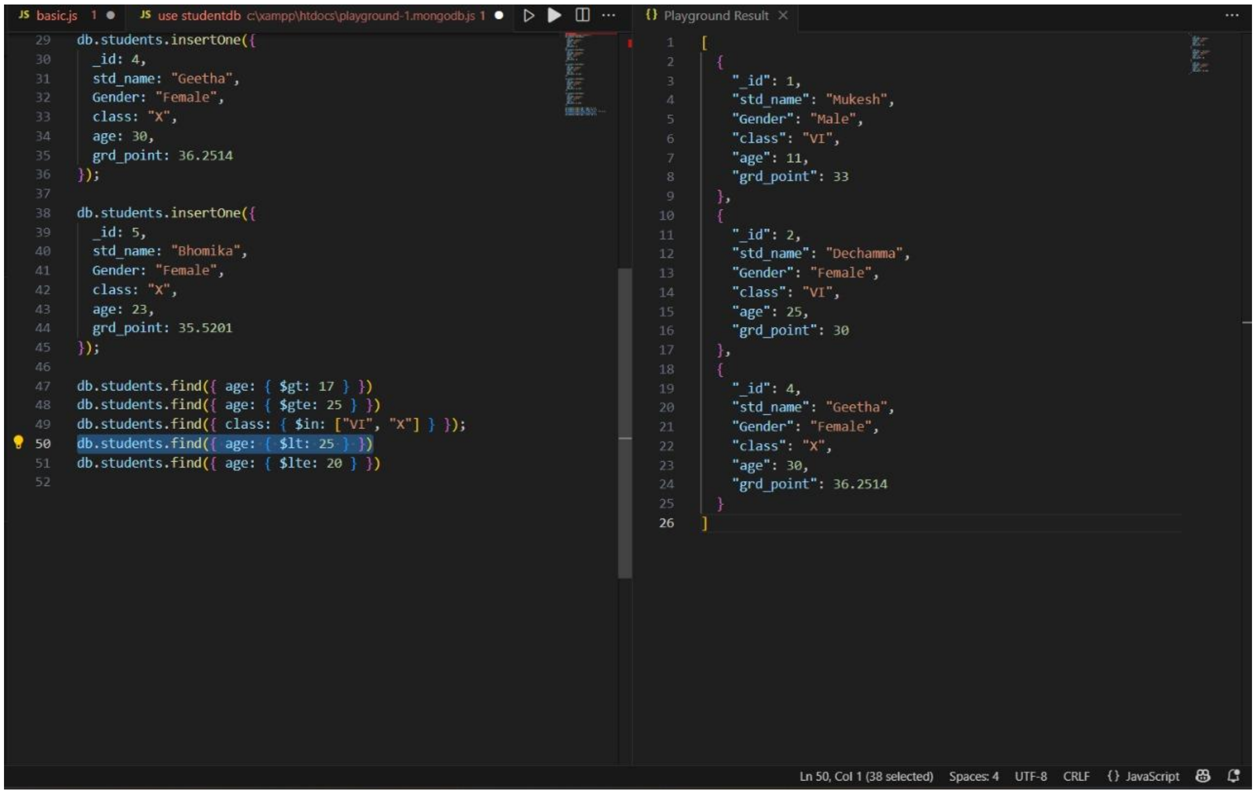
```
db.students.insertOne({
  _id: 4,
  std_name: "Geetha",
  Gender: "Female",
  class: "X",
  age: 30,
  grd_point: 36.2514
});

db.students.insertOne({
  _id: 5,
  std_name: "Bhomika",
  Gender: "Female",
  class: "X",
  age: 23,
  grd_point: 35.5201
});

db.students.find({ age: { $gt: 17 } })
db.students.find({ age: { $gte: 25 } })
db.students.find({ class: { $in: ["VI", "X"] } });
db.students.find({ age: { $lt: 25 } })
db.students.find({ age: { $lte: 20 } })
```

```
[
  {
    "_id": 1,
    "std_name": "Mukesh",
    "Gender": "Male",
    "class": "VI",
    "age": 11,
    "grd_point": 33
  },
  {
    "_id": 2,
    "std_name": "Dechamma",
    "Gender": "Female",
    "class": "VI",
    "age": 25,
    "grd_point": 30
  },
  {
    "_id": 4,
    "std_name": "Geetha",
    "Gender": "Female",
    "class": "X",
    "age": 30,
    "grd_point": 36.2514
  }
]
```

4. Display Student Details Where Age<25

db.students.find({ age: { $lt: 25 } })

Output:


basic.js 1
use studentdb c:\xampp\htdocs\playground-1.mongodb.js 1
Playground Result
Ln 50, Col 1 (38 selected)
Spaces: 4
UTF-8
CRLF
{} JavaScript

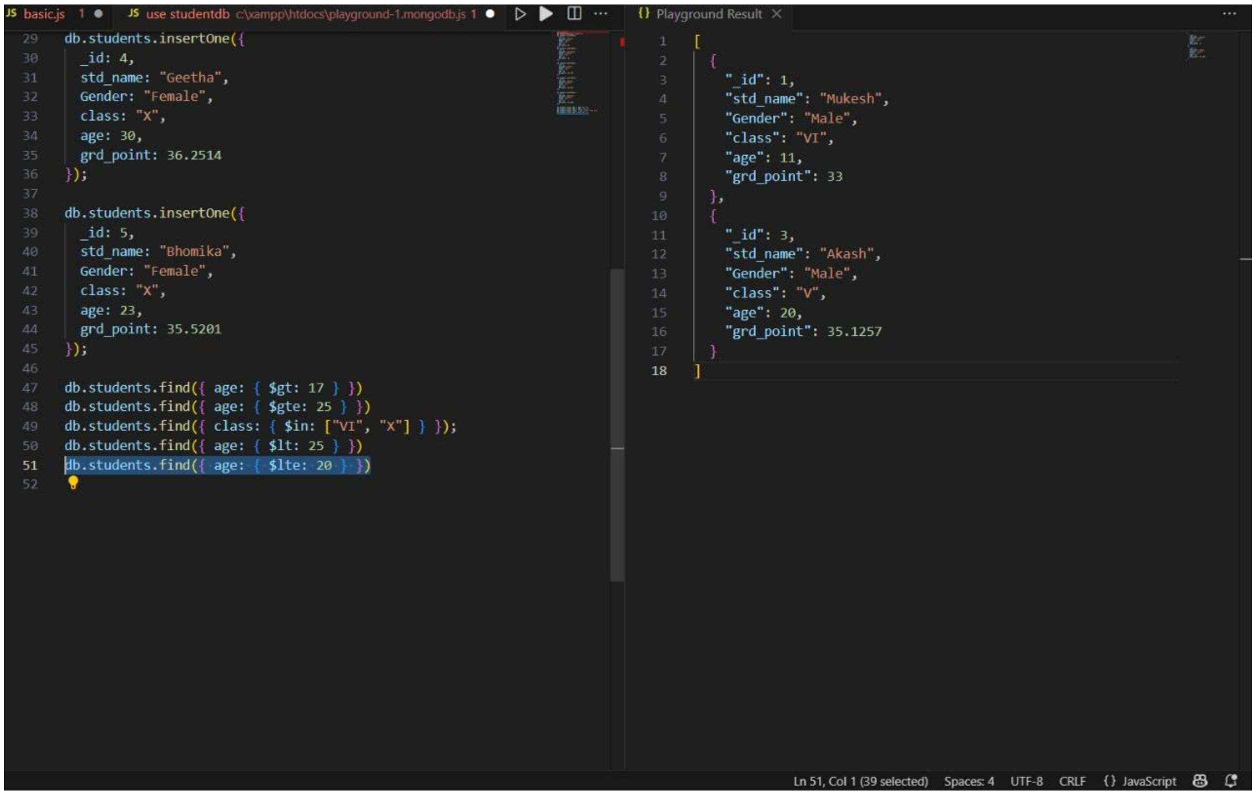
```
db.students.insertOne({
  _id: 4,
  std_name: "Geetha",
  Gender: "Female",
  class: "X",
  age: 30,
  grd_point: 36.2514
});

db.students.insertOne({
  _id: 5,
  std_name: "Bhomika",
  Gender: "Female",
  class: "X",
  age: 23,
  grd_point: 35.5201
});

db.students.find({ age: { $gt: 17 } })
db.students.find({ age: { $gte: 25 } })
db.students.find({ class: { $in: ["VI", "X"] } });
db.students.find({ age: { $lt: 25 } })
db.students.find({ age: { $lte: 20 } })
```

```
[
  {
    "_id": 1,
    "std_name": "Mukesh",
    "Gender": "Male",
    "class": "VI",
    "age": 11,
    "grd_point": 33
  },
  {
    "_id": 2,
    "std_name": "Dechamma",
    "Gender": "Female",
    "class": "VI",
    "age": 25,
    "grd_point": 30
  },
  {
    "_id": 4,
    "std_name": "Geetha",
    "Gender": "Female",
    "class": "X",
    "age": 30,
    "grd_point": 36.2514
  }
]
```

5.Display Student Details Where Age<=20

db.students.find({ age: { $lte: 20 } })

Output:


basic.js 1
use studentdb c:\xampp\htdocs\playground-1.mongodb.js 1
Playground Result
Ln 51, Col 1 (39 selected)
Spaces: 4
UTF-8
CRLF
{} JavaScript

```
db.students.insertOne({
  _id: 4,
  std_name: "Geetha",
  Gender: "Female",
  class: "X",
  age: 30,
  grd_point: 36.2514
});

db.students.insertOne({
  _id: 5,
  std_name: "Bhomika",
  Gender: "Female",
  class: "X",
  age: 23,
  grd_point: 35.5201
});

db.students.find({ age: { $gt: 17 } })
db.students.find({ age: { $gte: 25 } })
db.students.find({ class: { $in: ["VI", "X"] } });
db.students.find({ age: { $lt: 25 } })
db.students.find({ age: { $lte: 20 } })
```

```
[
  {
    "_id": 1,
    "std_name": "Mukesh",
    "Gender": "Male",
    "class": "VI",
    "age": 11,
    "grd_point": 33
  },
  {
    "_id": 3,
    "std_name": "Akash",
    "Gender": "Male",
    "class": "V",
    "age": 20,
    "grd_point": 35.1257
  }
]
```

>Intermediate

Dataset

"_id" : 1,

name:"Kavana",

"sem" : 1,

"marks" : [70, 87, 90]

"_id" : 2,

name:"Ayaan Sharief",

"sem" : 2,

"marks" : [90, 77, 80]

"_id" : 3,

name:"Varsha",

"sem" : 3,

"marks" : [83, 67, 95]

"_id" : 4,

name:"Shifa Banu",

"sem" : 4,

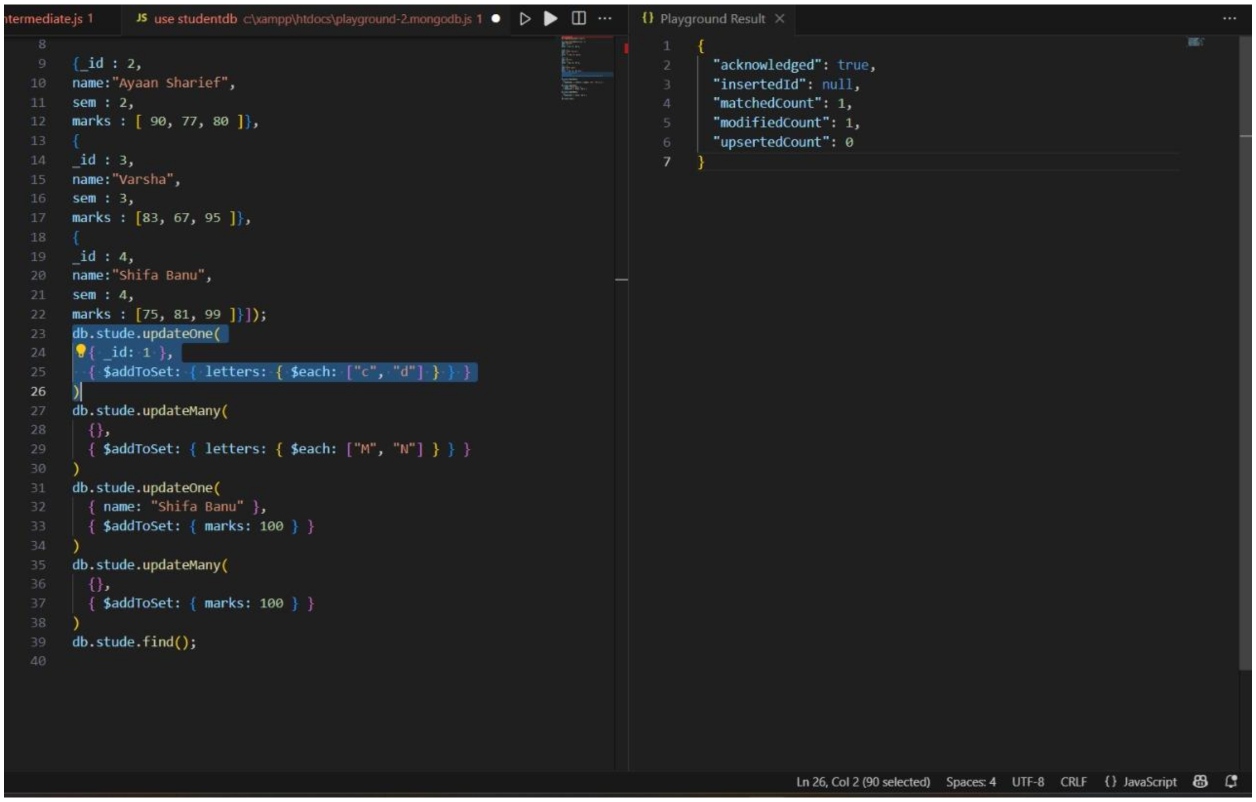
"marks" : [75, 81, 99]

>Using $addToSet operator in document in Mongodb

1.Query to Append c And d Letters To Array Letters Whose Id=1 Using updateOne and $addto set

```
        db.stude.updateOne(
  { _id: 1 },
  { $addToSet: { letters: { $each: [“c”, “d”] } } }
)
```

Output:



```
{_id : 2,
name:"Ayaan Sharief",
sem : 2,
marks : [ 90, 77, 80 ]},
{
_id : 3,
name:"Varsha",
sem : 3,
marks : [83, 67, 95 ]},
{
_id : 4,
name:"Shifa Banu",
sem : 4,
marks : [75, 81, 99 ]}]);
db.stude.updateOne(
{ _id: 1 },
  { $addToSet: { letters: { $each: ["c", "d"] } } }
)
db.stude.updateMany(
  {},
  { $addToSet: { letters: { $each: ["M", "N"] } } }
)
db.stude.updateOne(
  { name: "Shifa Banu" },
  { $addToSet: { marks: 100 } }
)
db.stude.updateMany(
  {},
  { $addToSet: { marks: 100 } }
)
db.stude.find();
```

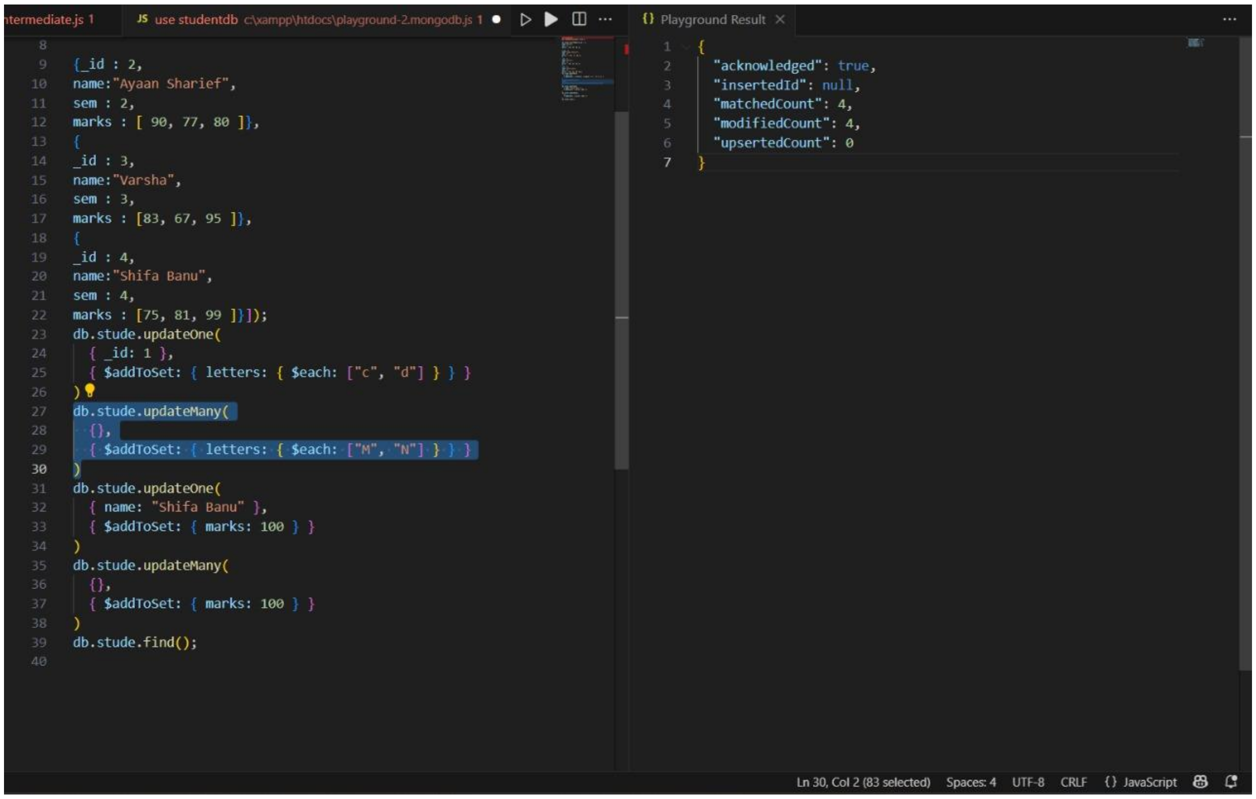
```
{
  "acknowledged": true,
  "insertedId": null,
  "matchedCount": 1,
  "modifiedCount": 1,
  "upsertedCount": 0
}
```

Ln 26, Col 2 (90 selected) Spaces: 4 UTF-8 CRLF {} JavaScript

2. Query to Append M and N Letters to Array Letters Using updateMany And $addToSet

```
    db.stude.updateMany(
  {},
  { $addToSet: { letters: { $each: ["M", "N"] } } }
)
```

Output:



```
ntermediate.js 1    JS use studentdb c:\xampp\htdocs\playground-2.mongodb.js 1
```

```

{_id : 2,
name:"Ayaan Sharief",
sem : 2,
marks : [ 90, 77, 80 ]},
{
_id : 3,
name:"Varsha",
sem : 3,
marks : [83, 67, 95 ]},
{
_id : 4,
name:"Shifa Banu",
sem : 4,
marks : [75, 81, 99 ]}]);
db.stude.updateOne(
  { _id: 1 },
  { $addToSet: { letters: { $each: ["c", "d"] } } }
)
db.stude.updateMany(
  {},
  { $addToSet: { letters: { $each: ["M", "N"] } } }
)
db.stude.updateOne(
  { name: "Shifa Banu" },
  { $addToSet: { marks: 100 } }
)
db.stude.updateMany(
  {},
  { $addToSet: { marks: 100 } }
)
db.stude.find();

```

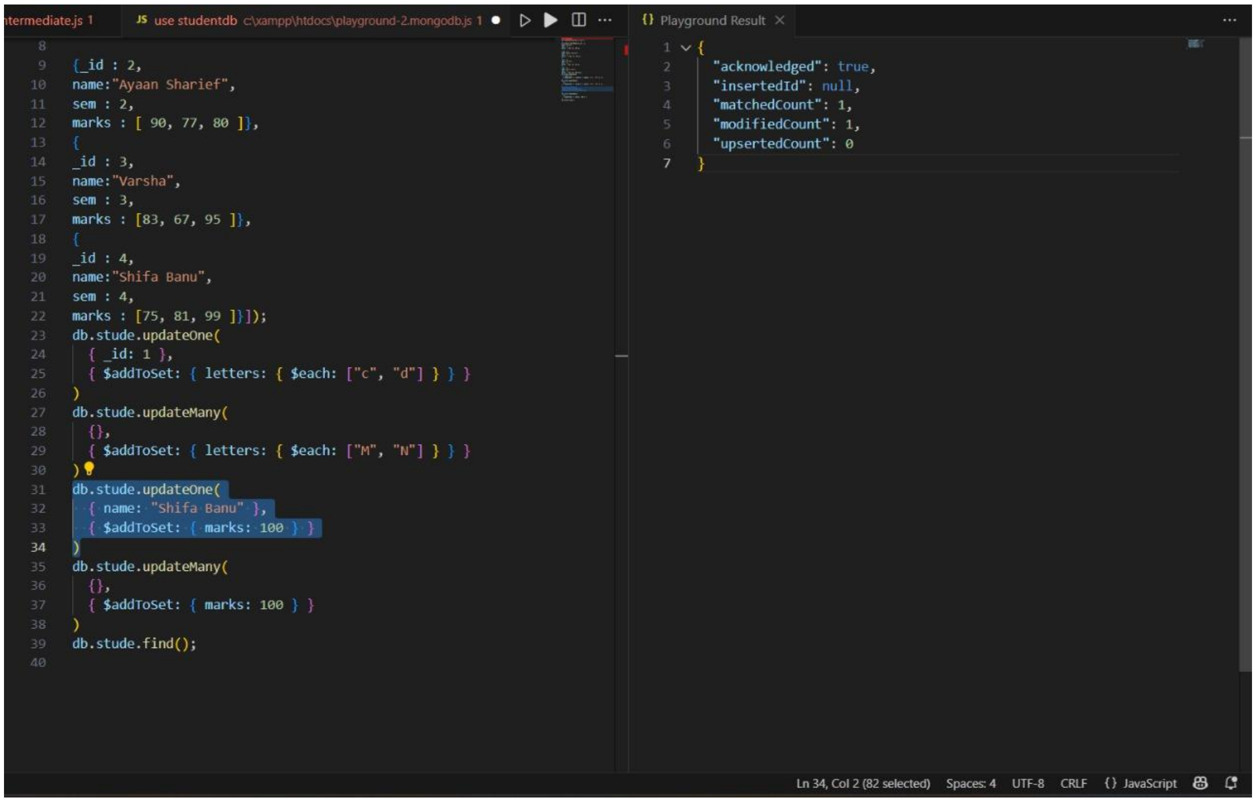
```
{} Playground Result
{
  "acknowledged": true,
  "insertedId": null,
  "matchedCount": 4,
  "modifiedCount": 4,
  "upsertedCount": 0
}
```

```
Ln 30, Col 2 (83 selected)   Spaces: 4   UTF-8   CRLF   {} JavaScript
```

3.Query to Append 100 to End of Array Using $addToSet Where Name=”Shifa Banu”

```
    db.stude.updateOne(
 { name: “Shifa Banu” },
 { $addToSet: { marks: 100 } }
)
```

Output:



```
{_id : 2,
name:"Ayaan Sharief",
sem : 2,
marks : [ 90, 77, 80 ]},
{
_id : 3,
name:"Varsha",
sem : 3,
marks : [83, 67, 95 ]},
{
_id : 4,
name:"Shifa Banu",
sem : 4,
marks : [75, 81, 99 ]}]);
db.stude.updateOne(
  { _id: 1 },
  { $addToSet: { letters: { $each: ["c", "d"] } } }
)
db.stude.updateMany(
  {},
  { $addToSet: { letters: { $each: ["M", "N"] } } }
)
db.stude.updateOne(
  { name: "Shifa Banu" },
  { $addToSet: { marks: 100 } }
)
db.stude.updateMany(
  {},
  { $addToSet: { marks: 100 } }
)
db.stude.find();
```

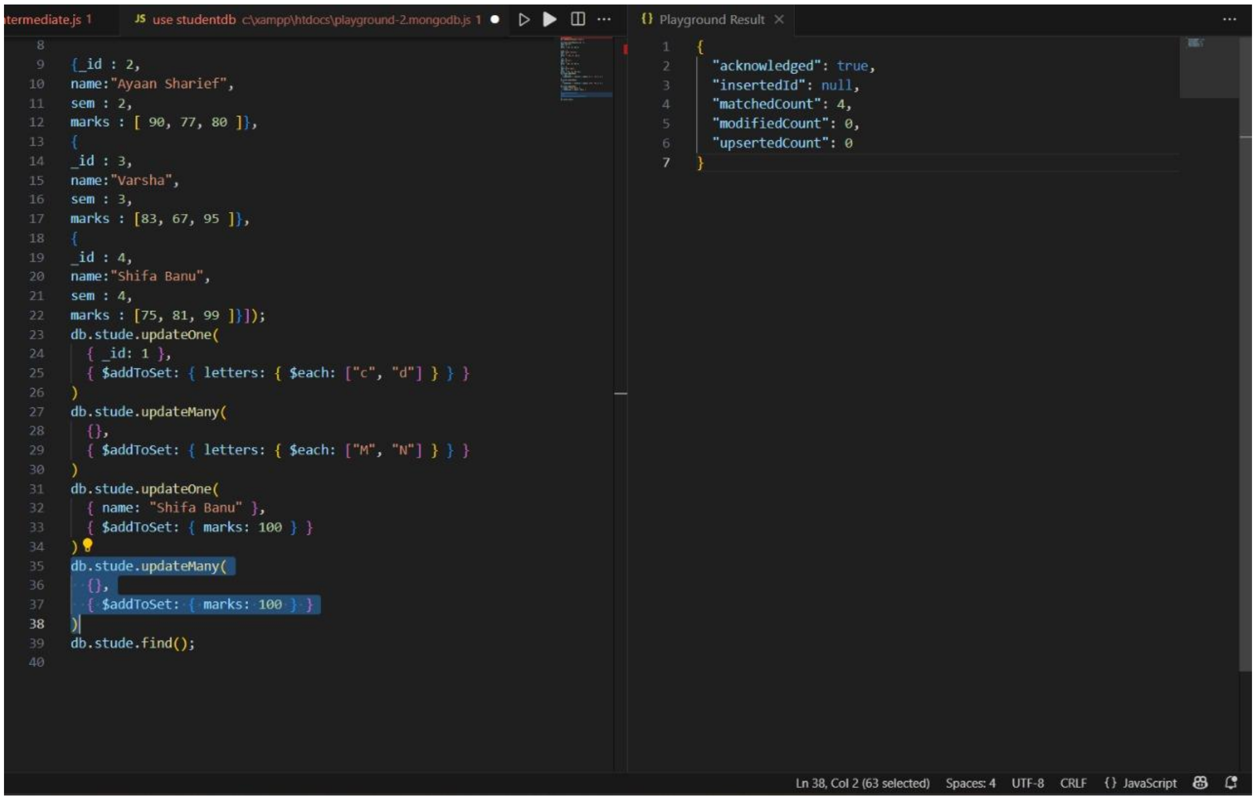
```
{
  "acknowledged": true,
  "insertedId": null,
  "matchedCount": 1,
  "modifiedCount": 1,
  "upsertedCount": 0
}
```

Ln 34, Col 2 (82 selected)   Spaces: 4   UTF-8   CRLF   {} JavaScript

4.Query To Append 100 To End of Array Using For All Students Using updateMany and $ addToSet

```
    Db.stude.updateMany(
 {},
 { $addToSet: { marks: 100 } }
)
```

Output:



ntermediate.js 1   JS use studentdb c:\xampp\htdocs\playground-2.mongodb.js 1   {} Playground Result

```
{_id : 2,
name:"Ayaan Sharief",
sem : 2,
marks : [ 90, 77, 80 ]},
{
_id : 3,
name:"Varsha",
sem : 3,
marks : [83, 67, 95 ]},
{
_id : 4,
name:"Shifa Banu",
sem : 4,
marks : [75, 81, 99 ]}]);
db.stude.updateOne(
  { _id: 1 },
  { $addToSet: { letters: { $each: ["c", "d"] } } }
)
db.stude.updateMany(
  {},
  { $addToSet: { letters: { $each: ["M", "N"] } } }
)
db.stude.updateOne(
  { name: "Shifa Banu" },
  { $addToSet: { marks: 100 } }
)
db.stude.updateMany(
  {},
  { $addToSet: { marks: 100 } }
)
db.stude.find();
```

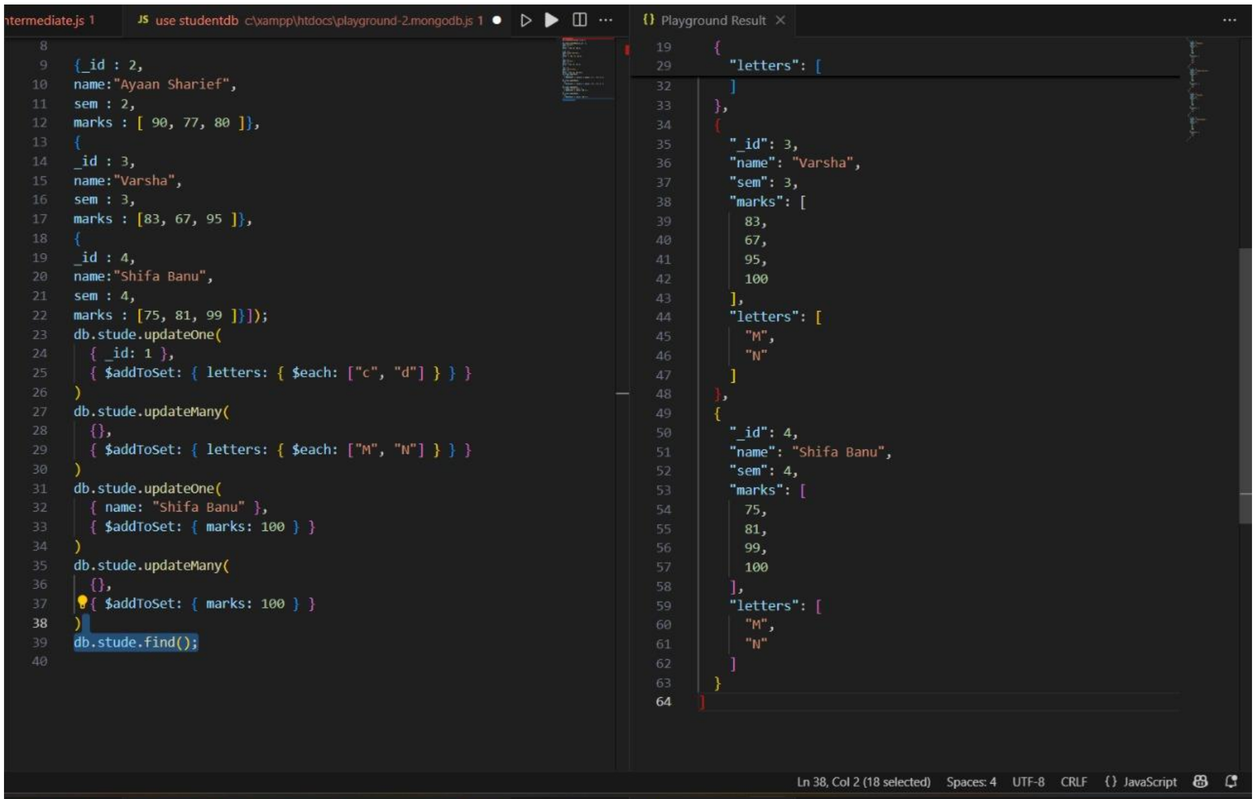
```
{
  "acknowledged": true,
  "insertedId": null,
  "matchedCount": 4,
  "modifiedCount": 0,
  "upsertedCount": 0
}
```

Ln 38, Col 2 (63 selected)   Spaces: 4   UTF-8   CRLF   {} JavaScript

To check the Dataset which is modified bu above operations

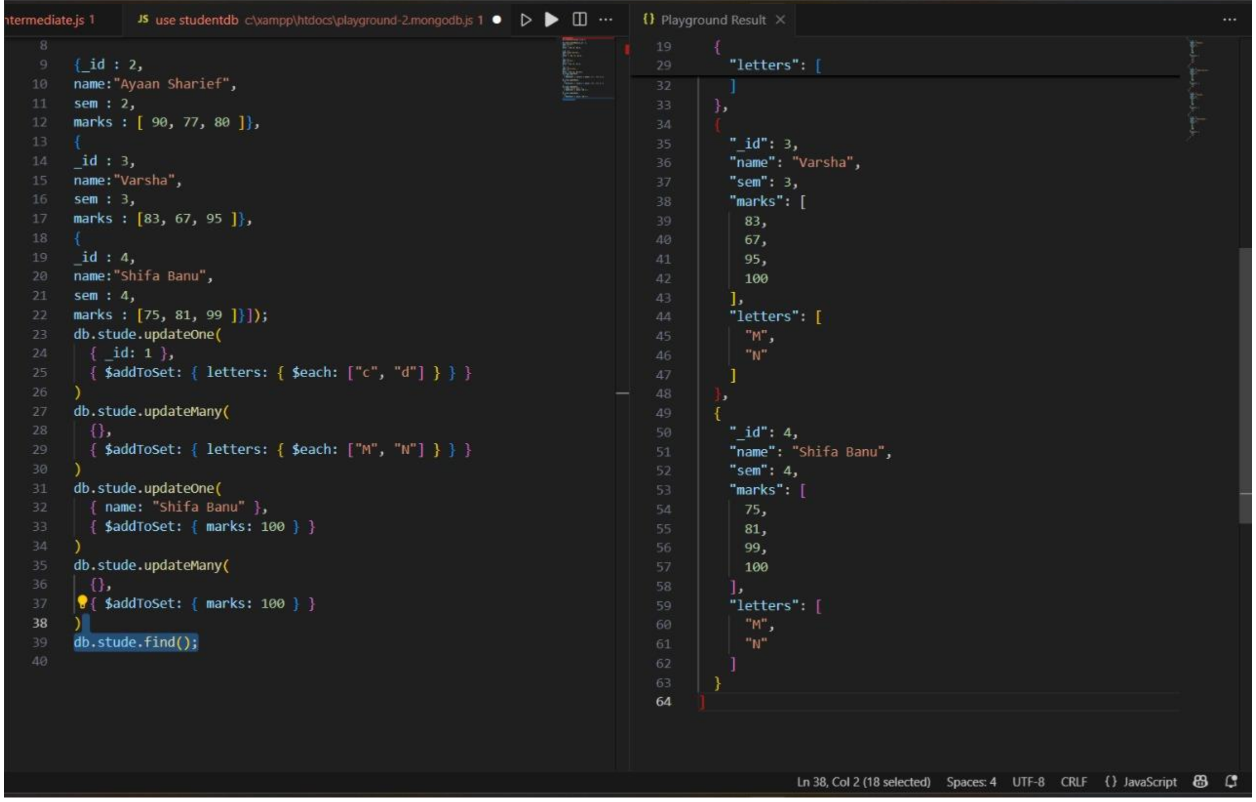
db.stude.find();

Output:



```
{_id : 2,
name:"Ayaan Sharief",
sem : 2,
marks : [ 90, 77, 80 ]},
{
_id : 3,
name:"Varsha",
sem : 3,
marks : [83, 67, 95 ]},
{
_id : 4,
name:"Shifa Banu",
sem : 4,
marks : [75, 81, 99 ]}]);
db.stude.updateOne(
  { _id: 1 },
  { $addToSet: { letters: { $each: ["c", "d"] } } }
)
db.stude.updateMany(
  {},
  { $addToSet: { letters: { $each: ["M", "N"] } } }
)
db.stude.updateOne(
  { name: "Shifa Banu" },
  { $addToSet: { marks: 100 } }
)
db.stude.updateMany(
  {},
  { $addToSet: { marks: 100 } }
)
db.stude.find();
```

```
  {
    "letters": [
    ]
  },
  {
    "_id": 3,
    "name": "Varsha",
    "sem": 3,
    "marks": [
      83,
      67,
      95,
      100
    ],
    "letters": [
      "M",
      "N"
    ]
  },
  {
    "_id": 4,
    "name": "Shifa Banu",
    "sem": 4,
    "marks": [
      75,
      81,
      99,
      100
    ],
    "letters": [
      "M",
      "N"
    ]
  }
]
```



ntermediate.js 1
JS use studentdb c:\xampp\htdocs\playground-2.mongodb.js 1
{} Playground Result
Ln 38, Col 2 (18 selected)   Spaces: 4   UTF-8   CRLF   {} JavaScript

```
{_id : 2,
name:"Ayaan Sharief",
sem : 2,
marks : [ 90, 77, 80 ]},
{
_id : 3,
name:"Varsha",
sem : 3,
marks : [83, 67, 95 ]},
{
_id : 4,
name:"Shifa Banu",
sem : 4,
marks : [75, 81, 99 ]}]);
db.stude.updateOne(
  { _id: 1 },
  { $addToSet: { letters: { $each: ["c", "d"] } } }
)
db.stude.updateMany(
  {},
  { $addToSet: { letters: { $each: ["M", "N"] } } }
)
db.stude.updateOne(
  { name: "Shifa Banu" },
  { $addToSet: { marks: 100 } }
)
db.stude.updateMany(
  {},
  { $addToSet: { marks: 100 } }
)
db.stude.find();
```

```
  {
    "letters": [
    ]
  },
  {
    "_id": 3,
    "name": "Varsha",
    "sem": 3,
    "marks": [
      83,
      67,
      95,
      100
    ],
    "letters": [
      "M",
      "N"
    ]
  },
  {
    "_id": 4,
    "name": "Shifa Banu",
    "sem": 4,
    "marks": [
      75,
      81,
      99,
      100
    ],
    "letters": [
      "M",
      "N"
    ]
  }
]
```