

SUSHMITHA P.A

1NT19IS170

C2

AGGREGATE FUNCTIONS

```
> use sushmitha
switched to db sushmitha
```

```
> db.createCollection("sush");
{ "ok" : 1 }
```

Inserting values

```
> db.sush.insertMany([ {name:'emp1',address:'bangalore',age:21}, {name:'emp2',address:'mandya',age:34}, {name:'emp3',address:'kerala',age:45}, {name:'emp4',address:'hampi',age:32} ])
{
  "acknowledged" : true,
  "insertedIds" : [
    ObjectId("628f3d5afcc275d62d90ac24"),
    ObjectId("628f3d5afcc275d62d90ac25"),
    ObjectId("628f3d5afcc275d62d90ac26"),
    ObjectId("628f3d5afcc275d62d90ac27")
  ]
}
> db.sush.find()
{ "_id" : ObjectId("628f3d5afcc275d62d90ac24"), "name" : "emp1", "address" : "bangalore", "age" : 21 }
{ "_id" : ObjectId("628f3d5afcc275d62d90ac25"), "name" : "emp2", "address" : "mandya", "age" : 34 }
{ "_id" : ObjectId("628f3d5afcc275d62d90ac26"), "name" : "emp3", "address" : "kerala", "age" : 45 }
{ "_id" : ObjectId("628f3d5afcc275d62d90ac27"), "name" : "emp4", "address" : "hampi", "age" : 32 }
```

```
> db.sush.insertMany([ {name:'emp5',address:'bangalore',age:26}, {name:'emp6',address:'mandya',age:38} ])
{
  "acknowledged" : true,
  "insertedIds" : [
    ObjectId("628f4252fcc275d62d90ac2c"),
    ObjectId("628f4252fcc275d62d90ac2d")
  ]
}
> db.sush.find()
{ "_id" : ObjectId("628f3d5afcc275d62d90ac24"), "name" : "emp1", "address" : "bangalore", "age" : 21 }
{ "_id" : ObjectId("628f3d5afcc275d62d90ac25"), "name" : "emp2", "address" : "mandya", "age" : 34 }
{ "_id" : ObjectId("628f3d5afcc275d62d90ac26"), "name" : "emp3", "address" : "kerala", "age" : 45 }
{ "_id" : ObjectId("628f3d5afcc275d62d90ac27"), "name" : "emp4", "address" : "hampi", "age" : 32 }
{ "_id" : ObjectId("628f4252fcc275d62d90ac2c"), "name" : "emp5", "address" : "bangalore", "age" : 26 }
{ "_id" : ObjectId("628f4252fcc275d62d90ac2d"), "name" : "emp6", "address" : "mandya", "age" : 38 }
```

MAXIMUM

We are finding the maximum age for particular address

```
> db.sush.aggregate([{$group:{_id:'$address',max_age:{$max:'$age'}}}])
{ "_id" : "mandya", "max_age" : 38 }
{ "_id" : "bangalore", "max_age" : 26 }
{ "_id" : "hampi", "max_age" : 32 }
{ "_id" : "kerala", "max_age" : 45 }
>
```

MINIMUM

We are finding the minimum age for particular address

```
> db.sush.aggregate([{$group:{_id:'$address',min_age:{$min:'$age'}}}])
{ "_id" : "mandya", "min_age" : 34 }
{ "_id" : "bangalore", "min_age" : 21 }
{ "_id" : "hampi", "min_age" : 32 }
{ "_id" : "kerala", "min_age" : 45 }
>
```

SUM

We are finding the sum of ages for particular address

```
>
> db.sush.aggregate([{$group:{_id:'$address',sum_age:{$sum:'$age'}}}])
{ "_id" : "mandya", "sum_age" : 72 }
{ "_id" : "bangalore", "sum_age" : 47 }
{ "_id" : "hampi", "sum_age" : 32 }
{ "_id" : "kerala", "sum_age" : 45 }
>
```

AVERAGE

We are finding the average age with respect to each address

```
>
> db.sush.aggregate([{$group:{_id:'$address',avg_age:{$avg:'$age'}}}])
{ "_id" : "mandya", "avg_age" : 36 }
{ "_id" : "bangalore", "avg_age" : 23.5 }
{ "_id" : "hampi", "avg_age" : 32 }
{ "_id" : "kerala", "avg_age" : 45 }
>
```

PUSH

```
>
> db.sush.aggregate([{$group:{_id:'$address',push_age:{$push:'$age'}}}])
{ "_id" : "mandya", "push_age" : [ 34, 38 ] }
{ "_id" : "bangalore", "push_age" : [ 21, 26 ] }
{ "_id" : "hampi", "push_age" : [ 32 ] }
{ "_id" : "kerala", "push_age" : [ 45 ] }
>
```

ADD TO SET

```
>
> db.sush.aggregate([{$group:{_id:'$address',ats_age:{$addToSet:'$age'}}}])
{ "_id" : "mandya", "ats_age" : [ 38, 34 ] }
{ "_id" : "bangalore", "ats_age" : [ 21, 26 ] }
{ "_id" : "hampi", "ats_age" : [ 32 ] }
{ "_id" : "kerala", "ats_age" : [ 45 ] }
>
>
```

LAST

```
>
> db.sush.aggregate([{$group:{_id:'$address',last_age:{$last:'$age'}}}])
{ "_id" : "mandya", "last_age" : 38 }
{ "_id" : "bangalore", "last_age" : 26 }
{ "_id" : "hampi", "last_age" : 32 }
{ "_id" : "kerala", "last_age" : 45 }
>
>
```

FIRST

```
>
> db.sush.aggregate([{$group:{_id:'$address',first_age:{$first:'$age'}}}])
{ "_id" : "mandya", "first_age" : 34 }
{ "_id" : "bangalore", "first_age" : 21 }
{ "_id" : "hampi", "first_age" : 32 }
{ "_id" : "kerala", "first_age" : 45 }
>
>
```

OR OPERATION

It will print the details of the employees whose age limit is 26 or whose employee's address is "mandya".

```
> db.sush.find({'or':[{age:{$lt:26}},{address:"mandya"}]})
{ "_id" : ObjectId("628f3d5afcc275d62d90ac24"), "name" : "emp1", "address" : "bangalore", "age" : 21 }
{ "_id" : ObjectId("628f3d5afcc275d62d90ac25"), "name" : "emp2", "address" : "mandya", "age" : 34 }
{ "_id" : ObjectId("628f4252fcc275d62d90ac2d"), "name" : "emp6", "address" : "mandya", "age" : 38 }
>
>
```

AND OPERATION

It will print employee details whose name is “emp1” and age is 21.

```
>
> db.employee.find({$and:[{name:"emp1"},{age:21}]})
>
> db.sush.find({$and:[{name:"emp1"},{age:21}]})
{ "_id" : ObjectId("628f3d5afcc275d62d90ac24"), "name" : "emp1", "address" : "bangalore", "age" : 21 }
>
>
```

COUNT

It will count the total number entries in collection

```
>
> db.sush.estimatedDocumentCount()
6
> db.sush.count()
6
```