

ASSIGNMENT – VIII

TITLE :

MongoDB – Aggregation and Indexing: Design and Develop MongoDB
Queries using aggregation and indexing with suitable example using MongoDB.

NAME : Shinde Shubham Dnyandev, DIV : SY-B, ROLL NO. : 23107121.

```
>_MONGOSH
> use comp;
< switched to db comp
> db.createCollection('website');
< { ok: 1 }
> db.website.insert({'roll':'1','name':'harsh','amount':1000,'url':'www.yahoo.com'});
< DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite.
< {
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('67ee543dc450bd8f2be1d37c')
  }
}
> db.website.insert({'roll':'2','name':'jitesh','amount':2000,'url':'www.yahoo.com'});
< {
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('67ee5469c450bd8f2be1d37d')
  }
}
> db.website.insert({'roll':'3','name':'rina','amount':3000,'url':'www.google.com'});
< {
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('67ee547bc450bd8f2be1d37e')
  }
}
> db.website.insert({'roll':'4','name':'ash','amount':4000,'url':'www.gmail.com'});
< {
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('67ee5499c450bd8f2be1d37f')
  }
}
> db.website.insert({'roll':'5','name':'ash','amount':1000,'url':'www.pvg.com'});
< {
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('67ee54a4c450bd8f2be1d380')
```

```
> db.website.aggregate({$group: {_id: "$name", "total": {$sum: "$amount"}}});
< {
  _id: 'ash',
  total: 5000
}
{
  _id: 'rina',
  total: 3000
}
{
  _id: 'jitesh',
  total: 2000
}
{
  _id: 'harsh',
  total: 1000
}
> db.website.aggregate({$group: {_id: "$name", "total": {$avg: "$amount"}}});
< {
  _id: 'ash',
  total: 2500
}
{
  _id: 'rina',
  total: 3000
}
{
  _id: 'jitesh',
  total: 2000
}
{
  _id: 'harsh',
  total: 1000
}
> db.website.aggregate({$group: {_id: "$name", "total": {$min: "$amount"}}});
```

```
< {
  _id: 'ash',
  total: 1000
}
{
  _id: 'rina',
  total: 3000
}
{
  _id: 'jitesh',
  total: 2000
}
{
  _id: 'harsh',
  total: 1000
}
> db.website.aggregate({$group: {_id: "$name", "total": {$max: "$amount"}}});
< {
  _id: 'ash',
  total: 4000
}
{
  _id: 'rina',
  total: 3000
}
{
  _id: 'jitesh',
  total: 2000
}
{
  _id: 'harsh',
  total: 1000
}
> db.website.aggregate({$group: {_id: "$name", "total": {$first: "$amount"}}});
< {
  _id: 'ash',
  total: 4000
}
}
```

```

{
  _id: 'rina',
  total: 3000
}
{
  _id: 'jitesh',
  total: 2000
}
{
  _id: 'harsh',
  total: 1000
}
> db.website.aggregate({$group: {_id: "$name", "total": {$last: "$amount"}}});
< {
  _id: 'ash',
  total: 1000
}
{
  _id: 'rina',
  total: 3000
}
{
  _id: 'jitesh',
  total: 2000
}
{
  _id: 'harsh',
  total: 1000
}
> db.website.aggregate({$group: {_id: "$name", "total": {$push: "$amount"}}});
< {
  _id: 'ash',
  total: [
    4000,
    1000
  ]
}

```

```

    _id: 'rina',
    total: [
      3000
    ]
  }
  {
    _id: 'jitesh',
    total: [
      2000
    ]
  }
  {
    _id: 'harsh',
    total: [
      1000
    ]
  }
}
> db.website.aggregate({$group: {_id: "$name", "total": {$sum: 1}}});
< {
  _id: 'ash',
  total: 2
}
{
  _id: 'rina',
  total: 1
}
{
  _id: 'jitesh',
  total: 1
}
{
  _id: 'harsh',
  total: 1
}
}

```

```
> db.website.aggregate({$group: {_id: "$name", "total": {$addToSet: "$amount"}}});
```

```
< {
  _id: 'ash',
  total: [
    1000,
    4000
  ]
}
{
  _id: 'rina',
  total: [
    3000
  ]
}
{
  _id: 'jitesh',
  total: [
    2000
  ]
}
{
  _id: 'harsh',
  total: [
    1000
  ]
}
```

```
> db.createCollection('website1');
```

```
< { ok: 1 }
```

```
> db.website1.insert({'r':1,'name':'harsh'});
```

```
< {
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('67ee55b9c450bd8f2be1d381')
  }
}
```

```
> db.website1.find().pretty()
```

```
< {
  _id: ObjectId('67ee55b9c450bd8f2be1d381'),
  r: 1,
  name: 'harsh'
}
```

```
> db.website1.createIndex({'name':1})
```

```
< name_1
```

```
> db.website1.createIndex({'name':-1})
```

```
< name_-1
```

```

> db.website1.getIndexes()
< [
  { v: 2, key: { _id: 1 }, name: '_id_', ns: 'comp.website1' },
  { v: 2, key: { name: 1 }, name: 'name_1', ns: 'comp.website1' },
  { v: 2, key: { name: -1 }, name: 'name_-1', ns: 'comp.website1' }
]
> db.website1.createIndex({'name':-1})
< name_-1

```

```

> db.website1.getIndexes()
< [
  { v: 2, key: { _id: 1 }, name: '_id_', ns: 'comp.website1' },
  { v: 2, key: { name: 1 }, name: 'name_1', ns: 'comp.website1' },
  { v: 2, key: { name: -1 }, name: 'name_-1', ns: 'comp.website1' }
]
> db.website1.find().pretty()
< {
  _id: ObjectId('67ee55b9c450bd8f2be1d381'),
  r: 1,
  name: 'harsh'
}
> db.website1.createIndex({'name':1})
< name_1

```

```

> db.website1.dropIndex({'name':1})
< { nIndexesWas: 3, ok: 1 }
> db.website1.getIndexes()
< [
  { v: 2, key: { _id: 1 }, name: '_id_', ns: 'comp.website1' },
  { v: 2, key: { name: -1 }, name: 'name_-1', ns: 'comp.website1' }
]
> db.website1.createIndex({'name':1,'r':-1})
< name_1_r_-1
> db.website1.getIndexes()
< [
  { v: 2, key: { _id: 1 }, name: '_id_', ns: 'comp.website1' },
  { v: 2, key: { name: -1 }, name: 'name_-1', ns: 'comp.website1' },
  {
    v: 2,
    key: { name: 1, r: -1 },
    name: 'name_1_r_-1',
    ns: 'comp.website1'
  }
]

```