

Name :- Unde Kiran Sharad.

Class :- MSc Comp. Sci. I (Sem I).

Roll No. :- 3223

Subject :- Database Technology Solved Slips

College Name :- R. B. N. Borawake College, Shrirampur

Slip 2

Ans. :-

```
C:\Windows\System32\cmd.exe - mongo
> show databases
admin      0.000GB
college    0.000GB
config     0.000GB
local      0.000GB
movie      0.000GB
test       0.000GB
> use customer
switched to db customer
> db.cust.insertMany([
  {customerName:{firstName : "Kiran",lastName : "Unde"},orderedProduct : [{productName: "Milk"},{productName: "Almond"}],orderStatus:"true"},
  {customerName:{firstName : "Hemant",lastName : "Unde"},orderedProduct : [{productName: "Curd"},{productName: "Peanuts"}],orderStatus:"true"},
  {customerName:{firstName : "Satish",lastName : "Unde"},orderedProduct : [{productName: "Lassi"},{productName: "Pista"}],orderStatus:"true"},
  {customerName:{firstName : "Pranav",lastName : "Unde"},orderedProduct : [{productName: "Butter"},{productName: "Almond"}],orderStatus:"true"},
  {customerName:{firstName : "Suraj",lastName : "Jadhav"},orderedProduct : [{productName: "Keshar"},{productName: "Almond"}],orderStatus:"true"},
  {customerName:{firstName : "Pranav",lastName : "Honmode"},orderedProduct : [{productName: "Mouse"},{productName: "Keyboard"}],orderStatus:"true"},
  {customerName:{firstName : "Pravin",lastName : "Gaikwad"},orderedProduct : [{productName: "Biscuits"},{productName: "Toast"}],orderStatus:"true"},
  {customerName:{firstName : "Animesh",lastName : "Karne"},orderedProduct : [{productName: "Chips"},{productName: "Kurkure"}],orderStatus:"true"},
  {customerName:{firstName : "Tushar",lastName : "Dhotre"},orderedProduct : [{productName: "Cold Drinks"},{productName: "Ice Cream"}],orderStatus:"true"},
  {customerName:{firstName : "Rutik",lastName : "Thorat"},orderedProduct : [{productName: "Milk"},{productName: "Pizza"}],orderStatus:"true"}
... ]);
{
  "acknowledged" : true,
  "insertedIds" : [
    ObjectId("60976a26f39d31f0cf1bf8f4"),
    ObjectId("60976a26f39d31f0cf1bf8f5"),
    ObjectId("60976a26f39d31f0cf1bf8f6"),
    ObjectId("60976a26f39d31f0cf1bf8f7"),
    ObjectId("60976a26f39d31f0cf1bf8f8"),
    ObjectId("60976a26f39d31f0cf1bf8f9"),
    ObjectId("60976a26f39d31f0cf1bf8fa"),
    ObjectId("60976a26f39d31f0cf1bf8fb"),
    ObjectId("60976a26f39d31f0cf1bf8fc"),
    ObjectId("60976a26f39d31f0cf1bf8fd")
  ]
}
> db.product.insertMany([
  {productId: 1, productName: "milk", inventory: true},
  {productId: 2, productName: "Mouse", inventory: false},
  {productId: 3, productName: "keyboa", inventory: true},
  {productId: 4, productName: "Curd", inventory: false},
  {productId: 5, productName: "Almond", inventory: true},
  {productId: 6, productName: "Peanuts", inventory: false},
  {productId: 7, productName: "Lassi", inventory: true},
  {productId: 8, productName: "Pista", inventory: false},
  {productId: 9, productName: "Butter", inventory: true},
  {productId: 10, productName: "Keshar", inventory: false},
  {productId: 11, productName: "Chips", inventory: true},
  {productId: 12, productName: "Kurkure", inventory: false},
  {productId: 13, productName: "Pizza", inventory: true},
  {productId: 14, productName: "Toast", inventory: false}
]);
{
  "acknowledged" : true,
  "insertedIds" : [
    ObjectId("60976be4f39d31f0cf1bf8fe"),
    ObjectId("60976be4f39d31f0cf1bf8ff")
  ]
}
```

```
C:\Windows\System32\cmd.exe - mongo
rd", inventory: true},{productId: 4, productName: "Curd", inventory: false},{productId: 5, productName: "Almond", inventory: true},{productId: 6, productName: "Peanuts",
, inventory: false},{productId: 7, productName: "Lassi", inventory: true},{productId: 8, productName: "Pista", inventory: false},{productId: 9, productName: "Butter", i
inventory: true},{productId: 10, productName: "Keshar", inventory: false},{productId: 11, productName: "Chips", inventory: true},{productId: 12, productName: "Kurkure",
inventory: false},{productId: 13, productName: "Pizza", inventory: true},{productId: 14, productName: "Toast", inventory: false}]]);
{
  "acknowledged": true,
  "insertedIds": [
    ObjectId("60976be4f39d31f0cf1bf8fe"),
    ObjectId("60976be4f39d31f0cf1bf8ff"),
    ObjectId("60976be4f39d31f0cf1bf900"),
    ObjectId("60976be4f39d31f0cf1bf901"),
    ObjectId("60976be4f39d31f0cf1bf902"),
    ObjectId("60976be4f39d31f0cf1bf903"),
    ObjectId("60976be4f39d31f0cf1bf904"),
    ObjectId("60976be4f39d31f0cf1bf905"),
    ObjectId("60976be4f39d31f0cf1bf906"),
    ObjectId("60976be4f39d31f0cf1bf907"),
    ObjectId("60976be4f39d31f0cf1bf908"),
    ObjectId("60976be4f39d31f0cf1bf909"),
    ObjectId("60976be4f39d31f0cf1bf90a"),
    ObjectId("60976be4f39d31f0cf1bf90b")
  ]
}
> db.order.insertMany([{"orderId": 101, orderedProdctName: "Milk", orderAmount: 4000, orderProcessed: "false", invoice: false, orderedBy: "Kiran"}, {"orderId": 102, orderedP
rodctName: "Keyboard", orderAmount: 6000, orderProcessed: "true", invoice: true, orderedBy: "Pranav"}, {"orderId": 103, orderedProdctName: "Pizza", orderAmount: 10000, ord
erProcessed: "false", invoice: false, orderedBy: "Rutik"}, {"orderId": 104, orderedProdctName: "Butter", orderAmount: 1000, orderProcessed: "true", invoice: true, orderedB
y: "Pranav"}, {"orderId": 105, orderedProdctName: "Toast", orderAmount: 1000, orderProcessed: "false", invoice: false, orderedBy: "Pravin"}, {"orderId": 106, orderedProdctNam
e: "Pista", orderAmount: 3000, orderProcessed: "true", invoice: true, orderedBy: "Satish"}, {"orderId": 107, orderedProdctName: "Milk", orderAmount: 13000, orderProcessed:
"false", invoice: false, orderedBy: "Rutik"}, {"orderId": 108, orderedProdctName: "Curd", orderAmount: 15000, orderProcessed: "true", invoice: true, orderedBy: "Hemant"},
{"orderId": 109, orderedProdctName: "Mouse", orderAmount: 1500, orderProcessed: "false", invoice: false, orderedBy: "Pranav"}, {"orderId": 110, orderedProdctName: "Ice Cream
", orderAmount: 2000, orderProcessed: "true", invoice: true, orderedBy: "Tushar"}]]);
{
  "acknowledged": true,
  "insertedIds": [
    ObjectId("60976e5ef39d31f0cf1bf90c"),
    ObjectId("60976e5ef39d31f0cf1bf90d"),
    ObjectId("60976e5ef39d31f0cf1bf90e"),
    ObjectId("60976e5ef39d31f0cf1bf90f"),
    ObjectId("60976e5ef39d31f0cf1bf910"),
    ObjectId("60976e5ef39d31f0cf1bf911"),
    ObjectId("60976e5ef39d31f0cf1bf912"),
    ObjectId("60976e5ef39d31f0cf1bf913"),
    ObjectId("60976e5ef39d31f0cf1bf914"),
    ObjectId("60976e5ef39d31f0cf1bf915")
  ]
}
```

```
C:\Windows\System32\cmd.exe - mongo
> db.product.find({inventory: "true"}).pretty();
> db.product.find({inventory: "true"}).pretty();
> db.product.find({inventory: true}).pretty();
{
  "_id" : ObjectId("60976be4f39d31f0cf1bf8fe"),
  "productId" : 1,
  "productName" : "milk",
  "inventory" : true
}
{
  "_id" : ObjectId("60976be4f39d31f0cf1bf900"),
  "productId" : 3,
  "productName" : "keyboard",
  "inventory" : true
}
{
  "_id" : ObjectId("60976be4f39d31f0cf1bf902"),
  "productId" : 5,
  "productName" : "Almond",
  "inventory" : true
}
{
  "_id" : ObjectId("60976be4f39d31f0cf1bf904"),
  "productId" : 7,
  "productName" : "Lassi",
  "inventory" : true
}
{
  "_id" : ObjectId("60976be4f39d31f0cf1bf906"),
  "productId" : 9,
  "productName" : "Butter",
  "inventory" : true
}
{
  "_id" : ObjectId("60976be4f39d31f0cf1bf908"),
  "productId" : 11,
  "productName" : "Chips",
  "inventory" : true
}
{
  "_id" : ObjectId("60976be4f39d31f0cf1bf90a"),
  "productId" : 13,
  "productName" : "Pizza",
  "inventory" : true
}
```

```
C:\Windows\System32\cmd.exe - mongo
> db.order.find({orderAmount: {$gt: 10000}}).pretty();
{
  "_id" : ObjectId("60976e5ef39d31f0cf1bf912"),
  "orderId" : 107,
  "orderedProdctName" : "Milk",
  "orderAmount" : 13000,
  "orderProcessed" : "false",
  "invoice" : false,
  "orderedBy" : "Rutik"
}
{
  "_id" : ObjectId("60976e5ef39d31f0cf1bf913"),
  "orderId" : 108,
  "orderedProdctName" : "Curd",
  "orderAmount" : 15000,
  "orderProcessed" : "true",
  "invoice" : true,
  "orderedBy" : "Hemant"
}
> db.order.aggregation([{$match: {orderProcessed: "false"}}]).pretty();
uncaught exception: TypeError: db.order.aggregation is not a function :
@ (shell):1:1
> db.order.aggregate([{$match: {orderProcessed: "false"}}]).pretty();
{
  "_id" : ObjectId("60976e5ef39d31f0cf1bf90c"),
  "orderId" : 101,
  "orderedProdctName" : "Milk",
  "orderAmount" : 4000,
  "orderProcessed" : "false",
  "invoice" : false,
  "orderedBy" : "Kiran"
}
{
  "_id" : ObjectId("60976e5ef39d31f0cf1bf90e"),
  "orderId" : 103,
  "orderedProdctName" : "Pizza",
  "orderAmount" : 10000,
  "orderProcessed" : "false",
  "invoice" : false,
  "orderedBy" : "Rutik"
}
{
  "_id" : ObjectId("60976e5ef39d31f0cf1bf910"),
  "orderId" : 105,
  "orderedProdctName" : "Toast",
  "orderAmount" : 1000,
  "orderProcessed" : "false",
  "invoice" : false,
  "orderedBy" : "Pravin"
}
{
  "_id" : ObjectId("60976e5ef39d31f0cf1bf912"),
  "orderId" : 107,
  "orderedProdctName" : "Milk",
  "orderAmount" : 13000,
  "orderProcessed" : "false",
  "invoice" : false,
  "orderedBy" : "Rutik"
}
```

```
C:\Windows\System32\cmd.exe - mongo
{
  "orderAmount" : 15000,
  "orderProcessed" : "true",
  "invoice" : true,
  "orderedBy" : "Hemant"
}
> db.order.aggregation([{$match: {orderProcessed: "false"}}]).pretty();
uncaught exception: TypeError: db.order.aggregation is not a function :
@ (shell):1:1
> db.order.aggregate([{$match: {orderProcessed: "false"}}]).pretty();
{
  "_id" : ObjectId("60976e5ef39d31f0cf1bf90c"),
  "orderId" : 101,
  "orderedProdctName" : "Milk",
  "orderAmount" : 4000,
  "orderProcessed" : "false",
  "invoice" : false,
  "orderedBy" : "Kiran"
}
{
  "_id" : ObjectId("60976e5ef39d31f0cf1bf90e"),
  "orderId" : 103,
  "orderedProdctName" : "Pizza",
  "orderAmount" : 10000,
  "orderProcessed" : "false",
  "invoice" : false,
  "orderedBy" : "Rutik"
}
{
  "_id" : ObjectId("60976e5ef39d31f0cf1bf910"),
  "orderId" : 105,
  "orderedProdctName" : "Toast",
  "orderAmount" : 1000,
  "orderProcessed" : "false",
  "invoice" : false,
  "orderedBy" : "Pravin"
}
{
  "_id" : ObjectId("60976e5ef39d31f0cf1bf912"),
  "orderId" : 107,
  "orderedProdctName" : "Milk",
  "orderAmount" : 13000,
  "orderProcessed" : "false",
  "invoice" : false,
  "orderedBy" : "Rutik"
}
```

C:\Windows\System32\cmd.exe - mongo

```
"orderProcessed" : "false",
"invoice" : false,
"orderedBy" : "Pranav"
}
> db.customer.aggregate([{$match: {"customerName.firstName": "Kiran"}}, {$lookup: {from: "order", localField: "customerName.firstName", foreignField: "orderedBy", as: "result"}}, {$project: {resultData: "$result"}}]).pretty();
> db.cust.aggregate([{$match: {"customerName.firstName": "Kiran"}}, {$lookup: {from: "order", localField: "customerName.firstName", foreignField: "orderedBy", as: "result"}}, {$project: {resultData: "$result"}}]).pretty();
{
  "_id" : ObjectId("60976a26f39d31f0cf1bf8f4"),
  "resultData" : [
    {
      "_id" : ObjectId("60976e5ef39d31f0cf1bf90c"),
      "orderId" : 101,
      "orderedProdctName" : "Milk",
      "orderAmount" : 4000,
      "orderProcessed" : "false",
      "invoice" : false,
      "orderedBy" : "Kiran"
    }
  ]
}
```


Slip 4

Ans. :-

```
C:\Windows\System32\cmd.exe - mongo
> use hospitalInfo
switched to db hospitalInfo
> db.hospital.insertMany([
  {hospitalId: 1, hospitalName: "City Hospital", isMultispeciality: "true", speciality: [{name: "Pediatric"}, {name: "Orthopaedic"}], rating: [{ratingBy: {firstName: "Kiran", lastName: "Unde", givenRating: 4}}, {ratingBy: {firstName: "Hemant", lastName: "Unde", givenRating: 4.4}}], visits: {visitedBy: "Dr Shinde", onDay: "Monday"}},
  {hospitalId: 2, hospitalName: "Central Hospital", isMultispeciality: "false", speciality: [{name: "Orthopaedic"}], rating: [{ratingBy: {firstName: "Kiran", lastName: "Unde", givenRating: 4.4}}], visits: {visitedBy: "Dr Kulkarni", onDay: "Saturday"}},
  {hospitalId: 3, hospitalName: "Aims Hospital", isMultispeciality: "true", speciality: [{name: "Pediatric"}, {name: "Gynaec"}], rating: [{ratingBy: {firstName: "Satish", lastName: "Unde", givenRating: 5}}], visits: {visitedBy: "Dr Rahane", onDay: "Wednesday"}},
  {hospitalId: 4, hospitalName: "Gems Hospital", isMultispeciality: "true", speciality: [{name: "Orthopaedic"}, {name: "Gynaec"}], rating: [{ratingBy: {firstName: "Suraj", lastName: "Jadhav", givenRating: 5}}], visits: {visitedBy: "Dr Thorat", onDay: "Tuesday"}},
  {hospitalId: 5, hospitalName: "Rural Hospital", isMultispeciality: "true", speciality: [{name: "Gynaec"}], rating: [{ratingBy: {firstName: "Akash", lastName: "Unde", givenRating: 5}}], visits: {visitedBy: "Dr Rahane", onDay: "Sunday"}}],
  {
    "acknowledged": true,
    "insertedIds": [
      ObjectId("609776acbbcaad7fae61751e"),
      ObjectId("609776acbbcaad7fae61751f"),
      ObjectId("609776acbbcaad7fae617520"),
      ObjectId("609776acbbcaad7fae617521"),
      ObjectId("609776acbbcaad7fae617522")
    ]
  }
]
> db.doctors.insertMany([
  {doctorId: 201, doctorName: "Dr Kulkarni", specialization: "Orthopaedic", experience: "10 years"},
  {doctorId: 202, doctorName: "Dr Rahane", specialization: "Gynaec", experience: "20 years"},
  {doctorId: 203, doctorName: "Dr Shinde", specialization: "Pediatric", experience: "30 years"},
  {doctorId: 204, doctorName: "Dr Thorat", specialization: "Gynaec", experience: "15 years"},
  {doctorId: 205, doctorName: "Dr Joshi", specialization: "Pediatric", experience: "5 years"}],
  {
    "acknowledged": true,
    "insertedIds": [
      ObjectId("6097781fbbcaad7fae617523"),
      ObjectId("6097781fbbcaad7fae617524"),
      ObjectId("6097781fbbcaad7fae617525"),
      ObjectId("6097781fbbcaad7fae617526"),
      ObjectId("6097781fbbcaad7fae617527")
    ]
  }
]
> db.persons.insertMany([
  {personId: 101, personName: {firstName: "Kiran", lastName: "Unde"}, visitedHospitals: [{hospitalName: "City Hospital"}, {hospitalName: "Central Hospital"}]},
  {personId: 102, personName: {firstName: "Suraj", lastName: "Jadhav"}, visitedHospitals: [{hospitalName: "Gems Hospital"}]},
  {personId: 103, personName: {firstName: "Sachin", lastName: "Pujari"}, visitedHospitals: [{hospitalName: "City Hospital"}, {hospitalName: "Aims Hospital"}]},
  {personId: 104, personName: {firstName: "Rahul", lastName: "Shinde"}, visitedHospitals: [{hospitalName: "Central Hospital"}]},
  {personId: 105, personName: {firstName: "Akash", lastName: "Unde"}, visitedHospitals: [{hospitalName: "Rural Hospital"}]}],
  {
    "acknowledged": true,
    "insertedIds": [
      ObjectId("6097793fbbcaad7fae617528"),
      ObjectId("6097793fbbcaad7fae617529"),
      ObjectId("6097793fbbcaad7fae61752a")
    ]
  }
]
```

```
C:\Windows\System32\cmd.exe - mongo
> db.hospital.aggregate([
  { $match: { "speciality.name": "Pediatric" } },
  { $group: { _id: { hospitalName: "$hospitalName" } } }
], { "_id": { "hospitalName": "Aims Hospital" } })
> db.hospital.aggregate([
  { $match: { "visits.onDay": "Monday" } },
  { $group: { _id: { doctorName: "$visits.visitedBy" } } }
], { "_id": { "doctorName": "Dr Shinde" } })
> db.hospital.aggregate([
  { $match: { $and: [{ isMultispeciality: "true" }, { "visits.visitedBy": "Dr Rahane" }] } },
  { $group: { _id: { hospitalName: "$hospitalName" } } }
], { "_id": { "hospitalName": "Rural Hospital" } })
> db.hospital.aggregate([
  { $match: { $and: [{ isMultispeciality: "true" }, { "visits.visitedBy": "Dr Rahane" }] } },
  { $group: { _id: { hospitalName: "$hospitalName" } } }
], { "_id": { "hospitalName": "Aims Hospital" } })
> db.hospital.aggregate([
  { $match: { $and: [{ hospitalName: "Central Hospital" }, { "rating.ratingBy.givenRating": { $gte: 3 } } ] } },
  { $lookup: { from: "persons", localField: "rating.ratingBy.firstName", foreignField: "personName.firstName", as: "result" } },
  { $project: { firstName: "$result.personName.firstName" } }
], { "_id": ObjectId("609776acbbcaad7fae61751f"), "firstName": [ ] })
>
```