

Payoda-Phase2 - Day 04

MongoDB and C#

Task 1:

```
Select mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000
Microsoft Windows [Version 10.0.16299.1887]
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C:\Users\jayakkavin.e>mongosh
Current Mongosh Log ID: 64cb3110486106cb0989c19e
Connecting to:      mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+1.10.3
Using MongoDB:      6.0.8
Using Mongosh:      1.10.3

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

To help improve our products, anonymous usage data is collected and sent to MongoDB periodically (https://www.mongodb.com/legal/privacy-policy).
You can opt-out by running the disableTelemetry() command.

-----
The server generated these startup warnings when booting
  2023-08-02T02:38:39.661-07:00: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
-----

test> show db
MongoshInvalidInputError: [COMMON-10001] 'db' is not a valid argument for "show".
test> show dbs
sample   8.00 KiB
admin    40.00 KiB
config   60.00 KiB
local    40.00 KiB
test> db payoda;
Uncaught:
SyntaxError: Missing semicolon. (1:2)

> 1 | db payoda;
    |         ^
    2 |

test> db;
test
test> use payoda
switched to db payoda
payoda> db.createCollection("Employees");
{ ok: 1 }
```

```

Select mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000
{ ok: 1 }
payoda> db.Employees.insertOne({name: "JK"});
{
  acknowledged: true,
  insertedId: ObjectId("64cb3d43486106cb0989c19f")
}
payoda> db.Employees.insertMany({name: "Sanjay"}, {name: "Yogesh"}, {name: "Harsha"});
MongoInvalidArgumentError: Argument "docs" must be an array of documents
payoda> db.Employees.insertMany({name: "Sanjay"}, {name: "Yogesh"}, {name: "Harsha"});
Uncaught:
SyntaxError: Unexpected token (1:25)

> 1 | db.Employees.insertMany({name: "Sanjay"}, {name: "Yogesh"}, {name: "Harsha"});
    |                               ^
    |
    |
2 |

payoda> db.Employees.insertMany([ {name: "Sanjay"}, {name: "Yogesh"}, {name: "Harsha"} ]);
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId("64cb3df7486106cb0989c1a0"),
    '1': ObjectId("64cb3df7486106cb0989c1a1"),
    '2': ObjectId("64cb3df7486106cb0989c1a2")
  }
}
payoda> db.Employees.find();
[
  { _id: ObjectId("64cb3d43486106cb0989c19f"), name: 'JK' },
  { _id: ObjectId("64cb3df7486106cb0989c1a0"), name: 'Sanjay' },
  { _id: ObjectId("64cb3df7486106cb0989c1a1"), name: 'Yogesh' },
  { _id: ObjectId("64cb3df7486106cb0989c1a2"), name: 'Harsha' }
]
payoda> db.Employees.find({name: "JK"});
[ { _id: ObjectId("64cb3d43486106cb0989c19f"), name: 'JK' } ]
payoda> db.Employees.find({}, {name: 1});
[
  { _id: ObjectId("64cb3d43486106cb0989c19f"), name: 'JK' },
  { _id: ObjectId("64cb3df7486106cb0989c1a0"), name: 'Sanjay' },
  { _id: ObjectId("64cb3df7486106cb0989c1a1"), name: 'Yogesh' },
  { _id: ObjectId("64cb3df7486106cb0989c1a2"), name: 'Harsha' }
]

```

```

Select mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000
[
  { _id: ObjectId("64cb3d43486106cb0989c19f") },
  { _id: ObjectId("64cb3df7486106cb0989c1a0") },
  { _id: ObjectId("64cb3df7486106cb0989c1a1") },
  { _id: ObjectId("64cb3df7486106cb0989c1a2") }
]
payoda> db.Employees.find({}, {name:0, _id=0});
Uncaught:
SyntaxError: Invalid shorthand property initializer. (1:32)

> 1 | db.Employees.find({}, {name:0, _id=0});
    |                               ^
    |
    2 |

payoda> db.Employees.find({}, {name:0, "_id=0"});
Uncaught:
SyntaxError: Unexpected token (1:34)

> 1 | db.Employees.find({}, {name:0, "_id=0"});
    |                               ^
    |
    2 |

payoda> db.Employees.find({}, {name=1});
Uncaught:
SyntaxError: Invalid shorthand property initializer. (1:26)

> 1 | db.Employees.find({}, {name=1});
    |               ^
    |
    2 |

payoda> db.Employees.find({}, {name : 0, _id : 0});
[ {}, {}, {}, {} ]
payoda> db.Employees.updateOne({name:"JK"}, {$set:{name:"JK 17"}});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
payoda> db.Employees.find({}, {name : 1});

```

```
Select mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000

[
  { _id: ObjectId("64cb3d43486106cb0989c19f"), name: 'JK 17' },
  { _id: ObjectId("64cb3df7486106cb0989c1a0"), name: 'Sanjay' },
  { _id: ObjectId("64cb3df7486106cb0989c1a1"), name: 'Yogesh' },
  { _id: ObjectId("64cb3df7486106cb0989c1a2"), name: 'Harsha' }
]
payoda> db.Employees.updateOne({name:"JK 17"},{$set:{name:"JK"}},{upsert:true});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
payoda> db.Employees.find({}, {name: 1});
[
  { _id: ObjectId("64cb3d43486106cb0989c19f"), name: 'JK' },
  { _id: ObjectId("64cb3df7486106cb0989c1a0"), name: 'Sanjay' },
  { _id: ObjectId("64cb3df7486106cb0989c1a1"), name: 'Yogesh' },
  { _id: ObjectId("64cb3df7486106cb0989c1a2"), name: 'Harsha' }
]
payoda> db.Employees.updateOne({name:"JK 17"},{$set:{name:"JK"}},{upsert:true});
{
  acknowledged: true,
  insertedId: ObjectId("64cb49979f6b0b82513ef5a7"),
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 1
}
payoda> db.Employees.find({}, {name: 1});
[
  { _id: ObjectId("64cb3d43486106cb0989c19f"), name: 'JK' },
  { _id: ObjectId("64cb3df7486106cb0989c1a0"), name: 'Sanjay' },
  { _id: ObjectId("64cb3df7486106cb0989c1a1"), name: 'Yogesh' },
  { _id: ObjectId("64cb3df7486106cb0989c1a2"), name: 'Harsha' },
  { _id: ObjectId("64cb49979f6b0b82513ef5a7"), name: 'JK' }
]
payoda> db.Employees.updateMany({name:"JK"},{$set:{name:"JK 17"}},{upsert:true});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 2,
  upsertedCount: 0
}
payoda> db.Employees.find({}, {name: 1});
[
  { _id: ObjectId("64cb3d43486106cb0989c19f"), name: 'JK 17' },
  { _id: ObjectId("64cb3df7486106cb0989c1a0"), name: 'Sanjay' },
  { _id: ObjectId("64cb3df7486106cb0989c1a1"), name: 'Yogesh' },
  { _id: ObjectId("64cb3df7486106cb0989c1a2"), name: 'Harsha' },
  { _id: ObjectId("64cb49979f6b0b82513ef5a7"), name: 'JK 17' }
]
payoda> db.Employees.deleteOne({name: "JK 17"});
{ acknowledged: true, deletedCount: 1 }
payoda> db.Employees.find({}, {name: 1});
[
  { _id: ObjectId("64cb3df7486106cb0989c1a0"), name: 'Sanjay' },
  { _id: ObjectId("64cb3df7486106cb0989c1a1"), name: 'Yogesh' },
  { _id: ObjectId("64cb3df7486106cb0989c1a2"), name: 'Harsha' },
  { _id: ObjectId("64cb49979f6b0b82513ef5a7"), name: 'JK 17' }
]
payoda> db.Employees.deleteMany({name: "JK 17"});
{ acknowledged: true, deletedCount: 1 }
payoda> db.Employees.deleteMany({});
{ acknowledged: true, deletedCount: 3 }
payoda> db.Employees.find({}, {name: 1});
[
  { _id: ObjectId("64cb49979f6b0b82513ef5a7"), name: 'JK 17' }
]
payoda> db.users.insert({name:"JK", age:23, email:"jk@yopmail.com", isActive:true});
DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite.
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("64cb4ced486106cb0989c1a3") }
}
payoda> db.users.find();
[
  {
    _id: ObjectId("64cb4ced486106cb0989c1a3"),
    name: 'JK',
    age: 23,
    email: 'jk@yopmail.com',
    isActive: true
  }
]
```

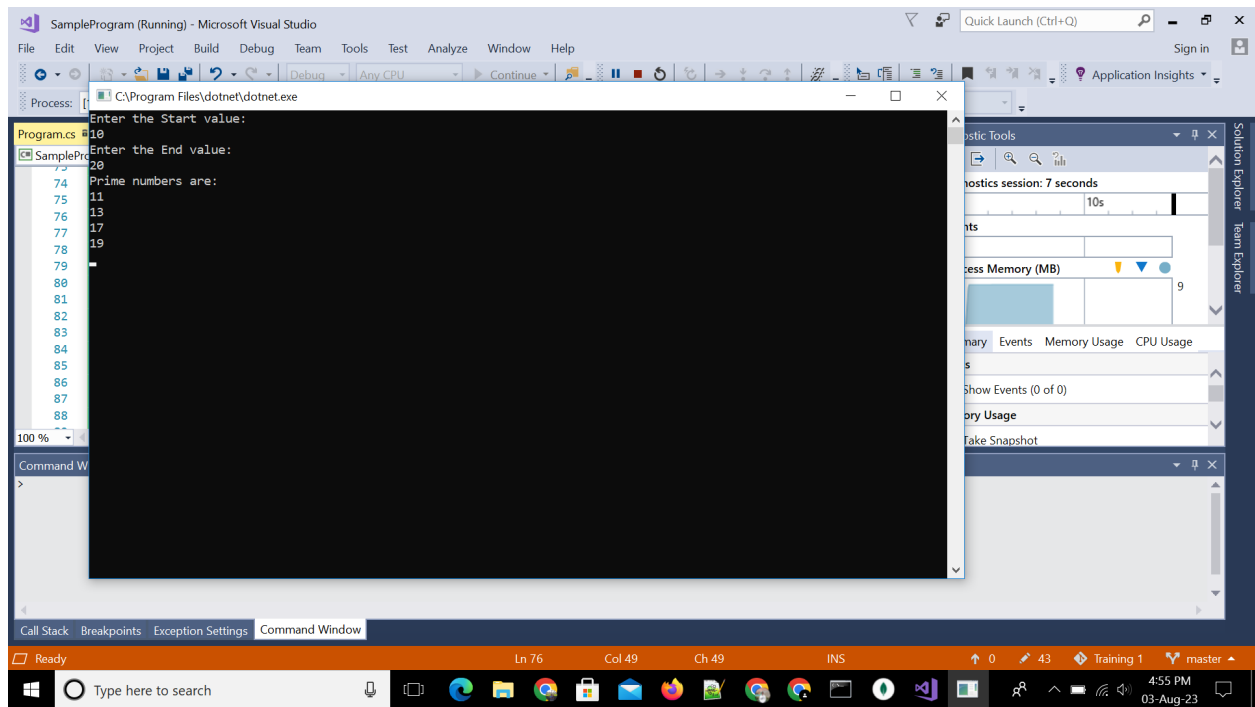
```
Select mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000

modifiedCount: 2,
upsertedCount: 0
}
payoda> db.Employees.find({}, {name: 1});
[
  { _id: ObjectId("64cb3d43486106cb0989c19f"), name: 'JK 17' },
  { _id: ObjectId("64cb3df7486106cb0989c1a0"), name: 'Sanjay' },
  { _id: ObjectId("64cb3df7486106cb0989c1a1"), name: 'Yogesh' },
  { _id: ObjectId("64cb3df7486106cb0989c1a2"), name: 'Harsha' },
  { _id: ObjectId("64cb49979f6b0b82513ef5a7"), name: 'JK 17' }
]
payoda> db.Employees.deleteOne({name: "JK 17"});
{ acknowledged: true, deletedCount: 1 }
payoda> db.Employees.find({}, {name: 1});
[
  { _id: ObjectId("64cb3df7486106cb0989c1a0"), name: 'Sanjay' },
  { _id: ObjectId("64cb3df7486106cb0989c1a1"), name: 'Yogesh' },
  { _id: ObjectId("64cb3df7486106cb0989c1a2"), name: 'Harsha' },
  { _id: ObjectId("64cb49979f6b0b82513ef5a7"), name: 'JK 17' }
]
payoda> db.Employees.deleteMany({name: "JK 17"});
{ acknowledged: true, deletedCount: 1 }
payoda> db.Employees.deleteMany({});
{ acknowledged: true, deletedCount: 3 }
payoda> db.Employees.find({}, {name: 1});
[
  { _id: ObjectId("64cb49979f6b0b82513ef5a7"), name: 'JK 17' }
]
payoda> db.users.insert({name:"JK", age:23, email:"jk@yopmail.com", isActive:true});
DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite.
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("64cb4ced486106cb0989c1a3") }
}
payoda> db.users.find();
[
  {
    _id: ObjectId("64cb4ced486106cb0989c1a3"),
    name: 'JK',
    age: 23,
    email: 'jk@yopmail.com',
    isActive: true
  }
]
```

```
Select mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000
]
payoda> db.users.find({age:{$gt:20}});
[
  {
    _id: ObjectId("64cb4ced486106cb0989c1a3"),
    name: 'JK',
    age: 23,
    email: 'jk@yopmail.com',
    isActive: true
  }
]
payoda> db.users.find({age:{$gt:20}, name : 1});
payoda> db.users.find({age:{$gt:20}},(name:1));
[ { _id: ObjectId("64cb4ced486106cb0989c1a3"), name: 'JK' } ]
payoda> db.users.find({age:{$gt:20}},{_id:0,name:1});
[ { name: 'JK' } ]
payoda> db.users.find({age:{$gt:20}},{_id:0,name:1,age:1});
[ { name: 'JK', age: 23 } ]
payoda> db.users.find({age:{$gt:20}},(name:0,age:1));
MongoServerError: Cannot do inclusion on field age in exclusion projection
payoda> db.users.find({age:{$gt:20}},{_id:0,name:1,age:1,email:0});
MongoServerError: Cannot do exclusion on field email in inclusion projection
payoda> db.users.insert({name:"Yogi", age:22, email:"yogi@yopmail.com", isActive:true});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("64cb4f39486106cb0989c1a4") }
}
payoda> db.users.insert({name:"sanjay", age:22, email:"sanjay@yopmail.com", isActive:false});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("64cb4f48486106cb0989c1a5") }
}
payoda> db.users.find();
[
  {
    _id: ObjectId("64cb4ced486106cb0989c1a3"),
    name: 'JK',
    age: 23,
    email: 'jk@yopmail.com',
  }
]
```

```
Select mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000
[
  {
    _id: ObjectId("64cb4f48486106cb0989c1a5"),
    name: 'sanjay',
    age: 22,
    email: 'sanjay@yopmail.com',
    isActive: false
  }
]
payoda> db.users.find({$or:[{age:{$gt:22}, isActive:true}]});
[
  {
    _id: ObjectId("64cb4ced486106cb0989c1a3"),
    name: 'JK',
    age: 23,
    email: 'jk@yopmail.com',
    isActive: true
  }
]
payoda> db.users.find({$or:[{age:{$gt:22}, isActive:false}]});
payoda> db.users.find({$or:[{age:{$gt:22}}, {isActive:false}]});
[
  {
    _id: ObjectId("64cb4ced486106cb0989c1a3"),
    name: 'JK',
    age: 23,
    email: 'jk@yopmail.com',
    isActive: true
  },
  {
    _id: ObjectId("64cb4f48486106cb0989c1a5"),
    name: 'sanjay',
    age: 22,
    email: 'sanjay@yopmail.com',
    isActive: false
  }
]
payoda> db.users.find({$or:[{age:{$gte:22}}, {isActive:false}]});
[
  {
    _id: ObjectId("64cb4ced486106cb0989c1a3"),
  }
]
```

Task 2: Prime Number between 10 to 20



Task 3: Perfect number

