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1) Create a database named with 'mydb', Create a collection named 'employees', Insert 15 documents in it.

Code:

```
use("mydb");
```

Screenshot:

```
> use mydb
switched to db mydb
>
```

```
db.createCollection("employees");
```

Screenshot:

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

```
db.employees.insert([
```

```
{
  empno:2001,
  name:[
    {
      firstname:"Chintan",
      lastname:"Bhimani"
    }
  ],
  emailID:"bhimanicaa@gmail.com",
  contact:1234567890,
  designation:"Web Developer",
```

```
birthday:new Date("2003-03-31"),
joiningdate:new Date("2020-01-01"),
salary:20000,
department:[
  {
    name:"IT",
    discription:"Information Technology"
  }
],
address:[{
  city:"Ahmedabad",
  state:"Gujarat",
  landmark:"Vesu",
  pincode:395001
}],
{
  empno:2002,
  name:[{
    firstname:"Rahul",
    lastname:"Makvana"
  }],
  emailID:"rahul111@gmail.com",
```

```
contact:6754534567,  
  
designation:"Police Officer",  
  
birthday:new Date("1988-02-11"),  
  
joiningdate:new Date("2000-11-27"),  
  
salary:54000,  
  
department:{  
    name:"Police",  
    discription:"Police Department"  
}},  
  
address:{  
    city:"Surat",  
    state:"Gujarat",  
    landmark:"Adajan",  
    pincode:395011  
}  
  
},  
  
{  
  
    empno:2003,  
  
    name:{  
        firstname:"Nikunj",  
        lastname:"Ghori"  
    },  
  
    emailID:"nikunj32@gmail.com",
```

```
contact:9765694596,  
  
designtion:"Assistant Professor",  
  
birthday:new Date("1995-11-11"),  
  
joiningdate:new Date("2015-06-01"),  
  
salary:15000,  
  
department:{  
  
    name:"School",  
  
    discription:"School Department"  
  
},  
  
address:{  
  
    city:"Vadoadara",  
  
    state:"Gujarat",  
  
    landmark:"Adajan",  
  
    pincode:399101  
  
}  
  
},  
  
{  
  
    empno:2004,  
  
    name:[{  
  
        firstname:"Minal",  
  
        lastname:"Ramani"  
  
    }],  
  
    emailID:"minal02@gmail.com",
```

```
contact:5676567545,  
  
designion:"Software Devloper",  
  
birthday:new Date("1999-09-04"),  
  
joiningdate:new Date("2019-01-01"),  
  
salary:56999,  
  
department:{{  
  
    name:"IT",  
  
    discription:"IT Department"  
  
}},  
  
address:{{  
  
    city:"Mumbai",  
  
    state:"Maharashtra",  
  
    landmark:"Bandra",  
  
    pincode:4001069  
  
}}  
  
},  
  
{  
  
    empno:2005,  
  
    name:{{  
  
        firstname:"Dhruvi",  
  
        lastname:"Patel"  
  
    }},  
  
    emailID:"dhruvi@gmail.com",
```

```
contact:234565437,

designtion:"Manager",

birthday:new Date("1976-05-06"),

joiningdate:new Date("2003-10-01"),

salary:91000,

department:{

  name:"AMT",

  discription:"Social Service"

}},

address:{

  city:"Junagadh",

  landmark:"Gir",

  pincode:564345

}

{

  empno:2006,

  name:{

    firstname:"Kirti",

    lastname:"Mital"

  }

},

emailID:"mitalisha000@gmail.com",

contact:098786745,
```



```
designtion:"Tester",  
  
birthday:new Date("1988-02-11"),  
  
joiningdate:new Date("2000-11-27"),  
  
salary:24000,  
  
department:{  
  
    name:"Find Technology",  
  
    discription:"Checking Software Depaetment"  
  
}},  
  
address:{  
  
    city:"Dilhi",  
  
    state:"Uttar Pradesh",  
  
    landmark:"West Delhi",  
  
    pincode:888888  
  
}}  
  
},  
  
{  
  
    empno:2007,  
  
    name:{  
  
        firstname:"Chirag",  
  
        lastname:"Jasani"  
  
    }},  
  
    emailID:"chirag01@gmail.com",  
  
    contact:0005605656,
```

```
designtion:"Owner",  
  
birthday:new Date("1992-12-17"),  
  
joiningdate:new Date("2017-12-01"),  
  
salary:null,  
  
department:[{  
  
    name:"The Food Club",  
  
    discription:"Hotel"  
  
}],  
  
address:[{  
  
    city:"Mumbai",  
  
    state:"Maharashtra",  
  
    landmark:"Juhu",  
  
    pincode:400376  
  
}]  
  
},  
  
{  
  
    empno:2008,  
  
    name:[{  
  
        firstname:"Akshay",  
  
        lastname:"Kaneriya"  
  
    }],  
  
    emailID:"ak@gmail.com",  
  
    contact:978656789,
```

```
designtion:"Software Devloper",  
  
birthday:new Date("2001-11-26"),  
  
joiningdate:new Date("2020-03-01"),  
  
salary:70000,  
  
department:[{  
  
    name:"IT",  
  
    discription:"IT Department"  
  
}],  
  
address:[{  
  
    city:"Surat",  
  
    state:"Gujarat",  
  
    landmark:"Vesu",  
  
    pincode:395001  
  
}]  
  
},  
  
{  
  
    empno:2009,  
  
    name:[{  
  
        firstname:"Dhruvik",  
  
        lastname:"Vekariya"  
  
    }],  
  
    emailID:"dhukiii@gmail.com",  
  
    contact:123456543,
```

```
designtion:"IAS Officer",  
  
birthday:new Date("2003-01-28"),  
  
joiningdate:new Date("2022-01-01"),  
  
salary:90000,  
  
department:[{  
  
    name:"Police",  
  
    discription:"Police Department"  
  
}],  
  
address:[{  
  
    city:"Mumbai",  
  
    state:"Maharashtra",  
  
    landmark:"Bandra",  
  
    pincode:401069  
  
}]  
  
},  
  
{  
  
    empno:2010,  
  
    name:[{  
  
        firstname:"Darshan",  
  
        lastname:"Thummar"  
  
    }],  
  
    emailID:"darshan007@gmail.com",  
  
    contact:1230070076,
```

```
designtion:"Seles Manager",  
  
birthday:new Date("2003-04-12"),  
  
joiningdate:new Date("2022-09-01"),  
  
salary:21000,  
  
department:{  
  
    name:"HTC Texttile",  
  
    discription:"Texttile Department"  
  
}},  
  
address:{  
  
    city:"Surat",  
  
    state:"Gujarat",  
  
    landmark:"Varachha",  
  
    pincode:395006  
  
}  
  
});
```

Screenshot:

```
BulkWriteResult({  
  "writeErrors" : [ ],  
  "writeConcernErrors" : [ ],  
  "nInserted" : 10,  
  "nUpserted" : 0,  
  "nMatched" : 0,  
  "nModified" : 0,  
  "nRemoved" : 0,  
  "upserted" : [ ]  
})  
>
```

2) Write a MongoDB query to displays all documents from the employee's collection.

Code:

```
db.employees.find().pretty()
```

Screenshot:

```

> db.employees.find();
{ "id" : ObjectId("63261281b5bf7921fc1c69b5"), "empno" : 2001, "name" : [ { "firstname" : "Chintan", "lastname" : "Bhimani" } ], "emailID" : "bhimanicaa@gmail.com", "contact" : 1234567890, "designation" : "Web Developer", "birthday" : ISODate("2003-03-31T00:00:00Z"), "joiningdate" : ISODate("2020-01-01T00:00:00Z"), "salary" : 20000, "department" : [ { "name" : "IT", "discretion" : "Information Technology" } ], "address" : [ { "city" : "Ahmedabad", "state" : "Gujarat", "landmark" : "Vesu", "pincode" : 395001 } ] }
{ "id" : ObjectId("63261281b5bf7921fc1c69b6"), "empno" : 2002, "name" : [ { "firstname" : "Rahul", "lastname" : "Makvana" } ], "emailID" : "rahul111@gmail.com", "contact" : 6754534567, "designation" : "Police Officer", "birthday" : ISODate("1988-02-11T00:00:00Z"), "joiningdate" : ISODate("2000-11-27T00:00:00Z"), "salary" : 54000, "department" : [ { "name" : "Police", "discretion" : "Police Department" } ], "address" : [ { "city" : "Surat", "state" : "Gujarat", "landmark" : "Adajan", "pincode" : 395011 } ] }
{ "id" : ObjectId("63261281b5bf7921fc1c69b7"), "empno" : 2003, "name" : [ { "firstname" : "Nikunj", "lastname" : "Ghori" } ], "emailID" : "nikunj32@gmail.com", "contact" : 9765694596, "designation" : "Assistant Professor", "birthday" : ISODate("1995-11-11T00:00:00Z"), "joiningdate" : ISODate("2015-06-01T00:00:00Z"), "salary" : 15000, "department" : [ { "name" : "School", "discretion" : "School Department" } ], "address" : [ { "city" : "Vadodara", "state" : "Gujarat", "landmark" : "Adajan", "pincode" : 399101 } ] }
{ "id" : ObjectId("63261281b5bf7921fc1c69b8"), "empno" : 2004, "name" : [ { "firstname" : "Minal", "lastname" : "Ramani" } ], "emailID" : "minal02@gmail.com", "contact" : 5676567545, "designation" : "Software Developer", "birthday" : ISODate("1999-09-04T00:00:00Z"), "joiningdate" : ISODate("2019-01-01T00:00:00Z"), "salary" : 56999, "department" : [ { "name" : "IT", "discretion" : "IT Department" } ], "address" : [ { "city" : "Mumbai", "state" : "Maharashtra", "landmark" : "Bandra", "pincode" : 4001069 } ] }
{ "id" : ObjectId("63261281b5bf7921fc1c69b9"), "empno" : 2005, "name" : [ { "firstname" : "Dhruvi", "lastname" : "Patel" } ], "emailID" : "dhruvi@gmail.com", "contact" : 234565437, "designation" : "Manager", "birthday" : ISODate("1976-05-06T00:00:00Z"), "joiningdate" : ISODate("2003-10-01T00:00:00Z"), "salary" : 91000, "department" : [ { "name" : "AMT", "discretion" : "Social Service" } ], "address" : [ { "city" : "Junagadh", "landmark" : "Gir", "pincode" : 564345 } ] }
{ "id" : ObjectId("63261281b5bf7921fc1c69ba"), "empno" : 2006, "name" : [ { "firstname" : "Kirti", "lastname" : "Mital" } ], "emailID" : "mitalisha000@gmail.com", "contact" : 98786745, "designation" : "Tester", "birthday" : ISODate("1988-02-11T00:00:00Z"), "joiningdate" : ISODate("2000-11-27T00:00:00Z"), "salary" : 24000, "department" : [ { "name" : "Find Technology", "discretion" : "Checking Software Department" } ], "address" : [ { "city" : "Dilhi", "state" : "Uttar Pradesh", "landmark" : "West Delhi", "pincode" : 888888 } ] }
{ "id" : ObjectId("63261281b5bf7921fc1c69bb"), "empno" : 2007, "name" : [ { "firstname" : "Chirag", "lastname" : "Jasani" } ], "emailID" : "chirag01@gmail.com", "contact" : 1510318, "designation" : "Owner", "birthday" : ISODate("1992-12-17T00:00:00Z"), "joiningdate" : ISODate("2017-12-01T00:00:00Z"), "salary" : null, "department" : [ { "name" : "The Food Club", "discretion" : "Hotel" } ], "address" : [ { "city" : "Mumbai", "state" : "Maharashtra", "landmark" : "Juhu", "pincode" : 400076 } ] }
{ "id" : ObjectId("63261281b5bf7921fc1c69bc"), "empno" : 2008, "name" : [ { "firstname" : "Akshay", "lastname" : "Kaneriyia" } ], "emailID" : "ak@gmail.com", "contact" : 978656789, "designation" : "Software Developer", "birthday" : ISODate("2001-11-26T00:00:00Z"), "joiningdate" : ISODate("2020-03-01T00:00:00Z"), "salary" : 70000, "department" : [ { "name" : "IT", "discretion" : "IT Department" } ], "address" : [ { "city" : "Surat", "state" : "Gujarat", "landmark" : "Vesu", "pincode" : 395001 } ] }
{ "id" : ObjectId("63261281b5bf7921fc1c69bd"), "empno" : 2009, "name" : [ { "firstname" : "Dhruvik", "lastname" : "Vekariya" } ], "emailID" : "dhukiii@gmail.com", "contact" : 123456543, "designation" : "IAS Officer", "birthday" : ISODate("2003-01-28T00:00:00Z"), "joiningdate" : ISODate("2022-01-01T00:00:00Z"), "salary" : 90000, "department" : [ { "name" : "Police", "discretion" : "Police Department" } ], "address" : [ { "city" : "Mumbai", "state" : "Maharashtra", "landmark" : "Bandra", "pincode" : 4001069 } ] }
{ "id" : ObjectId("63261281b5bf7921fc1c69be"), "empno" : 2010, "name" : [ { "firstname" : "Darshan", "lastname" : "Thummar" } ], "emailID" : "darshan007@gmail.com", "contact" : 1230070075, "designation" : "Sales Manager", "birthday" : ISODate("2003-04-12T00:00:00Z"), "joiningdate" : ISODate("2022-09-01T00:00:00Z"), "salary" : 21000, "department" : [ { "name" : "HTC Texttile", "discretion" : "Texttile Department" } ], "address" : [ { "city" : "Surat", "state" : "Gujarat", "landmark" : "Varachha", "pincode" : 395006 } ] }

```

3) Write a MongoDB query to displays name, joining date and salary of all documents from the employee's collection.

Code:

```
db.employees.find({},{name:1,j_date:1,salary:1,_id:0}).pretty()
```

Screenshot:

```

> db.employees.find({},{_id:0,name:1,joiningdate:1,salary:1});
{ "name" : [ { "firstname" : "Chintan", "lastname" : "Bhimani" } ], "joiningdate" : ISODate("2020-01-01T00:00:00Z"), "salary" : 20000 }
{ "name" : [ { "firstname" : "Rahul", "lastname" : "Makvana" } ], "joiningdate" : ISODate("2000-11-27T00:00:00Z"), "salary" : 54000 }
{ "name" : [ { "firstname" : "Nikunj", "lastname" : "Ghori" } ], "joiningdate" : ISODate("2015-06-01T00:00:00Z"), "salary" : 15000 }
{ "name" : [ { "firstname" : "Minal", "lastname" : "Ramani" } ], "joiningdate" : ISODate("2019-01-01T00:00:00Z"), "salary" : 56999 }
{ "name" : [ { "firstname" : "Dhruvi", "lastname" : "Patel" } ], "joiningdate" : ISODate("2003-10-01T00:00:00Z"), "salary" : 91000 }
{ "name" : [ { "firstname" : "Kirti", "lastname" : "Mital" } ], "joiningdate" : ISODate("2000-11-27T00:00:00Z"), "salary" : 24000 }
{ "name" : [ { "firstname" : "Chirag", "lastname" : "Jasani" } ], "joiningdate" : ISODate("2017-12-01T00:00:00Z"), "salary" : null }
{ "name" : [ { "firstname" : "Akshay", "lastname" : "Kaneriyia" } ], "joiningdate" : ISODate("2020-03-01T00:00:00Z"), "salary" : 70000 }
{ "name" : [ { "firstname" : "Dhruvik", "lastname" : "Vekariya" } ], "joiningdate" : ISODate("2022-01-01T00:00:00Z"), "salary" : 90000 }
{ "name" : [ { "firstname" : "Darshan", "lastname" : "Thummar" } ], "joiningdate" : ISODate("2022-09-01T00:00:00Z"), "salary" : 21000 }

```

4) Write a MongoDB query to displays first name, last name and email id of all documents from the employee's collection whose salary is more than 20000.

Code:

```
db.employees.find({}, {_id:0,name:1,joiningdate:1,salary:1});
```

Screenshot:

```
> db.employees.find({"salary":{$gt:20000}},{"_id":0,"name":1,"emailID":1});
{ "name" : [ { "firstname" : "Rahul", "lastname" : "Makvana" } ], "emailID" : "rahul111@gmail.com" }
{ "name" : [ { "firstname" : "Minal", "lastname" : "Ramani" } ], "emailID" : "minal02@gmail.com" }
{ "name" : [ { "firstname" : "Dhruvi", "lastname" : "Patel" } ], "emailID" : "dhruvi@gmail.com" }
{ "name" : [ { "firstname" : "Kirti", "lastname" : "Mital" } ], "emailID" : "mitalisha000@gmail.com" }
{ "name" : [ { "firstname" : "Akshay", "lastname" : "Kaneriyaa" } ], "emailID" : "ak@gmail.com" }
{ "name" : [ { "firstname" : "Dhruvik", "lastname" : "Vekariya" } ], "emailID" : "dhukiii@gmail.com" }
{ "name" : [ { "firstname" : "Darshan", "lastname" : "Thummar" } ], "emailID" : "darshan007@gmail.com" }
>
```

5) Write a MongoDB query to displays first name, last name, email id and contact number of all documents from the employees collection whose salary is 20000 and working as an 'Web Developer'.

Code:

```
db.employees.find({"salary":{$gt:20000}},{"_id":0,"name":1,"emailID":1});
```

Screenshot:

```
> db.employees.find({'$and':[{"salary":{$eq:20000}},{"designation":{$eq:"Web Developer"}}]},{"_id":0,"name":1,"emailID":1,"contact":1}).pretty();
{
  "name" : [
    {
      "firstname" : "Chintan",
      "lastname" : "Bhimani"
    }
  ],
  "emailID" : "bhimanicaa@gmail.com",
  "contact" : 1234567890
}
>
```


6) Write a MongoDB query to displays all documents from the employee's collection whose first character of their first name is 'K'.

Code:

```
db.employees.find({"name.firstname":/^K/},{ "_id":0,"name.firstname":1}).pretty();
```

Screenshot:

```
> db.employees.find({"name.firstname":/^K/},{ "_id":0,"name.firstname":1}).pretty();
{ "name" : [ { "firstname" : "Kirti" } ] }
>
```

7) Write a MongoDB query to displays all documents from the employee's collection in the ascending order of their birth year.

Code:

```
db.employees.find().sort({birthday:1});
```

Screenshot:

```
> db.employees.find().sort({birthday:1});
{ "_id" : ObjectId("63261281b5bf7921fc1c69b9"), "empno" : 2005, "name" : [ { "firstname" : "Dhruvi", "lastname" : "Patel" } ], "emailID" : "dhruvi@gmail.com", "contact" : 234565437, "designation" : "Manager", "birthday" : ISODate("1976-05-06T00:00:00Z"), "joiningdate" : ISODate("2003-10-01T00:00:00Z"), "salary" : 91000, "department" : [ { "name" : "AMT", "discritcion" : "Social Service" } ], "address" : [ { "city" : "Junagadh", "landmark" : "Gir", "pincode" : 564345 } ] }
{ "_id" : ObjectId("63261281b5bf7921fc1c69b6"), "empno" : 2002, "name" : [ { "firstname" : "Rahul", "lastname" : "Makvana" } ], "emailID" : "rahul111@gmail.com", "contact" : 6754534567, "designation" : "Police Officer", "birthday" : ISODate("1988-02-11T00:00:00Z"), "joiningdate" : ISODate("2000-11-27T00:00:00Z"), "salary" : 54000, "department" : [ { "name" : "Police", "discritcion" : "Police Department" } ], "address" : [ { "city" : "Surat", "state" : "Gujarat", "landmark" : "Adajan", "pincode" : 395011 } ] }
{ "_id" : ObjectId("63261281b5bf7921fc1c69ba"), "empno" : 2006, "name" : [ { "firstname" : "Kirti", "lastname" : "Mital" } ], "emailID" : "mitalisha000@gmail.com", "contact" : 98786745, "designation" : "Tester", "birthday" : ISODate("1988-02-11T00:00:00Z"), "joiningdate" : ISODate("2000-11-27T00:00:00Z"), "salary" : 24000, "department" : [ { "name" : "Find Technology", "discritcion" : "Checking Software Deapetment" } ], "address" : [ { "city" : "Dilhi", "state" : "Uttar Pradesh", "landmark" : "West Delhi", "pincode" : 888888 } ] }
{ "_id" : ObjectId("63261281b5bf7921fc1c69bb"), "empno" : 2007, "name" : [ { "firstname" : "Chirag", "lastname" : "Jasani" } ], "emailID" : "chirag01@gmail.com", "contact" : 1510318, "designation" : "Owner", "birthday" : ISODate("1992-12-17T00:00:00Z"), "joiningdate" : ISODate("2017-12-01T00:00:00Z"), "salary" : null, "department" : [ { "name" : "The Food Club", "discritcion" : "Hotel" } ], "address" : [ { "city" : "Mumbai", "state" : "Maharashtra", "landmark" : "Juhu", "pincode" : 400376 } ] }
{ "_id" : ObjectId("63261281b5bf7921fc1c69b7"), "empno" : 2003, "name" : [ { "firstname" : "Nikunj", "lastname" : "Ghori" } ], "emailID" : "nikunj32@gmail.com", "contact" : 9765694596, "designation" : "Assistant Professor", "birthday" : ISODate("1995-11-11T00:00:00Z"), "joiningdate" : ISODate("2015-06-01T00:00:00Z"), "salary" : 15000, "department" : [ { "name" : "School", "discritcion" : "School Department" } ], "address" : [ { "city" : "Vadodara", "state" : "Gujarat", "landmark" : "Adajan", "pincode" : 399101 } ] }
{ "_id" : ObjectId("63261281b5bf7921fc1c69b8"), "empno" : 2004, "name" : [ { "firstname" : "Minal", "lastname" : "Ramani" } ], "emailID" : "minal02@gmail.com", "contact" : 5676567545, "designation" : "Software Developer", "birthday" : ISODate("1999-09-04T00:00:00Z"), "joiningdate" : ISODate("2019-01-01T00:00:00Z"), "salary" : 56999, "department" : [ { "name" : "IT", "discritcion" : "IT Department" } ], "address" : [ { "city" : "Mumbai", "state" : "Maharashtra", "landmark" : "Bandra", "pincode" : 4001069 } ] }
{ "_id" : ObjectId("63261281b5bf7921fc1c69bc"), "empno" : 2008, "name" : [ { "firstname" : "Akshay", "lastname" : "Kaneriyaa" } ], "emailID" : "ak@gmail.com", "contact" : 978656789, "designation" : "Software Developer", "birthday" : ISODate("2001-11-26T00:00:00Z"), "joiningdate" : ISODate("2020-03-01T00:00:00Z"), "salary" : 70000, "department" : [ { "name" : "IT", "discritcion" : "IT Department" } ], "address" : [ { "city" : "Surat", "state" : "Gujarat", "landmark" : "Vesu", "pincode" : 395001 } ] }
{ "_id" : ObjectId("63261281b5bf7921fc1c69bd"), "empno" : 2009, "name" : [ { "firstname" : "Dhruvik", "lastname" : "Vekariya" } ], "emailID" : "dhukiii@gmail.com", "contact" : 123456543, "designation" : "IAS Officer", "birthday" : ISODate("2003-01-28T00:00:00Z"), "joiningdate" : ISODate("2022-01-01T00:00:00Z"), "salary" : 90000, "department" : [ { "name" : "Police", "discritcion" : "Police Department" } ], "address" : [ { "city" : "Mumbai", "state" : "Maharashtra", "landmark" : "Bandra", "pincode" : 401069 } ] }
{ "_id" : ObjectId("63261281b5bf7921fc1c69b5"), "empno" : 2001, "name" : [ { "firstname" : "Chintan", "lastname" : "Bhimani" } ], "emailID" : "bhimanicaa@gmail.com", "contact" : 1234567890, "designation" : "Web Developer", "birthday" : ISODate("2003-03-31T00:00:00Z"), "joiningdate" : ISODate("2020-01-01T00:00:00Z"), "salary" : 20000, "department" : [ { "name" : "IT", "discritcion" : "Information Technology" } ], "address" : [ { "city" : "Ahmedabad", "state" : "Gujarat", "landmark" : "Vesu", "pincode" : 395001 } ] }
{ "_id" : ObjectId("63261281b5bf7921fc1c69be"), "empno" : 2010, "name" : [ { "firstname" : "Darshan", "lastname" : "Thummar" } ], "emailID" : "darshan007@gmail.com", "contact" : 1230070076, "designation" : "Seles Manager", "birthday" : ISODate("2003-04-12T00:00:00Z"), "joiningdate" : ISODate("2022-09-01T00:00:00Z"), "salary" : 21000, "department" : [ { "name" : "HTC Texttile", "discritcion" : "Texttile Department" } ], "address" : [ { "city" : "Surat", "state" : "Gujarat", "landmark" : "Varachha", "pincode" : 395006 } ] }
```


8) Write a MongoDB query to displays top 5 documents from the employee's collection earning highest.

Code:

```
db.employees.find().sort({"salary":-1}).limit(5);
```

Screenshot:

```
> db.employees.find().sort({"salary":-1}).limit(5);
{ "id" : ObjectId("63261281b5bf7921fc1c69b9"), "empno" : 2805, "name" : [ { "firstname" : "Dhruvi", "lastname" : "Patel" } ], "emailID" : "dhruvi@gmail.com", "contact" : 234565437, "designation" : "Manager", "birthday" : ISODate("1976-05-06T00:00:00Z"), "joiningdate" : ISODate("2003-10-01T00:00:00Z"), "salary" : 91000, "department" : [ { "name" : "AMT", "discription" : "Social Service" } ], "address" : [ { "city" : "Junagadh", "landmark" : "Gir", "pincode" : 564345 } ] }
{ "id" : ObjectId("63261281b5bf7921fc1c69bd"), "empno" : 2809, "name" : [ { "firstname" : "Dhruvik", "lastname" : "Vekariya" } ], "emailID" : "dhukiii@gmail.com", "contact" : 123456543, "designation" : "IAS Officer", "birthday" : ISODate("2003-01-20T00:00:00Z"), "joiningdate" : ISODate("2022-01-01T00:00:00Z"), "salary" : 90000, "department" : [ { "name" : "Police", "discription" : "Police Department" } ], "address" : [ { "city" : "Mumbai", "state" : "Maharashtra", "landmark" : "Bandra", "pincode" : 401069 } ] }
{ "id" : ObjectId("63261281b5bf7921fc1c69bc"), "empno" : 2808, "name" : [ { "firstname" : "Akshay", "lastname" : "Kaneriyia" } ], "emailID" : "ak@gmail.com", "contact" : 978656789, "designation" : "Software Developer", "birthday" : ISODate("2001-11-26T00:00:00Z"), "joiningdate" : ISODate("2020-03-01T00:00:00Z"), "salary" : 70000, "department" : [ { "name" : "IT", "discription" : "IT Department" } ], "address" : [ { "city" : "Surat", "state" : "Gujarat", "landmark" : "Vesu", "pincode" : 395001 } ] }
{ "id" : ObjectId("63261281b5bf7921fc1c69b8"), "empno" : 2804, "name" : [ { "firstname" : "Minal", "lastname" : "Ramani" } ], "emailID" : "minal02@gmail.com", "contact" : 567867545, "designation" : "Software Developer", "birthday" : ISODate("1999-09-04T00:00:00Z"), "joiningdate" : ISODate("2019-01-01T00:00:00Z"), "salary" : 56999, "department" : [ { "name" : "IT", "discription" : "IT Department" } ], "address" : [ { "city" : "Mumbai", "state" : "Maharashtra", "landmark" : "Bandra", "pincode" : 4001069 } ] }
{ "id" : ObjectId("63261281b5bf7921fc1c69b6"), "empno" : 2802, "name" : [ { "firstname" : "Rahul", "lastname" : "Makvana" } ], "emailID" : "rahull11@gmail.com", "contact" : 6754534567, "designation" : "Police Officer", "birthday" : ISODate("1988-02-11T00:00:00Z"), "joiningdate" : ISODate("2000-11-27T00:00:00Z"), "salary" : 54000, "department" : [ { "name" : "Police", "discription" : "Police Department" } ], "address" : [ { "city" : "Surat", "state" : "Gujarat", "landmark" : "Adajan", "pincode" : 395011 } ] }
```

9) Write a MongoDB query to remove all the documents whose pincode is 395001.

Code:

```
db.employees.deleteMany({"address.pincode":395001});
```

Screenshot:

```
> db.employees.deleteMany({"address.pincode":395001});
{ "acknowledged" : true, "deletedCount" : 2 }
>
```

10) Write a MongoDB query to displays all documents from the employees collection born on or before 1990.

Code:

```
db.employees.find({"birthday":{"$lte:ISODate("1990-12-31")}},{"birthday":1});
```

Screenshot:

```
> db.employees.find({"birthday":{"$lte:ISODate("1990-12-31")}},{"birthday":1});
{ "_id" : ObjectId("63261281b5bf7921fc1c69b6"), "birthday" : ISODate("1988-02-11T00:00:00Z") }
{ "_id" : ObjectId("63261281b5bf7921fc1c69b9"), "birthday" : ISODate("1976-05-06T00:00:00Z") }
{ "_id" : ObjectId("63261281b5bf7921fc1c69ba"), "birthday" : ISODate("1988-02-11T00:00:00Z") }
>
```

11) Install Nodejs, Create React one react application with “Myfirstapp” name and Run it

Code:

```
npx create-react-app myfirstapp
```

```
cd myfirstapp
```

```
npm start
```

App.js

```
import logo from './logo.svg';
```

```
import './App.css';
```

```
function App() {
```

```
  return (
```

```
    <div className="App">
```

```
      <header className="App-header">
```

```
        <img src={logo} className="App-logo" alt="logo" />
```

```
      <p>
```

Edit `src/App.js` and save to reload.

`</p>`

`<a`

`className="App-link"`

`href="https://reactjs.org"`

`target="_blank"`

`rel="noopener noreferrer"`

`>`

`MyFirstapp`

``

`</header>`

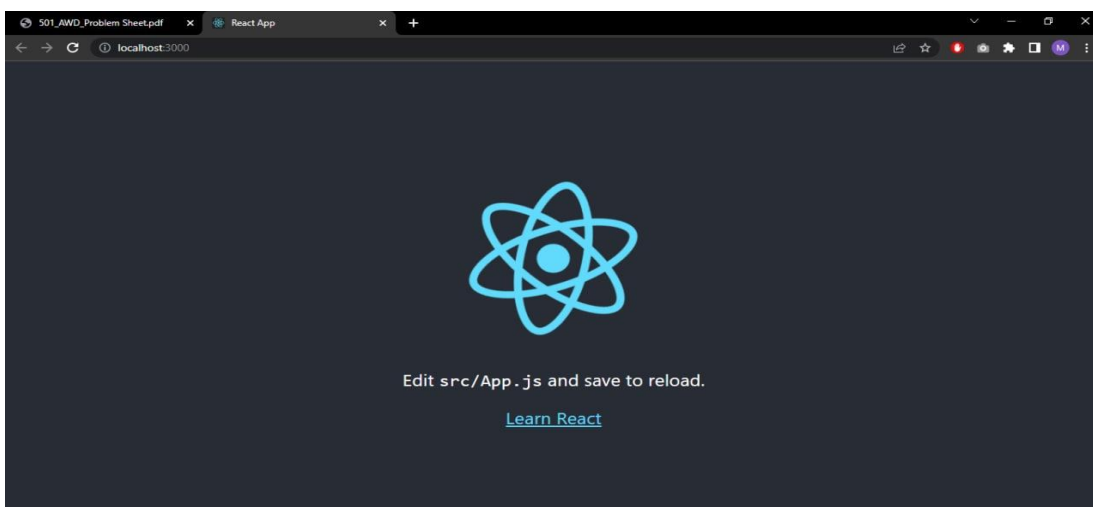
`</div>`

`);`

`}`

`export default App;`

Screenshot:



12) Write a React program to create Header, Navbar using Bootstrap**Code:****App.js**

```
import 'bootstrap/dist/css/bootstrap.min.css';

import {Nav, Navbar, Container, NavDropdown} from 'react-bootstrap';

function App() {

  return (

    <Navbar bg="primary" expand="md">

      <Container>

        <Navbar.Brand href="#home">Navbar Brand</Navbar.Brand>

        <Navbar.Toggle aria-controls="basic-navbar-nav" />

        <Navbar.Collapse id="basic-navbar-nav">

          <Nav className="me-auto">

            <Nav.Link href="#home">Home</Nav.Link>

            <Nav.Link href="#link">Link</Nav.Link>

            <NavDropdown title="Dropdown" id="basic-nav-dropdown">

              <NavDropdown.Item href="#action/3.1">Dropdown Item 1</NavDropdown.Item>

              <NavDropdown.Item href="#action/3.2">Dropdown Item 2</NavDropdown.Item>

              <NavDropdown.Item href="#action/3.3">Dropdown Item 3</NavDropdown.Item>

              <NavDropdown.Divider />

              <NavDropdown.Item href="#action/3.4">Another Item</NavDropdown.Item>

            </NavDropdown>

          </Nav>

        </Navbar.Collapse>

      </Navbar>

    </Container>

  )
}
```

```
</Navbar.Collapse>

</Container>

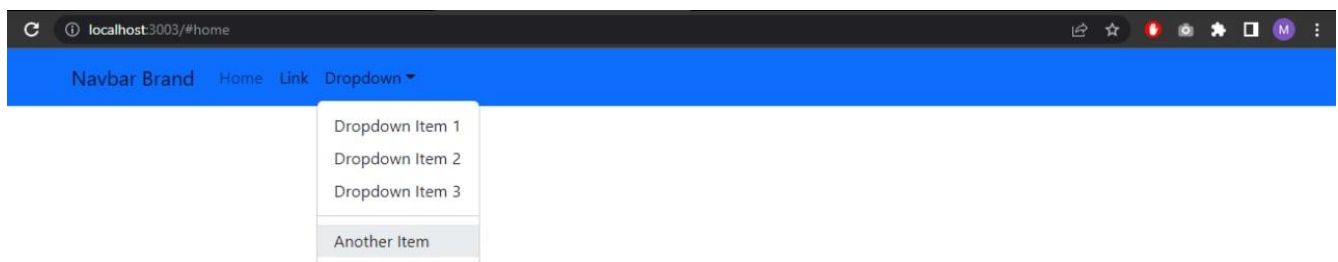
</Navbar>

);

}

export default App;
```

Screenshot:



13) Write a react program to create Form with Name, address, Gender, Subjects (dropdown box), Hobbies (check box) submit the form and alert the inputted data.

Code:

App.js

```
function BasicExample() {

  return (

    <Form>

      <Form.Group className="mb-3" controlId="formBasicName">

        <Form.Label>Name</Form.Label>
```

```
<Form.Control type="name" placeholder="Enter Your Name" />

</Form.Group>

<Form.Group className="mb-3" controlId="formBasicAddress">

  <Form.Label>Address</Form.Label>

  <Form.Control type="text" placeholder="Enter Your Address" />

</Form.Group>

<Form.Group className="mb-3" controlId="formBasicGender">

  <Form.Label>Gender</Form.Label>

  <Form.Control type="text" placeholder="Enter Your Gender" />

</Form.Group>

<Form.Group className="mb-3">

  <Form.Label>Subject</Form.Label>

  <Form.Select disabled>

    <option>Science</option>

  </Form.Select>

</Form.Group>

<Form.Group className="mb-3">

  <Form.Label>Hobbies</Form.Label>

  <Form.Check type="checkbox" label="Cricket" />

  <Form.Check type="checkbox" label="Football" />

</Form.Group>

<Button variant="primary" type="submit">
```

Submit

</Button>

</Form>

);

}

export default BasicExample;

Screenshot:

Name

Address

Gender

Subject

Science

Hobbies

☐ Cricket

☐ Football

Submit

14) Write a React program to count button click event using 'useState' hook.

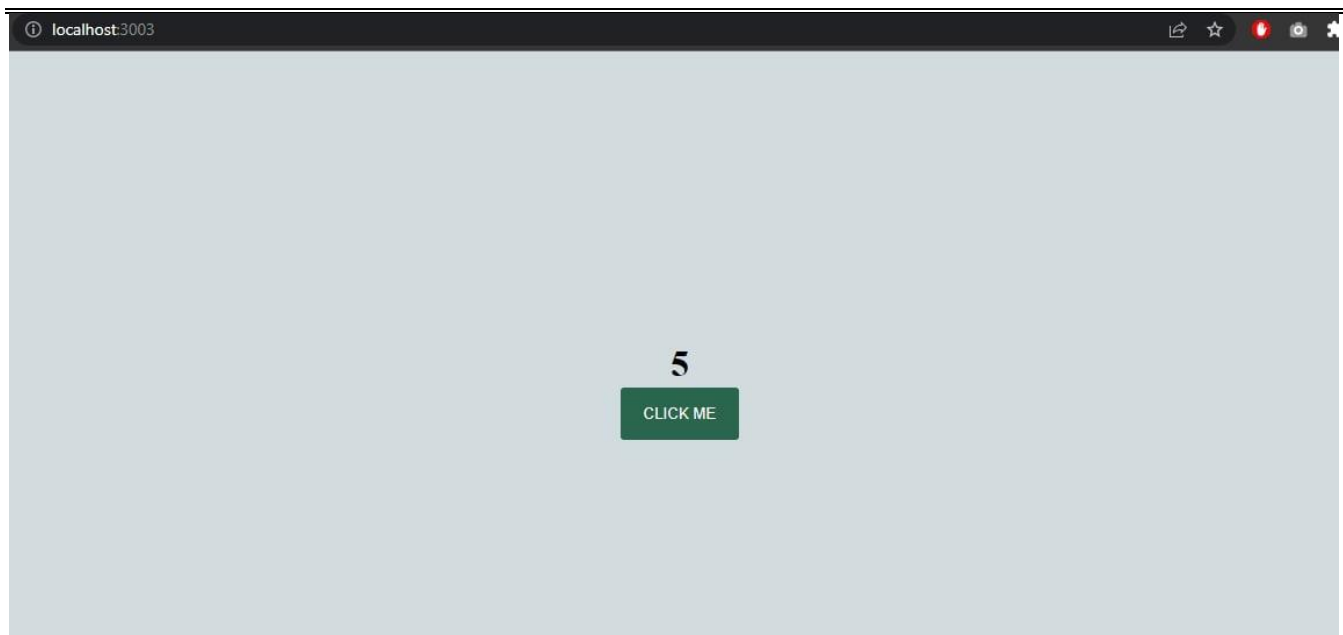
Code :

Count.js

```
import React, { useState } from "react";
import ReactDOM from "react-dom";
import "../src/App.css";
function App() {
  // State to store count value
  const [count, setCount] = useState(0);
  // Function to increment count by 1
  const incrementCount = () => {
```

```
// Update state with incremented value
setCount(count + 1);
};
return (
  <div className="app">
    <button onClick={incrementCount}>Click Here</button>
    {count}
  </div>
);
}
const rootElement = document.getElementById("root");
ReactDOM.render(<App />, rootElement);

export default App;
```

Screenshot:

15) Write a React program to create Timer using 'useEffect' hook.**Code:****CountDownTimer.js**

```
import React from 'react';

import './style';

const Timer = () => {

  return (

    <div className="container">

      <div className="time">

        <span className="minute">00</span>

        <span>:</span>

        <span className="second">00</span>

      </div>

      <div className="buttons">

        <button onClick={() => null} className="start">Start</button>

        <button onClick={() => null} className="reset">Reset</button>

      </div>

    </div>

  )

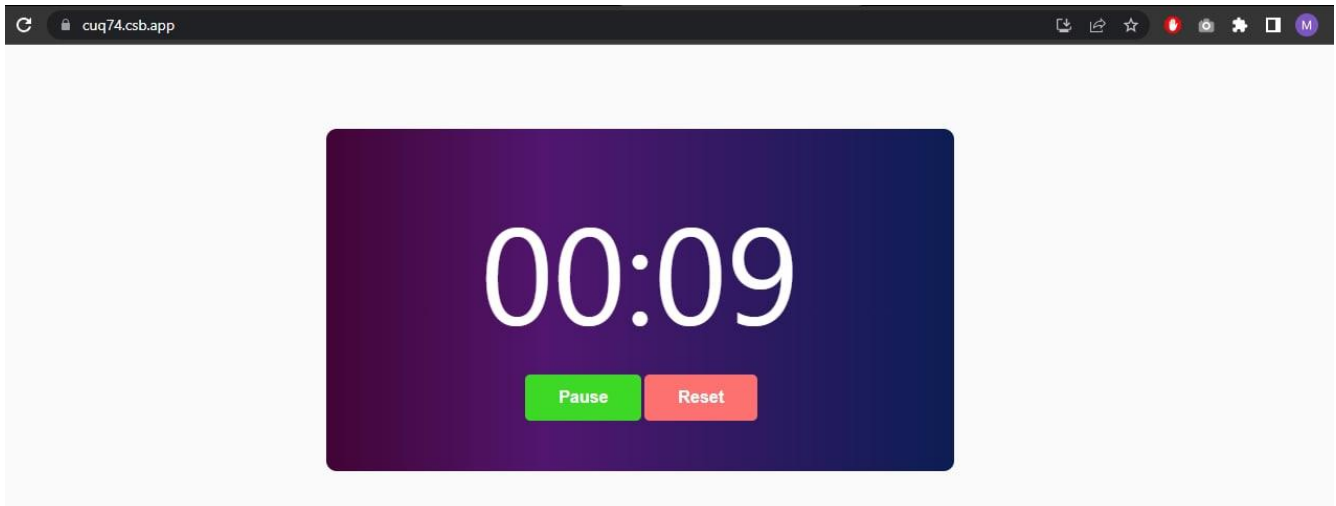
}

export default Timer;
```

App.js :-

```
import React, { useState, useEffect } from 'react';
```

```
const Timer = () => {  
  
  function stopTimer() {  
  
    setIsActive(false);  
  
    setCounter(0);  
  
    setSecond('00');  
  
    setMinute('00')  
  
  }  
  
  return (  
  
    <div className="container">  
  
      <div className="time">  
  
        <span className="minute">{minute}</span>  
  
        <span>:</span>  
  
        <span className="second">{second}</span>  
  
      </div>  
  
      <div className="buttons">  
  
        <button onClick={() => setIsActive(!isActive)} className="start">  
  
          {isActive ? "Pause": "Start"}  
  
        </button>  
  
        <button onClick={stopTimer} className="reset">Reset</button>  
  
      </div>  
  
    </div>  
  
  )  
}
```

Screenshot:**16) Create Single page application (Website) using Angular js.****Code:**

Index.html:

```
<html lang="en">

<head>

  <meta charset="UTF-8">

  <title>Single page web app using Angularjs</title>

  <script src="//ajax.googleapis.com/ajax/libs/angularjs/1.3.3/angular.min.js"></script>

  <script src="//cdnjs.cloudflare.com/ajax/libs/angular.js/1.3.3/angular-route.min.js"> </script>

  <script src="script.js"></script>

</head>

<body ng-app="single-page-app">
```

```
<div ng-controller="cfgController">
<div>
  <ul>
    <li><a href="#">Home</a></li>
    <li><a href="#/about">About us</a></li>
  </ul>
</div>
</div>
<br/>
<div ng-view>
</div>
</div>
</body>
</html>

Script.js

var app=angular.module('single-page-app',['ngRoute']);
app.config(function($routeProvider){
  $routeProvider
    .when('/',{
      templateUrl: 'home.html'
    })
    .when('/about',{
      templateUrl: 'about.html'
    });
});
```

```
});
```

```
app.controller('cfgController',function($scope){
```

```
});
```