

BIG DATA LAB

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The values inserted in database:

> db.Details.find()

```
> use <laisha>
switched to db <laisha>
> db.Details.find()
{ "_id" : ObjectId("624bc02dd463bbbd0d2e4207"), "Name" : "laisha", "age" : 20, "gender" : "F" }
{ "_id" : ObjectId("624bc119d463bbbd0d2e4208"), "Name" : "Rani", "age" : 22 }
{ "_id" : ObjectId("624bc119d463bbbd0d2e420a"), "Name" : "Snehitha", "age" : 23, "gender" : "F" }
{ "_id" : ObjectId("6254fb2d851acd0422ca231c"), "Name" : "Vani", "age" : 25, "gender" : "F" }
{ "_id" : ObjectId("6254fb2d851acd0422ca231d"), "Name" : "John", "age" : 28, "gender" : "M" }
```

Creating Aggerate pipeline

Count:

Count the number of students with age :23

> db.Details.aggregate([{\$match:{age:23}},{\$count:"Number of students with age :23"}])

```
> db.Details.aggregate([{$match:{age:23}},{$count:"Number of students with age :23"}])
{ "Number of students with age :23" : 1 }
> |
```

Sum

Sum of ages of female

> db.Details.aggregate([{\$match:{gender: "F"}},{\$group:{_id : null,sum :{\$sum:"\$age"}}}])

Sum of ages of male

```
> db.Details.aggregate([{$match:{gender: "M"}},{$group:{_id : null,sum: {$sum: "$age" }}}])
```

Sum of all the ages

```
> db.Details.aggregate([{$match:{}},{$group:{_id : null,sum:{$sum:"$age"}}}])
```

```
> db.Details.aggregate([{$match:{gender: "F"}},{$group:{_id : null,sum :{$sum:"$age"}}}])
{ "_id" : null, "sum" : 68 }
> db.Details.aggregate([{$match:{gender: "M"}},{$group:{_id : null,sum:{$sum:"$age"}}}])
{ "_id" : null, "sum" : 28 }
> db.Details.aggregate([{$match:{}},{$group:{_id : null,sum:{$sum:"$age"}}}])
{ "_id" : null, "sum" : 118 }
```

Average

Average of all the ages

```
> db.Details.aggregate([{$match:{}},{$group:{_id : null,avg:{$avg:"$age"}}}])
```

```
> db.Details.aggregate([{$match:{}},{$group:{_id : null,avg:{$avg:"$age"}}}])
{ "_id" : null, "avg" : 23.6 }
```

Max &Min

Find the maximum age among all

```
> db.Details.aggregate([{$group:{_id : "age",aggregate_age:{$min:"$age"}}}])
```

Find the minimum age among all

```
> db.Details.aggregate([{$group:{_id : "age",aggregate_age:{$max:"$age"}}}])
```

```
> db.Details.aggregate([{$group:{_id : "age",aggregate_age:{$min:"$age"}}}])
{ "_id" : "age", "aggregate_age" : 20 }
> db.Details.aggregate([{$group:{_id : "age",aggregate_age:{$max:"$age"}}}])
{ "_id" : "age", "aggregate_age" : 28 }
```

First & Last values

Find the first name in database

```
> db.Details.aggregate([{$group: {_id: "Name", aggregate_Name: {$first: "$Name"}}}])
```

Find the last name in database

```
> db.Details.aggregate([{$group: {_id: "Name", aggregate_Name: {$last: "$Name"}}}])
```

```
> db.Details.aggregate([{$group: {_id: "Name", aggregate_Name: {$first: "$Name"}}}])
{ "_id" : "Name", "aggregate_Name" : "laisha" }
> db.Details.aggregate([{$group: {_id: "Name", aggregate_Name: {$last: "$Name"}}}])
{ "_id" : "Name", "aggregate_Name" : "John" }
```