1. Find Documents Using Shard Key

```
mongos> db.mybooks.find({_id:10000})
```

```
{ "_id" : 10000, "name" : "book_number_10000", "author" : "author",
"description" : "this is a book" }
```

```
mongos> db.mybooks.find({_id:1})
```

```
{ "_id" : 1, "name" : "book_number_1", "author" : "author" }
```

```
mongos> db.mybooks.find({_id:50000})
```

```
{ "_id" : 50000, "name" : "book_number_50000", "author" : "author",
"description" : "this is a book" }
```

2. Find Documents Using Shard Key and Check Number Of Shards Scanned and Used

```
mongos> db.mybooks.find({_id:10000}).explain()
```

```
{
      "clusteredType" : "ParallelSort",
      "shards" : {

      "ReplicaSetNew3/localhost.localdomain:27031,localhost.localdomain:27
032,localhost.localdomain:27033" : [
                  {
                        "cursor" : "IDCursor",
                        "n" : 1,
                        "nscannedObjects" : 1,
                        "nscanned" : 1,
                        "indexOnly" : false,
                        "millis" : 0,
                        "indexBounds" : {
                              "_id" : [
                                    [
                                          10000,
                                          10000
                                    ]
                              ]
                        },
                        "server" : "localhost.localdomain:27031"
                  }
            ]
      },
      "cursor" : "IDCursor",
      "n" : 1,
      "nscanned" : 1,
      "nscannedObjects" : 1,
      "millisShardTotal" : 0,
      "millisShardAvg" : 0,
      "numQueries" : 1,
      "numShards" : 1,
      "indexBounds" : {
            "_id" : [
                  [
                        10000,
                        10000
                  ]
            ]
      },
      "millis" : 15
}
```

3. Find Documents Without Using Shard Key and Check Number Of Shards Scanned and Used

```
mongos> db.mybooks.find({name:"book_number_10000"}).explain()
```

```
{
      "clusteredType" : "ParallelSort",
      "shards" : {

      "ReplicaSetNew1/localhost.localdomain:27011,localhost.localdomain:27
012,localhost.localdomain:27013" : [
                  {
                        "cursor" : "BasicCursor",
                        "isMultiKey" : false,
                        "n" : 0,
                        "nscannedObjects" : 9613,
                        "nscanned" : 9613,
                        "nscannedObjectsAllPlans" : 9613,
                        "nscannedAllPlans" : 9613,
                        "scanAndOrder" : false,
                        "indexOnly" : false,
                        "nYields" : 75,
                        "nChunkSkips" : 0,
                        "millis" : 18,
                        "server" : "localhost.localdomain:27011",
                        "filterSet" : false
                  }
            ],

      "ReplicaSetNew2/localhost.localdomain:27021,localhost.localdomain:27
022,localhost.localdomain:27023" : [
                  {
                        "cursor" : "BasicCursor",
                        "isMultiKey" : false,
                        "n" : 0,
                        "nscannedObjects" : 0,
                        "nscanned" : 0,
                        "nscannedObjectsAllPlans" : 0,
                        "nscannedAllPlans" : 0,
                        "scanAndOrder" : false,
                        "indexOnly" : false,
                        "nYields" : 0,
                        "nChunkSkips" : 0,
                        "millis" : 0,
                        "server" : "localhost.localdomain:27021",
                        "filterSet" : false
                  }
            ],

      "ReplicaSetNew3/localhost.localdomain:27031,localhost.localdomain:27
032,localhost.localdomain:27033" : [
                  {
                        "cursor" : "BasicCursor",
```

```
                        "isMultiKey" : false,
                        "n" : 1,
                        "nscannedObjects" : 40388,
                        "nscanned" : 40388,
                        "nscannedObjectsAllPlans" : 40388,
                        "nscannedAllPlans" : 40388,
                        "scanAndOrder" : false,
                        "indexOnly" : false,
                        "nYields" : 315,
                        "nChunkSkips" : 0,
                        "millis" : 54,
                        "server" : "localhost.localdomain:27031",
                        "filterSet" : false
                }
        ]
    },
    "cursor" : "BasicCursor",
    "n" : 1,
    "nChunkSkips" : 0,
    "nYields" : 390,
    "nscanned" : 50001,
    "nscannedAllPlans" : 50001,
    "nscannedObjects" : 50001,
    "nscannedObjectsAllPlans" : 50001,
    "millisShardTotal" : 72,
    "millisShardAvg" : 24,
    "numQueries" : 3,
    "numShards" : 3,
    "millis" : 57
}
```

4. Exit From Mongo Shell

```
mongos> exit
```

```
bye
```