**Slip 17. Mobile Shopping Database**

1. Model the following Online Mobile Shopping information as a document database.

Consider online mobile shopping where the customer can get different models from different brands.

Customers can rate the brands and the models individually.

2. Assume appropriate attributes and collections as per the query requirements

3. Insert at least 10 documents in each collection.

4. Answer the following Queries.

a. List the mobiles having RAM and ROM as 3GB and 32GB.

b. List the customers who bought Samsung J6.

c. List the names of the distinct brands available. Also display the name of the brand with highest rating.

d. List all the customers in ascending order who bought iPhone 7plus.

db.Mobiles.insertMany([

{"brand":"samsung",

"model":"J6",

"ram":"3GB",

"rom":"32GB",

"customers":["Ajaz"],

rating:8

},

{"brand":"samsung",

"model":"J6",

"ram":"4GB",

"rom":"64GB",

"customers":["Salman","Amit"],

rating:9

},

{"brand":"Mi",

"model":"4A",

"ram":"3GB",

"rom":"32GB",

"customers":["Ajay","Salman"],

rating:7

},

{"brand":"iphone",

"model":"7plus",

"ram":"3GB",

"rom":"64GB",

"customers":["Anil"],

rating:10

},

{"brand":"iphone",

"model":"7plus",

"ram":"3GB",

"rom":"32GB",

"customers":["Soyab","Amey"],

rating:9

}

])

Solution for the queries

a. List the mobiles having RAM and ROM as 3GB and 32GB.

>db.Mobiles.find({"ram":"3GB","rom":"32GB"},{\_id:0,customers:0})

b. List the customers who bought Samsung J6.

>db.Mobiles.find({"brand":"samsung","model":"J6"},{\_id:0,customers:1,brand:1,model:1})

c. List the names of the distinct brands available. Also display the name of the brand with highest rating.

>db.Mobiles.find({},{\_id:0,customers:0}).sort({rating:-1})

d. List all the customers in ascending order who bought iPhone 7plus.

> db.Mobiles.find({"brand":"iphone","model":"7plus"},{\_id:0,customers:1,brand:1,model:1}).sort({"$natural":1})

**Slip 18.Tourism Database**

1. Model the following Tours information as a document database.

A tour will consider the source and destination. Destination may be all around the world.

The tours are planned using different tourism industries.

The industries provide the complete information before selecting a particular package.

Customers select different packages as per their requirements & can rate/review tourism industry.

2. Assume appropriate attributes and collections as per the query requirements.

3. Insert at least 10 documents in each collection.

4. Answer the following Queries.

a. List the details of packages provided by “Veena World”

b. List the highest rated tourism industry.

c. List all the details of expenses made by John on his first 3 trips. Also display the total expenses.

d. List the names of the customers who went on a tour to Shillong.

db.tourCompany.insertMany([

{name:"Veena world", packages:[{package\_name:"Shimla",amount:30000},{package\_name:"Shillong",amount:35000},

{package\_name:"Singapore",amount:350000},{package\_name:"Canada",amount:200000}], review:8},

{name:"Geeta Travels", packages:[{package\_name:"Delhi",amount:8000},{package\_name:"Banaras",amount:6000},

{package\_name:"kolkata",amount:14000}], review:7},

{name:"Rafi Travels", packages:[{package\_name:"Shimla",amount:27000},{package\_name:"Banaras",amount:7000}], review:6},

{name:"Hariyana Roadways", packages:[{package\_name:"Hariyana",amount:23000},{package\_name:"Chandigarh",amount:17000}], review:5}

])

db.customer.insertMany([

{name:"John",

trips:[

{provider:"Veena world", source:"Mumbai", destination:"Shimla", expenses:50000},

{provider:"Hariyana Roadways", source:"Pune", destination:"Hariyana", expenses:30000},

{provider:"Rafi Travels", source:"Delhi", destination:"Banaras", expenses:10000},

{provider:"Veena world", source:"Delhi", destination:"Canada", expenses:250000},

{provider:"Veena world", source:"Nagar", destination:"Shillong", expenses:35000}]

},

{name:"Amrit", trips:[

{provider:"Veena world", source:"Mumbai", destination:"Shillong", expenses:50000}]},

{name:"Soyab", trips:[

{provider:"Veena world", source:"Nasik", destination:"Shillong", expenses:53000}]}

])

Solution for the queries

a. List the details of packages provided by “Veena World”

>db.tourCompany.find({name:"Veena world"},{\_id:0,name:1,packages:1})

b. List the highest rated tourism industry

>db.tourCompany.find({},{\_id:0,name:1,review:1}).sort({review:-1}).limit(1)

c. List all the details of expenses made by John on his first 3 trips. Also display the total expenses.

>db.customer.aggregate([{$match:{name:"John"}},{"$unwind":"$trips"},

{"$limit":3},{$group:{\_id:"$name","Total Expenses":{"$sum":"$trips.expenses"}}}])

d. List the names of customers who went on a tour to Shillong.

>db.customer.find({"trips.destination":"Shillong"},{\_id:0,name:1})

**Slip 20 Hospital Database**

1. Model the following Hospital information system as a document database.

Consider hospitals in and around Pune. Each hospital may have one or more specializations like Pediatric, Gynaec, Orthopaedic, etc.

A person can recommend/provide review for a hospital. A doctor can be associated with one or more hospitals.

2. Assume appropriate attributes and collections as per the query requirements.

3. Insert at least 10 documents in each collection.

4. Answer the following Queries

a. List the names of hospitals with pediatric specialization.

b. List the Names of doctors who are visiting “Jehangir Hospital ” on Mondays.

c. List the names of hospitals which are multispecialty hospitals where Dr. Kale visits.

d. List the names of people who have given a rating of (>=3) for “Jehangir Hospital”

db.hospital.insertMany( [

{"hospital\_name":"jehangir hospital", "specialization":["pediatric","gynaec"],

"doctors":[

{"doctor\_name":"Dr. Kale", "day":"Monday"},{"doctor\_name":"Dr. Amit", "day":"Monday"},{"doctor\_name":"Dr. Chetan", "day":"Tuesday"}],

person:[{"person\_name":"ajaz", "review":4}, {"person\_name":"soyab", "review":5},{"person\_name":"ajay", "review":2}]},

{"hospital\_name":"poona hospital", "specialization":["pediatric","orthopedic"],

"doctors":[{"doctor\_name":"Dr. Kale", "day":"Wednesday"}],

person:[{"person\_name":"ajay", "review":4}]},

{"hospital\_name":"Deenanath Mangeshkar hospital", "specialization":["pediatric","orthopedic","gynaec"],

"doctors":[{"doctor\_name":"Dr. Amit", "day":"Friday"}],

person:[{"person\_name":"chetana", "review":4}]},

{"hospital\_name":"Sahyadri Super hospital","specialization":["pediatric","orthopedic","gynaec","radiology"],

"doctors":[{"doctor\_name":"Dr. Geeta", "day":"Friday"},{"doctor\_name":"Dr. Kale", "day":"Sunday"}],

person:[{"person\_name":"amar", "review":5}]},

{"hospital\_name":"jupiter hospital", "specialization":["pediatric"],

"doctors":[{"doctor\_name":"Dr. Geeta", "day":"Sunday"},{"doctor\_name":"Dr. Kale", "day":"Friday"}],

person:[{"person\_name":"aman", "review":3}]},

{"hospital\_name":"Deccan hospital", "specialization":["pediatric","radiology","cardiology"],

"doctors":[{"doctor\_name":"Dr. Amrita", "day":"Sunday"},{"doctor\_name":"Dr. Kale", "day":"Friday"}],

person:[{"person\_name":"daulat", "review":5}]},

{"hospital\_name":"KEM hospital", "specialization":["radiology","cardiology"],

"doctors":[{"doctor\_name":"Dr. Amrita", "day":"Sunday"},{"doctor\_name":"Dr. Kale", "day":"Wednesday"}],

person:[{"person\_name":"meena", "review":5}]}

])

Solution for the queries

a. List the names of hospitals with pediatric specialization.

>db.hospital.find({"specialization":"pediatric"},{"\_id":0,"hospital\_name":1,"specialization":1})

b. List the Names of doctors who are visiting “Jehangir Hospital ” on Mondays.

>db.hospital.aggregate({$unwind: "$doctors"},

{$match: {"doctors.day":"Monday","hospital\_name":"jehangir hospital"}},

{$project: {"doctors.doctor\_name": 1, "doctors.day": 1,"hospital\_name":1, "\_id": 0}})

c. List the names of hospitals which are multispecialty hospitals where Dr. Kale visits.

>db.hospital.find( {$where:"this.specialization.length>1","doctors.doctor\_name":"Dr. Kale"},

{\_id:0,"hospital\_name":1,"specialization":1,"doctors.doctor\_name":1} )

d. List the names of people who have given a rating of (>=3) for “Jehangir Hospital”

>db.hospital.aggregate({$unwind: "$person"},

{$match: {"person.review":{$gte:3},"hospital\_name":"jehangir hospital"}},

{$project: {"person":1,"hospital\_name":1, "\_id": 0}})