db.createCollection('employee')

db.createCollection('department')

db.createCollection('project')

**Inserting records into Collection Employee**

db.employee.insertOne({

"ssn":101,

"name":"krupa",

'gender':'female',

"salary":900000,

"depid":201,

'qualification':['bca','mca'],

"designation":"senior software engineer",

"experience":9,

"dob":"09-08-1999",

'dependants':

[{'name':'gopal','relationship':'father'},

{'name':'usha','relationship':'mother'}],

'workson':[{'pno':301,'phour':5}]

});

db.employee.insertOne({

"ssn":102,

"name":"kiran",

'gender':'male',

"salary":9000,

"depid":201,

'qualification':['bsc','mca'],

"designation":"senior software engineer",

"experience":1,

"dob":"29-06-2002",

'dependants':

[{'name':'gajendra','relationship':'father'}],

'workson':[{'pno':301,'phour':1}]

});

db.employee.insertOne({

"ssn":103,

"name":"karishma",

'gender':'female',

"salary":23500,

"depid":201,

'qualification':['bca','mca'],

"designation":"senior software engineer",

"experience":5,

"dob":"13-04-1997",

'dependants':

[{'name':'varun','relationship':'fiance'}],

'workson':[{'pno':301,'phour':9},{'pno':302,'phour':3}]

});

db.employee.insertOne({

"ssn":104,

"name":"jaya",

'gender':'female',

"salary":103400,

"depid":202,

'qualification':['bsc'],

"designation":"junior software engineer",

"experience":10,

"dob":"29-06-1092",

'dependants':

[{'name':'harish','relationship':'son'}],

'workson':[{'pno':302,'phour':6}]

});

db.employee.insertOne({

"ssn":105,

"name":"ramesh",

'gender':'male',

"salary":73500,

"depid":203,

'qualification':['bcs','mca'],

"designation":"senior software engineer",

"experience":9,

"dob":"11-03-1993",

'dependants':

[{'name':'varsha','relationship':'fiance'}],

'workson':[{'pno':301,'phour':2},{'pno':302,'phour':3}]

});

**Inserting records into Collection Department**

db.department.insertOne({

'depid':201,

'depname':'finance',

'depmngr':101})

db.department.insertOne({

'depid':202,

'depname':'operations',

'depmngr':104})

db.department.insertOne({

'depid':203,

'depname':'customer service',

'depmngr':105})

**Inserting records into Collection Project**

db.project.insertOne({

'pid':301,

'pname':'Profit Report',

'depid':201,

'pstart':'2022-04-11',

'pend':'2022-05-01'})

db.project.insertOne({

'pid':302,

'pname':'Customer Satisfaction Report',

'depid':201,

'pstart':'2022-01-19'})

**Queries**

**1)Insert at least 5 values**

**2) Sort the employee list by ssn**

Ascending : db.employee.find().sort({"ssn":1})

descending : db.employee.find().sort({"ssn":-1})

**3)List the employee who are working in finance department**

Shortcut method i.e. finding by Dep ID : db.employee.find({"depid":201})

**4)Find employee who draws max salary**

**Works for both when more than 2 employee have same max salary**

var sal=db.employee.distinct("salary").sort() **//Created an ascending array of distinct salaries**

db.employee.find({"salary":{$eq:sal[sal.length-1]}}) **//From array selected max (last) value**

**5)Update the record of employee who has worked on max projects as “Employee of the Year”**

db.employee.update({

\_id:db.employee.aggregate

([{$project:{count:{$size:'$workson'}}},

{$sort:{'count':-1}}]).toArray()[0].\_id},

{$set:{'title':'Employee of the year'}})

**6)Delete Employee with Minimum Experience**

db.employee.deleteOne({

experience:db.employee.aggregate

([{$group:{\_id:null,

MinExp:{$min:'$experience'}}}]).toArray()[0].MinExp})

**Additional Queries**

**1)Find male employee with designation senior software engineer**

db.employee.find({$and:[{'gender':'male'},{'designation':'senior software engineer'}]})

**2)Find employee who have specified qualification and qualification is MCA**

db.employee.find({'qualification':'mca'})

**3)Total number of employee in each department**

db.employee.aggregate([{$group:{\_id:"$depid",count:{$sum:1}}}])

**4)** **Retrieve the details of female employees whose salary is greater than average salary of all the employees working in finance department**

db.employee.find({

$and:[{'gender':'female'},

{'salary':{$gt:db.employee.aggregate([{$match:{'depid':201}},{$group:{\_id:'$depid',avg:{$avg:'$salary'}}}]).toArray()[0].avg}}]

})