

## PRACTICAL 06

### AIM :- INDEXING IN MONGODB

### CODE & OUTPUT :-

```
prac6> db.airpoty.find().explain("executionStats")
{
  queryPlanner: {
    plannerVersion: 1,
    namespace: 'prac6.airpoty',
    indexFilterSet: false,
    parsedQuery: {},
    winningPlan: { stage: 'COLLSCAN', direction: 'forward' },
    rejectedPlans: []
  },
  executionStats: {
    executionSuccess: true,
    nReturned: 3885,
    executionTimeMillis: 1,
    totalKeysExamined: 0,
    totalDocsExamined: 3885,
    executionStages: {
      stage: 'COLLSCAN',
      nReturned: 3885,
      executionTimeMillisEstimate: 0,
```

```
    works: 3887,  
    advanced: 3885,  
    needTime: 1,  
    needYield: 0,  
    saveState: 30,  
    restoreState: 30,  
    isEOF: 1,  
    direction: 'forward',  
    docsExamined: 3885  
  }  
},  
serverInfo: {  
  host: 'DESKTOP-F0CVGOT',  
  port: 27017,  
  version: '4.2.22-rc0',  
  gitVersion: 'eef44cd56b1cc11e5771736fa6cb3077e0228be2'  
},  
ok: 1  
}
```

```
prac6> db.airpoty.createIndex({name:'text'})
```

```
name_text
```

```
prac6> db.airpoty.getIndexes()
```

```
[
```

```
  { v: 2, key: { _id: 1 }, name: '_id_', ns: 'prac6.airpoty' },
```

```
  {
```

```
    v: 2,
```

```
    key: { _fts: 'text', _ftsx: 1 },
```

```
    name: 'name_text',
```

```
    ns: 'prac6.airpoty',
```

```
    weights: { name: 1 },
```

```
    default_language: 'english',
```

```
    language_override: 'language',
```

```
    textIndexVersion: 3
```

```
  }
```

```
]
```

```
prac6> db.airpoty.find({$text : {$search : 'text'}})
```

```
prac6> db.airpoty.find({$text : {$search : 'york'}})
```

```
[  
  {  
    _id: ObjectId("65f52da1f66c167723046763"),  
    code: 'XNY',  
    lat: '42.8767',  
    lon: '-77.8826',  
    name: 'York',  
    city: 'New York',  
    state: 'New York',  
    country: 'United States',  
    woeid: '2524848',  
    tz: 'America/New_York',  
    phone: "",  
    type: 'Airports',  
    email: "",  
    url: "",  
    runway_length: null,  
    elev: null,  
    icao: "",  
    direct_flights: '1',
```

```
    carriers: '1'
  },
  {
    _id: ObjectId("65f52da1f66c1677230468d3"),
    code: 'ZFZ',
    lat: '40.7145',
    lon: '-74.0071',
    name: 'New York',
    city: 'Buffalo',
    state: 'New York',
    country: 'United States',
    woeid: '2459115',
    tz: 'America/New_York',
    phone: "",
    type: 'Airports',
    email: "",
    url: "",
    runway_length: null,
    elev: null,
    icao: "",
    direct_flights: '2',
    carriers: '1'
  },
```

```
{  
  _id: ObjectId("65f52da1f66c1677230468b2"),  
  code: 'ZAC',  
  lat: '56.0763',  
  lon: '-96.09',  
  name: 'York Landing Airport',  
  city: 'Nelson House',  
  state: 'Manitoba',  
  country: 'Canada',  
  woeid: '12524282',  
  tz: 'America/Winnipeg',  
  phone: "",  
  type: 'Airports',  
  email: "",  
  url: "",  
  runway_length: '3000',  
  elev: '609',  
  icao: 'CZAC',  
  direct_flights: '1',  
  carriers: '1'  
}  
]
```

```
prac6> db.airpoty.find({$text : {$search :  
'york'}}).explain('executionStats  
)
```

```
{  
queryPlanner: {  
  plannerVersion: 1,  
  namespace: 'prac6.airpoty',  
  indexFilterSet: false,  
  parsedQuery: {  
    '$text': {  
      '$search': 'york',  
      '$language': 'english',  
      '$caseSensitive': false,  
      '$diacriticSensitive': false  
    }  
  },  
  winningPlan: {  
    stage: 'TEXT',  
    indexPrefix: {},  
    indexName: 'name_text',  
    parsedTextQuery: {  
      terms: [ 'york' ],  
      negatedTerms: [],
```

```
    phrases: [],
    negatedPhrases: []
  },
  textIndexVersion: 3,
  inputStage: {
    stage: 'TEXT_MATCH',
    inputStage: {
      stage: 'FETCH',
      inputStage: {
        stage: 'OR',
        inputStage: {
          stage: 'IXSCAN',
          keyPattern: { _fts: 'text', _ftsx: 1 },
          indexName: 'name_text',
          isMultiKey: true,
          isUnique: false,
          isSparse: false,
          isPartial: false,
          indexVersion: 2,
          direction: 'backward',
          indexBounds: {}
        }
      }
    }
  }
```



```
    }  
  }  
},  
rejectedPlans: []  
},  
executionStats: {  
  executionSuccess: true,  
  nReturned: 3,  
  executionTimeMillis: 0,  
  totalKeysExamined: 3,  
  totalDocsExamined: 3,  
  executionStages: {  
    stage: 'TEXT',  
    nReturned: 3,  
    executionTimeMillisEstimate: 0,  
    works: 4,  
    advanced: 3,  
    needTime: 0,  
    needYield: 0,  
    saveState: 0,  
    restoreState: 0,  
    isEOF: 1,  
    indexPrefix: {},
```

```
indexName: 'name_text',  
parsedTextQuery: {  
  terms: [ 'york' ],  
  negatedTerms: [],  
  phrases: [],  
  negatedPhrases: []  
},  
textIndexVersion: 3,  
inputStage: {  
  stage: 'TEXT_MATCH',  
  nReturned: 3,  
  executionTimeMillisEstimate: 0,  
  works: 4,  
  advanced: 3,  
  needTime: 0,  
  needYield: 0,  
  saveState: 0,  
  restoreState: 0,  
  isEOF: 1,  
  docsRejected: 0,  
  inputStage: {  
    stage: 'FETCH',  
    nReturned: 3,
```

*executionTimeMillisEstimate: 0,*  
*works: 4,*  
*advanced: 3,*  
*needTime: 0,*  
*needYield: 0,*  
*saveState: 0,*  
*restoreState: 0,*  
*isEOF: 1,*  
*docsExamined: 3,*  
*alreadyHasObj: 0,*  
*inputStage: {*  
    *stage: 'OR',*  
    *nReturned: 3,*  
    *executionTimeMillisEstimate: 0,*  
    *works: 4,*  
    *advanced: 3,*  
    *needTime: 0,*  
    *needYield: 0,*  
    *saveState: 0,*  
    *restoreState: 0,*  
    *isEOF: 1,*  
    *dupsTested: 3,*  
    *dupsDropped: 0,*

```
inputStage: {  
  stage: 'IXSCAN',  
  nReturned: 3,  
  executionTimeMillisEstimate: 0,  
  works: 4,  
  advanced: 3,  
  needTime: 0,  
  needYield: 0,  
  saveState: 0,  
  restoreState: 0,  
  isEOF: 1,  
  keyPattern: { _fts: 'text', _ftsx: 1 },  
  indexName: 'name_text',  
  isMultiKey: true,  
  isUnique: false,  
  isSparse: false,  
  isPartial: false,  
  indexVersion: 2,  
  direction: 'backward',  
  indexBounds: {},  
  keysExamined: 3,  
  seeks: 1,  
  dupsTested: 3,
```

```
      dupsDropped: 0
    }
  }
}
}
},
serverInfo: {
  host: 'DESKTOP-F0CVGOT',
  port: 27017,
  version: '4.2.22-rc0',
  gitVersion: 'eef44cd56b1cc11e5771736fa6cb3077e0228be2'
},
ok:
```