

Assignment B05

- Date of Completion: 9/11/20
- Date of Submission: 23/11/20
- Title: Array Operations.
- Problem Statement:
Design & implement any 5 queries
Using MongoDB
- Objectives:
 - 1) To query embedded documents, arrays & array of embedded documents.
 - 2) To update embedded documents, arrays & array of embedded documents.
- Outcome:
Ability to update & query embedded documents, arrays & array of embedded documents.
- SIW & HIW Req.
MongoDB 4.4 Server, Windows 10, i5 Processor, 8GB RAM.

- Theory:

Array Query Operators

1) \$all

selects the document where value of field is an array that contains all specified elements.

Syntax:

```
{ <field> : { $all [ <value1>, <value2>, ... ] } }
```

2) \$elemMatch

element that matches all queries

Syntax

```
{ <field> : { $elemMatch : { <q1>, <q2>, ... } } }
```

3) \$size

matches with no. of elements specified.

Syntax

```
db.collection.find( { field : { $size : <value> } } )
```

Array Update Operators.

1) \$: Specifies position of ele. in array

Syntax:

```
{ "<array>" : value }
```


2) \$[]

Specifies that it will update all specified in array field

Syntax:

{ <update operator> : { "<array.\$[]>" : value } }

3) \$pop

Removes first/last element of an array.

Syntax:

{ \$pop : <field> : <-1|-2, ...> }

4) \$pull

Removes from existing array of instances

Syntax:

{ \$pull : { <field> : <value|cond>, ... } }

5) \$push

Appends value to an array

Syntax:

{ \$push : { <field> : <value>, ... } }

- 6) \$pullAll
removes all instances of specified values.

Syntax:

```
{ $pullAll: { <field>: <values> ... } ... }
```

Array Update Operator Modifiers

- 1) \$each:
used with \$addToSet & \$push to append multiple values to an array.

Syntax:

```
{ $push: { <field> { $each: [ <values> ... ] } } }
```

- 2) \$slice (projection)
Specifies the number of elements in an array to return query & result.

Syntax:

```
db.collection.find (<query>, { <arrfield>:  
  { $slice: <num> } })
```

• TEST CASES:

i/p	expected o/p	Result
1) <code>db.songs.find({ featuredIn: { \$all ["Recent", "Favourites"] }})</code>	Returns one document	Yes
2) <code>db.songs.find({ Playedby: { \$Size: 2 } })</code>	Returns 2 documents	Yes

• Conclusion:

Thus we implemented array operations
& queried embedded documents in
MongoDB.


```

> use B04;
switched to db B04
> db.dropDatabase();
createCollection("Aadhar");
show collections;

d{ "dropped" : "B04", "ok" : 1 }
> use B04;
switched to db B04

> db.Aadhar.update({},{$push:{"results":{"declared":"Yes"}},{multi:true})
WriteResult({ "nMatched" : 20, "nUpserted" : 0, "nModified" : 20 })
>
> db.Aadhar.update({ Aadharno:123513},{$push:{"results.$.Voted":{"2018":1,"2019":0}}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.Aadhar.update({ Aadharno:123512},{$push:{"results.$.Voted":{"2018":0,"2019":0}}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.Aadhar.update({ Aadharno:123511},{$push:{"results.$.Voted":{"2018":1,"2019":1}}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.Aadhar.update({ Aadharno:123510},{$push:{"results.$.Voted":{"2018":0,"2019":0}}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.Aadhar.update({ Aadharno:123509},{$push:{"results.$.Voted":{"2019":1,"2020":1}}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.Aadhar.update({ Aadharno:123508},{$push:{"results.$.Voted":{"2018":1,"2020":0}}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
>
> db.Aadhar.find().pretty();
{
  "_id" : ObjectId("5fbdecc663e242e7827e7d26"),
  "Aadharno" : 123456,
  "Name" : "Prathamesh KS",
  "MobileNo" : 7755922895,
  "Gender" : "Male",
  "Citizenship" : "Indian",
  "Age" : 20,
  "Address" : "Pune",
  "Voted" : {
    "2018" : 0,
    "2019" : 0,
    "2020" : 1
  },
  "results" : [
    {
      "declared" : "Yes"
    }
  ]
}
{

```

```

    "_id" : ObjectId("5fbdecc763e242e7827e7d27"),
    "Aadharno" : 123459,
    "Name" : "Sooraj VS",
    "MobileNo" : 7755922894,
    "Gender" : "Male",
    "Citizenship" : "Indian",
    "Age" : 21,
    "Address" : "Mumbai",
    "Voted" : {
        "2018" : 1,
        "2019" : 0,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes"
        }
    ]
}
{
    "_id" : ObjectId("5fbdecc763e242e7827e7d28"),
    "Aadharno" : 133455,
    "Name" : "Aditya Somani",
    "MobileNo" : 7755922893,
    "Gender" : "Male",
    "Citizenship" : "Indian",
    "Age" : 31,
    "Address" : "Mumbai",
    "Voted" : {
        "2018" : 1,
        "2019" : 1,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes"
        }
    ]
}
{
    "_id" : ObjectId("5fbdecc763e242e7827e7d29"),
    "Aadharno" : 125455,
    "Name" : "Utkarsh Gurav",
    "MobileNo" : 7755922892,
    "Gender" : "Male",
    "Citizenship" : "Indian",
    "Age" : 98,
    "Address" : "Nashik",
    "Voted" : {

```

```

        "2018" : 0,
        "2019" : 0,
        "2020" : 0
    },
    "results" : [
        {
            "declared" : "Yes"
        }
    ]
}
{
    "_id" : ObjectId("5fbdecc763e242e7827e7d2a"),
    "Aadharno" : 126451,
    "Name" : "Henry VS",
    "MobileNo" : 7755922824,
    "Gender" : "Male",
    "Citizenship" : "US",
    "Age" : 21,
    "Address" : "Mumbai",
    "Voted" : {
        "2018" : 1,
        "2019" : 0,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes"
        }
    ]
}
{
    "_id" : ObjectId("5fbdecc763e242e7827e7d2b"),
    "Aadharno" : 123465,
    "Name" : "Tanvi MD",
    "MobileNo" : 7755922214,
    "Gender" : "Female",
    "Citizenship" : "US",
    "Age" : 43,
    "Address" : "Newyork",
    "Voted" : {
        "2018" : 0,
        "2019" : 0,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes"
        }
    ]
}

```



```

}
{
  "_id" : ObjectId("5fbdecc763e242e7827e7d2c"),
  "AadharNo" : 123500,
  "Name" : "Aakash MD",
  "MobileNo" : 7722922214,
  "Gender" : "Male",
  "Citizenship" : "US",
  "Age" : 34,
  "Address" : "Newyork",
  "Voted" : {
    "2018" : 0,
    "2019" : 0,
    "2020" : 1
  },
  "results" : [
    {
      "declared" : "Yes"
    }
  ]
}
{
  "_id" : ObjectId("5fbdecc763e242e7827e7d2d"),
  "AadharNo" : 123501,
  "Name" : "Rajas S",
  "MobileNo" : 775592215,
  "Gender" : "Male",
  "Citizenship" : "US",
  "Age" : 23,
  "Address" : "London",
  "Voted" : {
    "2018" : 0,
    "2019" : 1,
    "2020" : 1
  },
  "results" : [
    {
      "declared" : "Yes"
    }
  ]
}
{
  "_id" : ObjectId("5fbdecc763e242e7827e7d2e"),
  "AadharNo" : 123502,
  "Name" : "Shreyas MD",
  "MobileNo" : 2255922216,
  "Gender" : "Male",
  "Citizenship" : "US",
  "Age" : 12,

```

```

    "Address" : "Indian",
    "Voted" : {
        "2018" : 1,
        "2019" : 0,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes"
        }
    ]
}
{
    "_id" : ObjectId("5fbdecc763e242e7827e7d2f"),
    "Aadharno" : 123503,
    "Name" : "Chetan LK",
    "MobileNo" : 7755922219,
    "Gender" : "Male",
    "Citizenship" : "Indian",
    "Age" : 22,
    "Address" : "Indian",
    "Voted" : {
        "2018" : 1,
        "2019" : 1,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes"
        }
    ]
}
{
    "_id" : ObjectId("5fbdecc763e242e7827e7d30"),
    "Aadharno" : 123504,
    "Name" : "Hritik S",
    "MobileNo" : 7755922405,
    "Gender" : "Male",
    "Citizenship" : "Indian",
    "Age" : 22,
    "Address" : "Pune",
    "Voted" : {
        "2018" : 1,
        "2019" : 1,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes"
        }
    ]
}

```



```

    }
  ]
}
{
  "_id" : ObjectId("5fbdecc763e242e7827e7d31"),
  "Aadharno" : 123505,
  "Name" : "Shreya LM",
  "MobileNo" : 7755922404,
  "Gender" : "Female",
  "Citizenship" : "US",
  "Age" : 15,
  "Address" : "Newyork",
  "Voted" : {
    "2018" : 0,
    "2019" : 0,
    "2020" : 0
  },
  "results" : [
    {
      "declared" : "Yes"
    }
  ]
}
{
  "_id" : ObjectId("5fbdecc763e242e7827e7d32"),
  "Aadharno" : 123506,
  "Name" : "Sparsh D",
  "MobileNo" : 7755922406,
  "Gender" : "Male",
  "Citizenship" : "Indian",
  "Age" : 20,
  "Address" : "Mumbai",
  "Voted" : {
    "2018" : 0,
    "2019" : 1,
    "2020" : 1
  },
  "results" : [
    {
      "declared" : "Yes"
    }
  ]
}
{
  "_id" : ObjectId("5fbdecc763e242e7827e7d33"),
  "Aadharno" : 123507,
  "Name" : "Harshita A",
  "MobileNo" : 7755922407,
  "Gender" : "Female",

```

```

    "Citizenship" : "Mexican",
    "Age" : 19,
    "Address" : "Newyork",
    "Voted" : {
        "2018" : 0,
        "2019" : 1,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes"
        }
    ]
}
{
    "_id" : ObjectId("5fbdecc763e242e7827e7d34"),
    "Aadharno" : 123508,
    "Name" : "Bhavika RC",
    "MobileNo" : 7755922408,
    "Gender" : "Female",
    "Citizenship" : "US",
    "Age" : 38,
    "Address" : "Newyork",
    "Voted" : {
        "2018" : 1,
        "2019" : 1,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes",
            "Voted" : [
                {
                    "2018" : 1,
                    "2020" : 0
                }
            ]
        }
    ]
}
{
    "_id" : ObjectId("5fbdecc763e242e7827e7d35"),
    "Aadharno" : 123509,
    "Name" : "Ronak M",
    "MobileNo" : 7755922409,
    "Gender" : "Male",
    "Citizenship" : "Indian",
    "Age" : 35,
    "Address" : "Pune",

```



```

    "Voted" : {
      "2018" : 0,
      "2019" : 0,
      "2020" : 0
    },
    "results" : [
      {
        "declared" : "Yes",
        "Voted" : [
          {
            "2019" : 1,
            "2020" : 1
          }
        ]
      }
    ]
  }
}
{
  "_id" : ObjectId("5fbdecc763e242e7827e7d36"),
  "Aadharno" : 123510,
  "Name" : "Aditi LL",
  "MobileNo" : 7755922410,
  "Gender" : "Female",
  "Citizenship" : "US",
  "Age" : 48,
  "Address" : "Pune",
  "Voted" : {
    "2018" : 0,
    "2019" : 1,
    "2020" : 1
  },
  "results" : [
    {
      "declared" : "Yes",
      "Voted" : [
        {
          "2018" : 0,
          "2019" : 0
        }
      ]
    }
  ]
}
{
  "_id" : ObjectId("5fbdecc763e242e7827e7d37"),
  "Aadharno" : 123511,
  "Name" : "Ayush Shah",
  "MobileNo" : 7755922411,
  "Gender" : "Male",

```

```

    "Citizenship" : "US",
    "Age" : 41,
    "Address" : "India",
    "Voted" : {
        "2018" : 1,
        "2019" : 0,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes",
            "Voted" : [
                {
                    "2018" : 1,
                    "2019" : 1
                }
            ]
        }
    ]
}
{
    "_id" : ObjectId("5fbdecc763e242e7827e7d38"),
    "Aadharno" : 123512,
    "Name" : "Karandeep H",
    "MobileNo" : 7755922412,
    "Gender" : "Male",
    "Citizenship" : "US",
    "Age" : 63,
    "Address" : "Mumbai",
    "Voted" : {
        "2018" : 0,
        "2019" : 0,
        "2020" : 0
    },
    "results" : [
        {
            "declared" : "Yes",
            "Voted" : [
                {
                    "2018" : 0,
                    "2019" : 0
                }
            ]
        }
    ]
}
{
    "_id" : ObjectId("5fbdecc763e242e7827e7d39"),
    "Aadharno" : 123513,

```



```

    "Name" : "Bhumika VC",
    "MobileNo" : 7755922413,
    "Gender" : "Female",
    "Citizenship" : "US",
    "Age" : 65,
    "Address" : "Pune",
    "Voted" : {
      "2018" : 0,
      "2019" : 1,
      "2020" : 1
    },
    "results" : [
      {
        "declared" : "Yes",
        "Voted" : [
          {
            "2018" : 1,
            "2019" : 0
          }
        ]
      }
    ]
  }
}
>

```

> -- ALL QUERY

uncaught exception: SyntaxError: unexpected token: identifier :

@(shell):1:7

> db.Aadhar.find({"results.Voted":{"\$all":[{"\$elemMatch":{"2018:1}}]}).pretty()

```

{
  "_id" : ObjectId("5fbdeb350832a5230031a534"),
  "Aadharno" : 123508,
  "Name" : "Bhavika RC",
  "MobileNo" : 7755922408,
  "Gender" : "Female",
  "Citizenship" : "US",
  "Age" : 38,
  "Address" : "Newyork",
  "Voted" : {
    "2018" : 1,
    "2019" : 1,
    "2020" : 1
  },
  "results" : [
    {
      "declared" : "Yes",
      "Voted" : [
        {

```

```

                "2018" : 1,
                "2020" : 0
            }
        ]
    }
]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a537"),
    "Aadharno" : 123511,
    "Name" : "Ayush Shah",
    "MobileNo" : 7755922411,
    "Gender" : "Male",
    "Citizenship" : "US",
    "Age" : 41,
    "Address" : "India",
    "Voted" : {
        "2018" : 1,
        "2019" : 0,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes",
            "Voted" : [
                {
                    "2018" : 1,
                    "2019" : 1
                }
            ]
        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a539"),
    "Aadharno" : 123513,
    "Name" : "Bhumika VC",
    "MobileNo" : 7755922413,
    "Gender" : "Female",
    "Citizenship" : "US",
    "Age" : 65,
    "Address" : "Pune",
    "Voted" : {
        "2018" : 0,
        "2019" : 1,
        "2020" : 1
    },
    "results" : [
        {

```

```

        "declared" : "Yes",
        "Voted" : [
            {
                "2018" : 1,
                "2019" : 0
            }
        ]
    }
]
}
> ### USING SLICE
uncaught exception: SyntaxError: illegal character :
@(shell):1:0
> db.Aadhar.find({}, {name:1, "results.Voted":{$slice:1}}).pretty()
{
  "_id" : ObjectId("5fbdeb350832a5230031a526"),
  "results" : [
    {

    }
  ]
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a527"),
  "results" : [
    {

    }
  ]
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a528"),
  "results" : [
    {

    }
  ]
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a529"),
  "results" : [
    {

    }
  ]
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a52a"),
  "results" : [

```

```
        {
        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a52b"),
    "results" : [
        {

        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a52c"),
    "results" : [
        {

        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a52d"),
    "results" : [
        {

        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a52e"),
    "results" : [
        {

        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a52f"),
    "results" : [
        {

        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a530"),
    "results" : [
        {
```



```

    }
  ]
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a531"),
  "results" : [
    {
      }
    ]
  }
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a532"),
  "results" : [
    {
      }
    ]
  }
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a533"),
  "results" : [
    {
      }
    ]
  }
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a534"),
  "results" : [
    {
      "Voted" : [
        {
          "2018" : 1,
          "2020" : 0
        }
      ]
    }
  ]
}
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a535"),
  "results" : [
    {
      "Voted" : [
        {
          "2019" : 1,
          "2020" : 1
        }
      ]
    }
  ]
}
}

```

```

    }
  ]
}
]
{
  "_id" : ObjectId("5fbdeb350832a5230031a536"),
  "results" : [
    {
      "Voted" : [
        {
          "2018" : 0,
          "2019" : 0
        }
      ]
    }
  ]
}
]
{
  "_id" : ObjectId("5fbdeb350832a5230031a537"),
  "results" : [
    {
      "Voted" : [
        {
          "2018" : 1,
          "2019" : 1
        }
      ]
    }
  ]
}
]
{
  "_id" : ObjectId("5fbdeb350832a5230031a538"),
  "results" : [
    {
      "Voted" : [
        {
          "2018" : 0,
          "2019" : 0
        }
      ]
    }
  ]
}
]
{
  "_id" : ObjectId("5fbdeb350832a5230031a539"),
  "results" : [
    {
      "Voted" : [

```

```

        {
            "2018" : 1,
            "2019" : 0
        }
    ]
}
]
}
}
> db.Aadhar.find({"results.Voted":{"$size:2"}}).pretty()
> db.Aadhar.find({"results.Voted":{"$size:1"}}).pretty()
{
  "_id" : ObjectId("5fbdeb350832a5230031a534"),
  "Aadharno" : 123508,
  "Name" : "Bhavika RC",
  "MobileNo" : 7755922408,
  "Gender" : "Female",
  "Citizenship" : "US",
  "Age" : 38,
  "Address" : "Newyork",
  "Voted" : {
    "2018" : 1,
    "2019" : 1,
    "2020" : 1
  },
  "results" : [
    {
      "declared" : "Yes",
      "Voted" : [
        {
          "2018" : 1,
          "2020" : 0
        }
      ]
    }
  ]
}
]
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a535"),
  "Aadharno" : 123509,
  "Name" : "Ronak M",
  "MobileNo" : 7755922409,
  "Gender" : "Male",
  "Citizenship" : "Indian",
  "Age" : 35,
  "Address" : "Pune",
  "Voted" : {
    "2018" : 0,
    "2019" : 0,
    "2020" : 0
  }
}

```

```

    },
    "results" : [
        {
            "declared" : "Yes",
            "Voted" : [
                {
                    "2019" : 1,
                    "2020" : 1
                }
            ]
        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a536"),
    "Aadharno" : 123510,
    "Name" : "Aditi LL",
    "MobileNo" : 7755922410,
    "Gender" : "Female",
    "Citizenship" : "US",
    "Age" : 48,
    "Address" : "Pune",
    "Voted" : {
        "2018" : 0,
        "2019" : 1,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes",
            "Voted" : [
                {
                    "2018" : 0,
                    "2019" : 0
                }
            ]
        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a537"),
    "Aadharno" : 123511,
    "Name" : "Ayush Shah",
    "MobileNo" : 7755922411,
    "Gender" : "Male",
    "Citizenship" : "US",
    "Age" : 41,
    "Address" : "India",
    "Voted" : {

```



```

        "2018" : 1,
        "2019" : 0,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes",
            "Voted" : [
                {
                    "2018" : 1,
                    "2019" : 1
                }
            ]
        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a538"),
    "Aadharno" : 123512,
    "Name" : "Karandeep H",
    "MobileNo" : 7755922412,
    "Gender" : "Male",
    "Citizenship" : "US",
    "Age" : 63,
    "Address" : "Mumbai",
    "Voted" : {
        "2018" : 0,
        "2019" : 0,
        "2020" : 0
    },
    "results" : [
        {
            "declared" : "Yes",
            "Voted" : [
                {
                    "2018" : 0,
                    "2019" : 0
                }
            ]
        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a539"),
    "Aadharno" : 123513,
    "Name" : "Bhumika VC",
    "MobileNo" : 7755922413,
    "Gender" : "Female",
    "Citizenship" : "US",

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    "Age" : 65,
    "Address" : "Pune",
    "Voted" : {
      "2018" : 0,
      "2019" : 1,
      "2020" : 1
    },
    "results" : [
      {
        "declared" : "Yes",
        "Voted" : [
          {
            "2018" : 1,
            "2019" : 0
          }
        ]
      }
    ]
  }
]
}
> ##### USING LOGICAL OPERATOR
uncaught exception: SyntaxError: illegal character :
@(shell):1:0
> db.Aadhar.find({$or:[{name:"Bhumika VC"},{Gender:"Female"}]}).pretty()
{
  "_id" : ObjectId("5fbdeb350832a5230031a52b"),
  "Aadharno" : 123465,
  "Name" : "Tanvi MD",
  "MobileNo" : 7755922214,
  "Gender" : "Female",
  "Citizenship" : "US",
  "Age" : 43,
  "Address" : "Newyork",
  "Voted" : {
    "2018" : 0,
    "2019" : 0,
    "2020" : 1
  },
  "results" : [
    {
      "declared" : "Yes"
    }
  ]
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a531"),
  "Aadharno" : 123505,
  "Name" : "Shreya LM",
  "MobileNo" : 7755922404,
  "Gender" : "Female",

```

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    "Citizenship" : "US",
    "Age" : 15,
    "Address" : "Newyork",
    "Voted" : {
        "2018" : 0,
        "2019" : 0,
        "2020" : 0
    },
    "results" : [
        {
            "declared" : "Yes"
        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a533"),
    "Aadharno" : 123507,
    "Name" : "Harshita A",
    "MobileNo" : 7755922407,
    "Gender" : "Female",
    "Citizenship" : "Mexican",
    "Age" : 19,
    "Address" : "Newyork",
    "Voted" : {
        "2018" : 0,
        "2019" : 1,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes"
        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a534"),
    "Aadharno" : 123508,
    "Name" : "Bhavika RC",
    "MobileNo" : 7755922408,
    "Gender" : "Female",
    "Citizenship" : "US",
    "Age" : 38,
    "Address" : "Newyork",
    "Voted" : {
        "2018" : 1,
        "2019" : 1,
        "2020" : 1
    },
    "results" : [

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        {
            "declared" : "Yes",
            "Voted" : [
                {
                    "2018" : 1,
                    "2020" : 0
                }
            ]
        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a536"),
    "Aadharno" : 123510,
    "Name" : "Aditi LL",
    "MobileNo" : 7755922410,
    "Gender" : "Female",
    "Citizenship" : "US",
    "Age" : 48,
    "Address" : "Pune",
    "Voted" : {
        "2018" : 0,
        "2019" : 1,
        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes",
            "Voted" : [
                {
                    "2018" : 0,
                    "2019" : 0
                }
            ]
        }
    ]
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a539"),
    "Aadharno" : 123513,
    "Name" : "Bhumika VC",
    "MobileNo" : 7755922413,
    "Gender" : "Female",
    "Citizenship" : "US",
    "Age" : 65,
    "Address" : "Pune",
    "Voted" : {
        "2018" : 0,
        "2019" : 1,

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        "2020" : 1
    },
    "results" : [
        {
            "declared" : "Yes",
            "Voted" : [
                {
                    "2018" : 1,
                    "2019" : 0
                }
            ]
        }
    ]
}
]
}
> ### USING UNWIND
uncaught exception: SyntaxError: illegal character :
@(shell):1:0
> db.Aadhar.aggregate({$unwind:"$results"}).pretty()
{
  "_id" : ObjectId("5fbdeb350832a5230031a526"),
  "Aadharno" : 123456,
  "Name" : "Prathamesh KS",
  "MobileNo" : 7755922895,
  "Gender" : "Male",
  "Citizenship" : "Indian",
  "Age" : 20,
  "Address" : "Pune",
  "Voted" : {
    "2018" : 0,
    "2019" : 0,
    "2020" : 1
  },
  "results" : {
    "declared" : "Yes"
  }
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a527"),
  "Aadharno" : 123459,
  "Name" : "Sooraj VS",
  "MobileNo" : 7755922894,
  "Gender" : "Male",
  "Citizenship" : "Indian",
  "Age" : 21,
  "Address" : "Mumbai",
  "Voted" : {
    "2018" : 1,
    "2019" : 0,
    "2020" : 1
  }
}

```

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    },
    "results" : {
        "declared" : "Yes"
    }
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a528"),
    "Aadharno" : 133455,
    "Name" : "Aditya Somani",
    "MobileNo" : 7755922893,
    "Gender" : "Male",
    "Citizenship" : "Indian",
    "Age" : 31,
    "Address" : "Mumbai",
    "Voted" : {
        "2018" : 1,
        "2019" : 1,
        "2020" : 1
    },
    "results" : {
        "declared" : "Yes"
    }
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a529"),
    "Aadharno" : 125455,
    "Name" : "Utkarsh Gurav",
    "MobileNo" : 7755922892,
    "Gender" : "Male",
    "Citizenship" : "Indian",
    "Age" : 98,
    "Address" : "Nashik",
    "Voted" : {
        "2018" : 0,
        "2019" : 0,
        "2020" : 0
    },
    "results" : {
        "declared" : "Yes"
    }
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a52a"),
    "Aadharno" : 126451,
    "Name" : "Henry VS",
    "MobileNo" : 7755922824,
    "Gender" : "Male",
    "Citizenship" : "US",
    "Age" : 21,

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    "Address" : "Mumbai",
    "Voted" : {
        "2018" : 1,
        "2019" : 0,
        "2020" : 1
    },
    "results" : {
        "declared" : "Yes"
    }
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a52b"),
    "Aadharno" : 123465,
    "Name" : "Tanvi MD",
    "MobileNo" : 7755922214,
    "Gender" : "Female",
    "Citizenship" : "US",
    "Age" : 43,
    "Address" : "Newyork",
    "Voted" : {
        "2018" : 0,
        "2019" : 0,
        "2020" : 1
    },
    "results" : {
        "declared" : "Yes"
    }
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a52c"),
    "Aadharno" : 123500,
    "Name" : "Aakash MD",
    "MobileNo" : 7722922214,
    "Gender" : "Male",
    "Citizenship" : "US",
    "Age" : 34,
    "Address" : "Newyork",
    "Voted" : {
        "2018" : 0,
        "2019" : 0,
        "2020" : 1
    },
    "results" : {
        "declared" : "Yes"
    }
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a52d"),
    "Aadharno" : 123501,

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    "Name" : "Rajas S",
    "MobileNo" : 775592215,
    "Gender" : "Male",
    "Citizenship" : "US",
    "Age" : 23,
    "Address" : "London",
    "Voted" : {
        "2018" : 0,
        "2019" : 1,
        "2020" : 1
    },
    "results" : {
        "declared" : "Yes"
    }
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a52e"),
    "Aadharno" : 123502,
    "Name" : "Shreyas MD",
    "MobileNo" : 2255922216,
    "Gender" : "Male",
    "Citizenship" : "US",
    "Age" : 12,
    "Address" : "Indian",
    "Voted" : {
        "2018" : 1,
        "2019" : 0,
        "2020" : 1
    },
    "results" : {
        "declared" : "Yes"
    }
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a52f"),
    "Aadharno" : 123503,
    "Name" : "Chetan LK",
    "MobileNo" : 7755922219,
    "Gender" : "Male",
    "Citizenship" : "Indian",
    "Age" : 22,
    "Address" : "Indian",
    "Voted" : {
        "2018" : 1,
        "2019" : 1,
        "2020" : 1
    },
    "results" : {
        "declared" : "Yes"
    }
}

```



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    }
  }
  {
    "_id" : ObjectId("5fbdeb350832a5230031a530"),
    "Aadharno" : 123504,
    "Name" : "Hritik S",
    "MobileNo" : 7755922405,
    "Gender" : "Male",
    "Citizenship" : "Indian",
    "Age" : 22,
    "Address" : "Pune",
    "Voted" : {
      "2018" : 1,
      "2019" : 1,
      "2020" : 1
    },
    "results" : {
      "declared" : "Yes"
    }
  }
  {
    "_id" : ObjectId("5fbdeb350832a5230031a531"),
    "Aadharno" : 123505,
    "Name" : "Shreya LM",
    "MobileNo" : 7755922404,
    "Gender" : "Female",
    "Citizenship" : "US",
    "Age" : 15,
    "Address" : "Newyork",
    "Voted" : {
      "2018" : 0,
      "2019" : 0,
      "2020" : 0
    },
    "results" : {
      "declared" : "Yes"
    }
  }
  {
    "_id" : ObjectId("5fbdeb350832a5230031a532"),
    "Aadharno" : 123506,
    "Name" : "Sparsh D",
    "MobileNo" : 7755922406,
    "Gender" : "Male",
    "Citizenship" : "Indian",
    "Age" : 20,
    "Address" : "Mumbai",
    "Voted" : {
      "2018" : 0,

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        "2019" : 1,
        "2020" : 1
    },
    "results" : {
        "declared" : "Yes"
    }
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a533"),
    "Aadharno" : 123507,
    "Name" : "Harshita A",
    "MobileNo" : 7755922407,
    "Gender" : "Female",
    "Citizenship" : "Mexican",
    "Age" : 19,
    "Address" : "Newyork",
    "Voted" : {
        "2018" : 0,
        "2019" : 1,
        "2020" : 1
    },
    "results" : {
        "declared" : "Yes"
    }
}
{
    "_id" : ObjectId("5fbdeb350832a5230031a534"),
    "Aadharno" : 123508,
    "Name" : "Bhavika RC",
    "MobileNo" : 7755922408,
    "Gender" : "Female",
    "Citizenship" : "US",
    "Age" : 38,
    "Address" : "Newyork",
    "Voted" : {
        "2018" : 1,
        "2019" : 1,
        "2020" : 1
    },
    "results" : {
        "declared" : "Yes",
        "Voted" : [
            {
                "2018" : 1,
                "2020" : 0
            }
        ]
    }
}
}

```

```

{
  "_id" : ObjectId("5fbdeb350832a5230031a535"),
  "Aadharno" : 123509,
  "Name" : "Ronak M",
  "MobileNo" : 7755922409,
  "Gender" : "Male",
  "Citizenship" : "Indian",
  "Age" : 35,
  "Address" : "Pune",
  "Voted" : {
    "2018" : 0,
    "2019" : 0,
    "2020" : 0
  },
  "results" : {
    "declared" : "Yes",
    "Voted" : [
      {
        "2019" : 1,
        "2020" : 1
      }
    ]
  }
}

```

```

}
{
  "_id" : ObjectId("5fbdeb350832a5230031a536"),
  "Aadharno" : 123510,
  "Name" : "Aditi LL",
  "MobileNo" : 7755922410,
  "Gender" : "Female",
  "Citizenship" : "US",
  "Age" : 48,
  "Address" : "Pune",
  "Voted" : {
    "2018" : 0,
    "2019" : 1,
    "2020" : 1
  },
  "results" : {
    "declared" : "Yes",
    "Voted" : [
      {
        "2018" : 0,
        "2019" : 0
      }
    ]
  }
}
{

```

```

    "_id" : ObjectId("5fbdeb350832a5230031a537"),
    "Aadharno" : 123511,
    "Name" : "Ayush Shah",
    "MobileNo" : 7755922411,
    "Gender" : "Male",
    "Citizenship" : "US",
    "Age" : 41,
    "Address" : "India",
    "Voted" : {
      "2018" : 1,
      "2019" : 0,
      "2020" : 1
    },
    "results" : {
      "declared" : "Yes",
      "Voted" : [
        {
          "2018" : 1,
          "2019" : 1
        }
      ]
    }
  }
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a538"),
  "Aadharno" : 123512,
  "Name" : "Karandeep H",
  "MobileNo" : 7755922412,
  "Gender" : "Male",
  "Citizenship" : "US",
  "Age" : 63,
  "Address" : "Mumbai",
  "Voted" : {
    "2018" : 0,
    "2019" : 0,
    "2020" : 0
  },
  "results" : {
    "declared" : "Yes",
    "Voted" : [
      {
        "2018" : 0,
        "2019" : 0
      }
    ]
  }
}
{
  "_id" : ObjectId("5fbdeb350832a5230031a539"),

```

```
"Aadharno" : 123513,
"Name" : "Bhumika VC",
"MobileNo" : 7755922413,
"Gender" : "Female",
"Citizenship" : "US",
"Age" : 65,
"Address" : "Pune",
"Voted" : {
  "2018" : 0,
  "2019" : 1,
  "2020" : 1
},
"results" : {
  "declared" : "Yes",
  "Voted" : [
    {
      "2018" : 1,
      "2019" : 0
    }
  ]
}
}
```