

Microsoft Windows [Version 10.0.22631.4391]
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```
C:\Users\ADMIN>mongosh
Current Mongosh Log ID: 672afcc2e5951dd62c0d818f
Connecting to:
mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.3.3
Using MongoDB:      8.0.3
Using Mongosh:      2.3.3
```

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

```
-----
The server generated these startup warnings when booting
2024-11-05T19:59:55.011+05:30: Access control is not enabled for the database.
Read and write access to data and configuration is unrestricted
-----
```

```
test> show databases
admin    40.00 KiB
config  48.00 KiB
local   40.00 KiB
tea55   80.00 KiB
test> use tea55
switched to db tea55
tea55> show collections
students
test collection
tea55> db.students.find()
[
  { _id: ObjectId('672a30420b146f0f4c0d8190'), name: 'Ram', age: 12 },
  {
    _id: ObjectId('672a30ea0b146f0f4c0d8191'),
    name: 'Piyush',
    age: 21
  },
  {
    _id: ObjectId('672a30ea0b146f0f4c0d8192'),
    name: 'Kushal',
    age: 21
  },
  { _id: ObjectId('672a30ea0b146f0f4c0d8193'), name: 'Vivek', age: 18 },
  { _id: ObjectId('672a349d0b146f0f4c0d8194'), name: 'Tom', age: 11 },
  { _id: ObjectId('672a349d0b146f0f4c0d8195'), name: 'Tunnu', age: 11 },
  {
    _id: ObjectId('672a3ab70b146f0f4c0d8196'),
    name: 'Piyush',
    age: 10
  },
]
```

```
{ _id: ObjectId('672a3ab70b146f0f4c0d8198'), name: 'Vivek', age: 18 }
]
```

```
tea55> // *****AGGREGATION*****
```

```
tea55> // db.collection.aggregate(pipeline, options)
```

```
tea55> // db.collection.aggregate([pipeline], options)
```

```
tea55> db.createCollection("teachers")
```

```
tea55> dd.teachers.insertMany([{name:"piyush ", age:22, exp:8,
city:"Nashik"},{name:"Kushal", age:20, exp:7, city:"Pune"},{name:"vivek", age:21,
exp:10, city:"Nashik"},{name:"dipesh", age:22, exp:9, city:"Nashik"},
{name:"laukik", age:20, exp:10, city:"Pune"}, {name:"jay", age:20, exp:10,
city:"Pune"}, {name:"mohit", age:24, exp:12, city:"Shahada"}])
```

Uncaught:

SyntaxError: Unexpected token (1:136)

```
> 1 | dd.teachers.insertMany([{name:"piyush ", age:22, exp:8,
city:"Nashik"},{name:"Kushal", age:20, exp:7, city:"Pune"},{name:"vivek", age:21,
exp:10, city:"Nashik"},{name:"dipesh", age:22, exp:9, city:"Nashik"},
{name:"laukik", age:20, exp:10, city:"Pune"}, {name:"jay", age:20, exp:10,
city:"Pune"}, {name:"mohit", age:24, exp:12, city:"Shahada"}])
|
^
```

```
2 |
```

```
tea55> db.teachers.insertMany([{name:"piyush ", age:22, exp:8,
city:"Nashik"},{name:"Kushal", age:20, exp:7, city:"Pune"},{name:"vivek", age:21,
exp:10, city:"Nashik"},{name:"dipesh", age:22, exp:9, city:"Nashik"},
{name:"laukik", age:20, exp:10, city:"Pune"}, {name:"jay", age:20, exp:10,
city:"Pune"}, {name:"mohit", age:24, exp:12, city:"Shahada"}])
```

Uncaught:

SyntaxError: Unexpected token (1:136)

```
> 1 | db.teachers.insertMany([{name:"piyush ", age:22, exp:8,
city:"Nashik"},{name:"Kushal", age:20, exp:7, city:"Pune"},{name:"vivek", age:21,
exp:10, city:"Nashik"},{name:"dipesh", age:22, exp:9, city:"Nashik"},
{name:"laukik", age:20, exp:10, city:"Pune"}, {name:"jay", age:20, exp:10,
city:"Pune"}, {name:"mohit", age:24, exp:12, city:"Shahada"}])
|
^
```

```
2 |
```

```
tea55> db.teachers.insertMany([{name:"piyush ", age:22, exp:8,
city:"Nashik"},{name:"Kushal", age:20, exp:7, city:"Pune"},{name:"vivek", age:21,
exp:10, city:"Nashik"},{name:"dipesh", age:22, exp:9, city:"Nashik"},
{name:"laukik", age:20, exp:10, city:"Pune"}, {name:"jay", age:20, exp:10,
city:"Pune"}, {name:"mohit", age:24, exp:12, city:"Shahada"}])
```

```
{
```

```
  acknowledged: true,
```

```
  insertedIds: {
```

```

    '0': ObjectId('672b00aee5951dd62c0d8190'),
    '1': ObjectId('672b00aee5951dd62c0d8191'),
    '2': ObjectId('672b00aee5951dd62c0d8192'),
    '3': ObjectId('672b00aee5951dd62c0d8193'),
    '4': ObjectId('672b00aee5951dd62c0d8194'),
    '5': ObjectId('672b00aee5951dd62c0d8195'),
    '6': ObjectId('672b00aee5951dd62c0d8196')
  }
}
tea55> db.teachers.find.pretty()
TypeError: db.teachers.find.pretty is not a function
tea55> db.teachers.find().pretty()

```

```

[
  {
    _id: ObjectId('672b00aee5951dd62c0d8190'),
    name: 'piyush ',
    age: 22,
    exp: 8,
    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8191'),
    name: 'Kushal',
    age: 20,
    exp: 7,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8192'),
    name: 'vivek',
    age: 21,
    exp: 10,
    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8193'),
    name: 'dipesh',
    age: 22,
    exp: 9,
    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8194'),
    name: 'laukik',
    age: 20,
    exp: 10,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8195'),

```

```

    name: 'jay',
    age: 20,
    exp: 10,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8196'),
    name: 'mohit',
    age: 24,
    exp: 12,
    city: 'Shahada'
  }
]
tea55> // ***** $match: {Filters documents based on specified criteria.}

```

```

tea55> db.teachers.find([{$match:{city:"Pune"}}])
MongoInvalidArgumentError: Query filter must be a plain object or ObjectId

```

```

tea55> db.teachers.aggregate([{$match:{city:"Pune"}}])

```

```

[
  {
    _id: ObjectId('672b00aee5951dd62c0d8191'),
    name: 'Kushal',
    age: 20,
    exp: 7,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8194'),
    name: 'laukik',
    age: 20,
    exp: 10,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8195'),
    name: 'jay',
    age: 20,
    exp: 10,
    city: 'Pune'
  }
]

```

```

tea55> // *****group by age*****

```

```

tea55> // ***$group: Groups documents by a specified identifier and can perform
aggregations on grouped data.

```

```

tea55> db.teachers.aggregate([{$group:{_id:"$age"}}])

```

```

[ { _id: 22 }, { _id: 20 }, { _id: 21 }, { _id: 24 } ]

```

```

tea55> db.teachers.aggregate([{$group:{_id:'$age', name:{$push: '$name'}}})

```

```

Uncaught:

```

SyntaxError: Unexpected token, expected ",", (1:29)

```
> 1 | db.teachers.aggregate([$group:{_id:'$age', name:{$push: '$name'}}])
    | ^
    2 |
```

```
tea55> db.teachers.aggregate([$group:{_id:"$age", name:{$push: "$name"}}])
```

Uncaught:

SyntaxError: Unexpected token, expected ",", (1:66)

```
> 1 | db.teachers.aggregate([$group:{_id:"$age", name:{$push: "$name"}}])
    | ^
    2 |
```

```
tea55> db.teachers.aggregate([$group:{_id:"$age", name:{$push: "$name"}}])
```

```
[
  { _id: 24, name: [ 'mohit' ] },
  { _id: 21, name: [ 'vivek' ] },
  { _id: 22, name: [ 'piyush ', 'dipesh' ] },
  { _id: 20, name: [ 'Kushal', 'laukik', 'jay' ] }
]
tea55> db.teachers.aggregate([$group:{_id:"$age", name:{$push: "$name"}}])
```

Uncaught:

SyntaxError: Unexpected token, expected ",", (1:66)

```
> 1 | db.teachers.aggregate([$group:{_id:"$age", name:{$push: "$name"}}])
    | ^
    2 |
```

```
tea55> db.teachers.aggregate([$group:{_id:"$age", name:{$push: "$name"}}])
```

```
[
  { _id: 24, name: [ 'mohit' ] },
  { _id: 21, name: [ 'vivek' ] },
  { _id: 22, name: [ 'piyush ', 'dipesh' ] },
  { _id: 20, name: [ 'Kushal', 'laukik', 'jay' ] }
]
tea55> db.teachers.aggregate([$group:{_id:"$age", avgExp:{$avg: "$exp" }
}])
```

```
[
  { _id: 20, avgExp: 9 },
  { _id: 22, avgExp: 8.5 },
  { _id: 21, avgExp: 10 },
  { _id: 24, avgExp: 12 }
]
```

```
tea55> db.teachers.aggregate([$group:{_id:"$age", name:{$push:"$name"},
avgExp:{$avg:"$exp" } }])
```

```
[
  { _id: 20, name: [ 'Kushal', 'laukik', 'jay' ], avgExp: 9 },
  { _id: 22, name: [ 'piyush ', 'dipesh' ], avgExp: 8.5 },
  { _id: 21, name: [ 'vivek' ], avgExp: 10 },
]
```

```
{ _id: 24, name: [ 'mohit' ], avgExp: 12 }
]
```

```
tea55> // $match and $group combined
```

```
tea55> // db.collection.aggregate([
```

```
tea55> {
...   $match: { <field>: <value> }
```

Uncaught:

SyntaxError: Support for the experimental syntax 'jsx' isn't currently enabled (2:15):

```
1 | {
> 2 |   $match: { <field>: <value> }
    |               ^
3 |
```

Add @babel/preset-react

(<https://github.com/babel/babel/tree/main/packages/babel-preset-react>) to the 'presets' section of your Babel config to enable transformation.

If you want to leave it as-is, add @babel/plugin-syntax-jsx

(<https://github.com/babel/babel/tree/main/packages/babel-plugin-syntax-jsx>) to the 'plugins' section to enable parsing.

```
tea55> },
```

Uncaught:

SyntaxError: Unexpected token (1:2)

```
> 1 | },
    |   ^
2 |
```

```
tea55> {
...   $group: {
...     _id: "<field_to_group_by>",
...     <new_field_name>: { <accumulator_operator>: "<field>" },
```

Uncaught:

SyntaxError: Support for the experimental syntax 'jsx' isn't currently enabled (4:7):

```
2 |   $group: {
3 |     _id: "<field_to_group_by>",
> 4 |     <new_field_name>: { <accumulator_operator>: "<field>" },
    |                       ^
5 |
```

Add @babel/preset-react

(<https://github.com/babel/babel/tree/main/packages/babel-preset-react>) to the 'presets' section of your Babel config to enable transformation.

If you want to leave it as-is, add @babel/plugin-syntax-jsx

(<https://github.com/babel/babel/tree/main/packages/babel-plugin-syntax-jsx>) to the 'plugins' section to enable parsing.

```
tea55> <another_new_field_name>: { <accumulator_operator>: "<field>" }
```

Uncaught:

SyntaxError: Support for the experimental syntax 'jsx' isn't currently enabled (1:7):

```
> 1 | <another_new_field_name>: { <accumulator_operator>: "<field>" }  
    | ^  
    2 |
```

Add @babel/preset-react

(<https://github.com/babel/babel/tree/main/packages/babel-preset-react>) to the 'presets' section of your Babel config to enable transformation.

If you want to leave it as-is, add @babel/plugin-syntax-jsx

(<https://github.com/babel/babel/tree/main/packages/babel-plugin-syntax-jsx>) to the 'plugins' section to enable parsing.

```
tea55> }
```

Uncaught:

SyntaxError: Unexpected token (1:4)

```
> 1 | }  
    | ^  
    2 |
```

```
tea55> }
```

Uncaught:

SyntaxError: Unexpected token (1:2)

```
> 1 | }  
    | ^  
    2 |
```

```
tea55> ])
```

Uncaught:

SyntaxError: Unexpected token (1:0)

```
> 1 | ])  
    | ^  
    2 |
```

```
tea55> // $match and $group combined
```

```
tea55> db.teachers.aggregate([ {$match:{city:"Nashik"} }, {$group:{ _id:"$age",  
name:{$push:"$name"}, avgExp:{$sum:{"$exp"}}} } ])
```

Uncaught:

SyntaxError: Unexpected token (1:116)

```
> 1 | db.teachers.aggregate([ {$match:{city:"Nashik"} }, {$group:{ _id:"$age",
name:{$push:"$name"}, avgExp:{$sum:{"$exp"}} } } ])
```

```
2 |
```

```
tea55> db.teachers.aggregate([ {$match:{city:"Nashik"} }, {$group:{ _id:"$age",
name:{$push:"$name"}, avgExp:{$avg:{"$exp"} } } ])
```

Uncaught:

SyntaxError: Unexpected token (1:116)

```
> 1 | db.teachers.aggregate([ {$match:{city:"Nashik"} }, {$group:{ _id:"$age",
name:{$push:"$name"}, avgExp:{$avg:{"$exp"} } } ])
```

```
2 |
```

```
tea55> db.teachers.aggregate([ {$match:{city:"Nashik"} }, {$group:{ _id:"$age",
name:{$push:"$name"}, avgExp:{$avg:"$exp"} } } ])
```

```
[
  { _id: 21, name: [ 'vivek' ], avgExp: 10 },
  { _id: 22, name: [ 'piyush ', 'dipesh' ], avgExp: 8.5 }
]
```

```
tea55> db.teachers.aggregate([ {$match:{city:"Nashik"} }, {$group:{ _id:"$age",
name:{$push:"$$R"}, avgExp:{$avg:"$exp"} } } ])
```

MongoServerError[Location17276]: Use of undefined variable: R

```
tea55> db.teachers.aggregate([ {$match:{city:"Nashik"} }, {$group:{ _id:"$age",
name:{$push:"$$ROOT"}, avgExp:{$avg:"$exp"} } } ])
```

```
[
  {
    _id: 22,
    name: [
      {
        _id: ObjectId('672b00aee5951dd62c0d8190'),
        name: 'piyush ',
        age: 22,
        exp: 8,
        city: 'Nashik'
      },
      {
        _id: ObjectId('672b00aee5951dd62c0d8193'),
        name: 'dipesh',
        age: 22,
        exp: 9,
        city: 'Nashik'
      }
    ],
    avgExp: 8.5
  },
  {

```



```

    _id: 21,
    name: [
      {
        _id: ObjectId('672b00aee5951dd62c0d8192'),
        name: 'vivek',
        age: 21,
        exp: 10,
        city: 'Nashik'
      }
    ],
    avgExp: 10
  }
]

```

```
tea55> // ****more practice with count and match
```

```
tea55> db.teachers.aggregate([{$match:{exp:{gt:19}} }])
```

```
tea55> db.teachers.aggregate([{$match:{exp:{gt:19}} }])
```

```
tea55> db.teachers.aggregate([{$match:{exp:{gt:8}} }])
```

```

[
  {
    _id: ObjectId('672b00aee5951dd62c0d8192'),
    name: 'vivek',
    age: 21,
    exp: 10,
    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8193'),
    name: 'dipesh',
    age: 22,
    exp: 9,
    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8194'),
    name: 'laukik',
    age: 20,
    exp: 10,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8195'),
    name: 'jay',
    age: 20,
    exp: 10,
    city: 'Pune'
  },
  {

```

```

    _id: ObjectId('672b00aee5951dd62c0d8196'),
    name: 'mohit',
    age: 24,
    exp: 12,
    city: 'Shahada'
  }
]
tea55> db.teachers.aggregate([{$match:{exp:{$gt:8}}}, { $group:{_id:"$age",
number:{$sum:1}} }  ])
[
  { _id: 20, number: 2 },
  { _id: 22, number: 1 },
  { _id: 21, number: 1 },
  { _id: 24, number: 1 }
]
tea55> db.teachers.aggregate([{$match:{exp:{$gt:8}}}, { $group:{_id:"$age",
number:{$sum:1}, all:{$push:"$$ROOT"} }}  ])
[
  {
    _id: 21,
    number: 1,
    all: [
      {
        _id: ObjectId('672b00aee5951dd62c0d8192'),
        name: 'vivek',
        age: 21,
        exp: 10,
        city: 'Nashik'
      }
    ]
  },
  {
    _id: 20,
    number: 2,
    all: [
      {
        _id: ObjectId('672b00aee5951dd62c0d8194'),
        name: 'laukik',
        age: 20,
        exp: 10,
        city: 'Pune'
      },
      {
        _id: ObjectId('672b00aee5951dd62c0d8195'),
        name: 'jay',
        age: 20,
        exp: 10,
        city: 'Pune'
      }
    ]
  }
],

```

```

{
  _id: 24,
  number: 1,
  all: [
    {
      _id: ObjectId('672b00aee5951dd62c0d8196'),
      name: 'mohit',
      age: 24,
      exp: 12,
      city: 'Shahada'
    }
  ]
},
{
  _id: 22,
  number: 1,
  all: [
    {
      _id: ObjectId('672b00aee5951dd62c0d8193'),
      name: 'dipesh',
      age: 22,
      exp: 9,
      city: 'Nashik'
    }
  ]
}
]
tea55> db.teachers.aggregate([{$match:{exp:{$gt:8}}}, { $group:{_id:"$age",
all:{$push:"$$ROOT"}, number:{$sum:1} }} ])
[
  {
    _id: 24,
    all: [
      {
        _id: ObjectId('672b00aee5951dd62c0d8196'),
        name: 'mohit',
        age: 24,
        exp: 12,
        city: 'Shahada'
      }
    ],
    number: 1
  },
  {
    _id: 21,
    all: [
      {
        _id: ObjectId('672b00aee5951dd62c0d8192'),
        name: 'vivek',
        age: 21,

```

```

        exp: 10,
        city: 'Nashik'
    }
],
number: 1
},
{
    _id: 22,
    all: [
        {
            _id: ObjectId('672b00aee5951dd62c0d8193'),
            name: 'dipesh',
            age: 22,
            exp: 9,
            city: 'Nashik'
        }
    ],
    number: 1
},
{
    _id: 20,
    all: [
        {
            _id: ObjectId('672b00aee5951dd62c0d8194'),
            name: 'laukik',
            age: 20,
            exp: 10,
            city: 'Pune'
        },
        {
            _id: ObjectId('672b00aee5951dd62c0d8195'),
            name: 'jay',
            age: 20,
            exp: 10,
            city: 'Pune'
        }
    ],
    number: 2
}
]
tea55> db.teachers.aggregate([ { $sort:{exp:-1} } ])
[
    {
        _id: ObjectId('672b00aee5951dd62c0d8196'),
        name: 'mohit',
        age: 24,
        exp: 12,
        city: 'Shahada'
    },
    {

```

```

    _id: ObjectId('672b00aee5951dd62c0d8192'),
    name: 'vivek',
    age: 21,
    exp: 10,
    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8194'),
    name: 'laukik',
    age: 20,
    exp: 10,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8195'),
    name: 'jay',
    age: 20,
    exp: 10,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8193'),
    name: 'dipesh',
    age: 22,
    exp: 9,
    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8190'),
    name: 'piyush ',
    age: 22,
    exp: 8,
    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8191'),
    name: 'Kushal',
    age: 20,
    exp: 7,
    city: 'Pune'
  }
]
tea55> // ***** $sort *****

tea55> db.teachers.aggregate([ { $sort:{age:1} } ])
[
  {
    _id: ObjectId('672b00aee5951dd62c0d8191'),
    name: 'Kushal',
    age: 20,

```

```

    exp: 7,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8194'),
    name: 'laukik',
    age: 20,
    exp: 10,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8195'),
    name: 'jay',
    age: 20,
    exp: 10,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8192'),
    name: 'vivek',
    age: 21,
    exp: 10,
    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8190'),
    name: 'piyush ',
    age: 22,
    exp: 8,
    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8193'),
    name: 'dipesh',
    age: 22,
    exp: 9,
    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8196'),
    name: 'mohit',
    age: 24,
    exp: 12,
    city: 'Shahada'
  }
]
tea55> db.teachers.aggregate([ { $match:{age:{gt:10}} }, { $group:{_id:"$age",
allDoc:{$push: "$$ROOT"}} }, { $sort:{exp:1} } ])

tea55> db.teachers.aggregate([ { $match:{age:{$gt:10}} }, { $group:{_id:"$age",

```

```

allDoc:{$push: "$$ROOT"}} }},{ $sort:{exp:1} } ] )
[
  {
    _id: 21,
    allDoc: [
      {
        _id: ObjectId('672b00aee5951dd62c0d8192'),
        name: 'vivek',
        age: 21,
        exp: 10,
        city: 'Nashik'
      }
    ]
  },
  {
    _id: 20,
    allDoc: [
      {
        _id: ObjectId('672b00aee5951dd62c0d8191'),
        name: 'Kushal',
        age: 20,
        exp: 7,
        city: 'Pune'
      },
      {
        _id: ObjectId('672b00aee5951dd62c0d8194'),
        name: 'laukik',
        age: 20,
        exp: 10,
        city: 'Pune'
      },
      {
        _id: ObjectId('672b00aee5951dd62c0d8195'),
        name: 'jay',
        age: 20,
        exp: 10,
        city: 'Pune'
      }
    ]
  },
  {
    _id: 24,
    allDoc: [
      {
        _id: ObjectId('672b00aee5951dd62c0d8196'),
        name: 'mohit',
        age: 24,
        exp: 12,
        city: 'Shahada'
      }
    ]
  }
]

```

```

    ]
  },
  {
    _id: 22,
    allDoc: [
      {
        _id: ObjectId('672b00aee5951dd62c0d8190'),
        name: 'piyush ',
        age: 22,
        exp: 8,
        city: 'Nashik'
      },
      {
        _id: ObjectId('672b00aee5951dd62c0d8193'),
        name: 'dipesh',
        age: 22,
        exp: 9,
        city: 'Nashik'
      }
    ]
  }
]
}
]
tea55> db.teachers.aggregate([ { $match:{age:{$gt:10}} }, { $sort:{exp:1} } ])
[
  {
    _id: ObjectId('672b00aee5951dd62c0d8191'),
    name: 'Kushal',
    age: 20,
    exp: 7,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8190'),
    name: 'piyush ',
    age: 22,
    exp: 8,
    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8193'),
    name: 'dipesh',
    age: 22,
    exp: 9,
    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8192'),
    name: 'vivek',
    age: 21,
    exp: 10,
  }
]

```



```

    city: 'Nashik'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8194'),
    name: 'laukik',
    age: 20,
    exp: 10,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8195'),
    name: 'jay',
    age: 20,
    exp: 10,
    city: 'Pune'
  },
  {
    _id: ObjectId('672b00aee5951dd62c0d8196'),
    name: 'mohit',
    age: 24,
    exp: 12,
    city: 'Shahada'
  }
]

```

```

tea55> // *****$project: is the field you want to include or exclude. *
*****

```

```

tea55> db.teachers.aggregate([ { $match:{age:{$gt:10}} }, { $sort:{exp:1} }, {
$project:{name:1, age:1, exp:1, _id:0} } ])

```

```

[
  { name: 'Kushal', age: 20, exp: 7 },
  { name: 'piyush ', age: 22, exp: 8 },
  { name: 'dipesh', age: 22, exp: 9 },
  { name: 'vivek', age: 21, exp: 10 },
  { name: 'laukik', age: 20, exp: 10 },
  { name: 'jay', age: 20, exp: 10 },
  { name: 'mohit', age: 24, exp: 12 }
]

```

```

tea55> // ***** $limit: *****

```

```

tea55> db.teachers.aggregate([ { $match:{age:{$gt:10}} }, { $sort:{exp:1} }, {
$project:{name:1, age:1, exp:1, _id:0} }, { $limit:{3} } ])

```

Uncaught:

SyntaxError: Unexpected token (1:130)

```

> 1 | db.teachers.aggregate([ { $match:{age:{$gt:10}} }, { $sort:{exp:1} }, {
    | $project:{name:1, age:1, exp:1, _id:0} }, { $limit:{3} } ])

```

2 |

^

```
tea55> db.teachers.aggregate([ { $match:{age:{$gt:10}} }, { $sort:{exp:1} }, {  
$project:{name:1, age:1, exp:1, _id:0} }, { $limit:3 } ])  
[  
  { name: 'Kushal', age: 20, exp: 7 },  
  { name: 'piyush ', age: 22, exp: 8 },
```

```

// Indexing

tea55> db.teachers.createIndex({ age:1 })
age_1
tea55> db.teachers.getIndexes()
[
  { v: 2, key: { _id: 1 }, name: '_id_' },
  { v: 2, key: { age: 1 }, name: 'age_1' }
]
tea55> // *****Compound Index *****

tea55> db.teachers.createIndex({ age:1, exp:-1 })
age_1_exp_-1
tea55> // 1: ascending , -1: Descending

tea55> // see Index

tea55> db.teachers.getIndexes()
[
  { v: 2, key: { _id: 1 }, name: '_id_' },
  { v: 2, key: { age: 1 }, name: 'age_1' },
  { v: 2, key: { age: 1, exp: -1 }, name: 'age_1_exp_-1' }
]
tea55> // ***** Dropping an Index *****

tea55> db.teachers.dropIndex("age_1_exp_-1")
{ nIndexesWas: 3, ok: 1 }
tea55> db.teachers.getIndexes()
[
  { v: 2, key: { _id: 1 }, name: '_id_' },
  { v: 2, key: { age: 1 }, name: 'age_1' }
]
tea55>

```