Presentation by Uplatz

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Uplatz

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Q1:

Write a MongoDB query to display all the documents in the collection restaurants?

db.restaurants.find();

Q2:

Write a MongoDB query to display the fields restaurant_id, name, borough and cuisine for all the documents in the collection restaurant?

db.restaurants.find({},{"restaurant_id" : 1,"name":1,"borough":1,"cuisine" :1});

Q3:

Write a MongoDB query to display the fields restaurant_id, name, borough and cuisine, but exclude the field _id for all the documents in the collection restaurant.

```
db.restaurants.find({},{"restaurant_id" :
1,"name":1,"borough":1,"cuisine" :1,"_id":0});
```

Q4:

Write a MongoDB query to display all the restaurant which is in the borough Bronx

```
db.restaurants.find({"borough": "Bronx"});
```

Q5:

Write a MongoDB query to display the first 5 restaurant which is in the borough Bronx.

db.restaurants.find({"borough": "Bronx"}).limit(5);

Q6:

Write a MongoDB query to display the next 5 restaurants after skipping first 5 which are in the borough Bronx

db.restaurants.find({"borough": "Bronx"}).skip(5).limit(5);

Q7:

Write a MongoDB query to find the restaurants who achieved a score more than 90.

```
db.restaurants.find({grades : {
$elemMatch:{"score":{$gt : 90}}}});
```

Q8:

Write a MongoDB query to find the restaurants that achieved a score, more than 80 but less than 100

```
db.restaurants.find({grades : {
$elemMatch:{"score":{$gt : 80 , $lt :100}}}});
```

Q9:

Write a MongoDB query to find the restaurants which locate in latitude value less than -95.754168

db.restaurants.find({"address.coord" : {$lt : -95.754168}});

Q10:

Write a MongoDB query to find the restaurants that do not prepare any cuisine of 'American' and their grade score more than 70 and latitude less than -65.754168.

```
db.restaurants.find(
        {$and:
            [
              {"cuisine" : {$ne :"American "}},
              {"grades.score" : {$gt : 70}},
              {"address.coord" : {$lt : -65.754168}}
            ]
         }
            );
```

Q11: Write a MongoDB query to find the restaurants which do not prepare any cuisine of 'American' and achieved a score more than 70 and located in the longitude less than -65.754168.

Note : Do this query without using $and operator

```
db.restaurants.find(
                    {
                     "cuisine" : {$ne : "American "},
                     "grades.score" :{$gt: 70},
                     "address.coord" : {$lt : -65.754168}
                    }
                );
```

Q12: Write a MongoDB query to find the restaurants which do not prepare any cuisine of 'American ' and achieved a grade point 'A' not belongs to the borough Brooklyn. The document must be displayed according to the cuisine in descending order?

```
db.restaurants.find( {
                    "cuisine" : {$ne : "American "},
                    "grades.grade" :"A",
                    "borough": {$ne : "Brooklyn"}
                }
            ).sort({"cuisine":-1});
```

Q13: Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which contain 'Wil' as first three letters for its name?

```
db.restaurants.find(
{name: /^Wil/},
{
"restaurant_id" : 1,
"name":1,"borough":1,
"cuisine" :1 });
```

Q14: Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which contain 'ces' as last three letters for its name.?

```
db.restaurants.find(
{name: /ces$/},
{
"restaurant_id" : 1,
"name":1,"borough":1,
"cuisine" :1
}
);
```

Q15: Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which contain 'Reg' as three letters somewhere in its name?

```
db.restaurants.find(
{"name": /.*Reg.*/},
{
"restaurant_id" : 1,
"name":1,"borough":1,
"cuisine" :1
}
);
```

Q16: Write a MongoDB query to find the restaurants which belong to the borough Bronx and prepared either American or Chinese dish?

```
db.restaurants.find(
{
"borough": "Bronx" ,
$or : [
{ "cuisine" : "American " },
{ "cuisine" : "Chinese" }
]
}
);
```

Q17: Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which belong to the borough Staten Island or Queens or Bronxor Brooklyn?

```
db.restaurants.find(
{"borough" :{$in :["Staten Island","Queens","Bronx","Brooklyn"]}},
{
"restaurant_id" : 1,
"name":1,"borough":1,
"cuisine" :1
}
);
```

Q18: Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which are not belonging to the borough Staten Island or Queens or Bronxor Brooklyn?

```
db.restaurants.find(
{"borough" :{$nin :["Staten Island","Queens","Bronx","Brooklyn"]}},
{
"restaurant_id" : 1,
"name":1,"borough":1,
"cuisine" :1
}
);
```

Q19: Write a MongoDB query to find the restaurant Id, name, borough and cuisine for those restaurants which prepared dish except 'American' and 'Chinees' or restaurant's name begins with letter 'Wil'?

```
db.restaurants.find(
{$or: [
  {name: /^Wil/},
  {"$and": [
        {"cuisine" : {$ne :"American "}},
        {"cuisine" : {$ne :"Chinees"}}
    ]}
]}
,{"restaurant_id" :
1,"name":1,"borough":1,"cuisine" :1} );
```

Q20: Write a MongoDB query to find the restaurant Id, name, and grades for those restaurants which achieved a grade of "A" and scored 11 on an ISODate "2014-08-11T00:00:00Z" among many of survey dates..

```
db.restaurants.find(
            {
             "grades.date": ISODate("2014-08-11T00:00:00Z"),
             "grades.grade":"A" ,
             "grades.score" : 11
            },
            {"restaurant_id" : 1,"name":1,"grades":1}
          );
```

Q21: Write a MongoDB query to find the restaurant Id, name and grades for those restaurants where the 2nd element of grades array contains a grade of "A" and score 9 on an ISODate "2014-08-11T00:00:00Z"

```
db.restaurants.find(
                    { "grades.1.date": ISODate("2014-
08-11T00:00:00Z"),
                      "grades.1.grade":"A" ,
                      "grades.1.score" : 9
                    },
                     {"restaurant_id" :
1,"name":1,"grades":1}
                   );
```

Q22: Write a MongoDB query to find the restaurant Id, name, address and geographical location for those restaurants where 2nd element of coord array contains a value which is more than 42 and upto 52..

```
db.restaurants.find(
                    {
                      "address.coord.1": {$gt : 42, $lte : 52}
                    },
                      {"restaurant_id" :
1,"name":1,"address":1,"coord":1}
                   );
```

Q23: Write a MongoDB query to arrange the name of the restaurants in ascending order along with all the columns.?

```
db.restaurants.find().sort({"name":1});
```

Q24: Write a MongoDB query to arrange the name of the restaurants in descending along with all the columns?

```
db.restaurants.find().sort({"name":-1});
```

- **Q24:**

Write a MongoDB query to arranged the name of the cuisine in ascending order and for that same cuisine borough should be in descending order?

```
db.restaurants.find().sort(
                    {"cuisine":1,"borough" : -1,}
                   );
```

Q25: Write a MongoDB query to know whether all the addresses contains the street or not.?

```
db.restaurants.find(
                {"address.street" :
                   { $exists : true }
                } );
```

Q26:

Write a MongoDB query which will select all documents in the restaurants collection where the coord field value is Double?

```
db.restaurants.find(
        {"address.coord" :
          {$type : 1}
        }
);
```

Q27: Write a MongoDB query which will select the restaurant Id, name and grades for those restaurants which returns 0 as a remainder after dividing the score by 7.?

```
db.restaurants.find(
                    {"grades.score" :
                       {$mod : [7,0]}
                    },
                       {"restaurant_id" : 1,"name":1,"grades":1}
                   );
```

Q28:

Write a MongoDB query to find the restaurant name, borough, longitude and attitude and cuisine for those restaurants which contains 'mon' as three letters somewhere in its name?

```
db.restaurants.find(
        { name :
          { $regex : "mon.*", $options: "i" }
        },
            {
              "name":1,
              "borough":1,
              "address.coord":1,
              "cuisine" :1
             }
        );
```

Q29:

Write a MongoDB query to find the restaurant name, borough, longitude and latitude and cuisine for those restaurants which contain 'Mad' as first three letters of its name.

```
db.restaurants.find(
        { name :
          { $regex : /^Mad/i, }
        },
            {
              "name":1,
              "borough":1,
              "address.coord":1,
              "cuisine" :1
            } );
```

What is "Namespace" in MongoDB?

- MongoDB stores BSON (Binary Interchange and Structure Object Notation) objects in the collection.
- The concatenation of the collection name and database name is called a namespace.

How can you see the connection used by Mongos?

- To see the connection used by Mongos use db_adminCommand ("connPoolStats");

Explain what is a replica set?

- A replica set is a group of mongo instances that host the same data set.
- In replica set, one node is primary, and another is secondary. From primary to the secondary node all data replicates.

While creating Schema in MongoDB what are the points need to be taken in consideration?

- Points need to be taken in consideration are
- Design your schema according to user requirements
- Combine objects into one document if you use them together. Otherwise, separate them
- Do joins while write, and not when it is on read
- For most frequent use cases optimize your schema
- Do complex aggregation in the schema

What is the syntax to create a collection and to drop a collection in MongoDB?

- Syntax to create collection in MongoDB is db.createCollection(name,options)
- Syntax to drop collection in MongoDB is db.collection.drop()

Explain what is the role of profiler in MongoDB?

- MongoDB database profiler shows performance characteristics of each operation against the database.
- You can find queries using the profiler that are slower than they should be.

Explain can you move old files in the moveChunk directory?

- Yes, it is possible to move old files in the moveChunk directory, during normal shard balancing operations these files are made as backups and can be deleted once the operations are done.

To do safe backups what is the feature in MongoDB that you can use?

- Journaling is the feature in MongoDB that you can use to do safe backups.

Mention what is ObjecId composed of?

- ObjectId is composed of
- Timestamp
- Client machine ID
- Client process ID
- 3 byte incremented counter

Mention what is the command syntax for inserting a document?

- For inserting a document command syntax is database.collection.insert (document).

Mention how you can inspect the source code of a function?

- To inspect a source code of a function, without any parentheses, the function must be invoked.

What is the command syntax that tells you whether you are on the master server or not? And how many master does MongoDB allow?

- Command syntax Db.isMaster() will tell you whether you are on the master server or not. MongoDB allows only one master server, while couchDB allows multiple masters.

Mention the command syntax that is used to view Mongo is using the link?

- The command syntax that is used to view mongo is using the link is db._adminCommand("connPoolStats.")

Explain what are indexes in MongoDB?

- Indexes are special structures in MongoDB, which stores a small portion of the data set in an easy to traverse form.
- Ordered by the value of the field specified in the index, the index stores the value of a specific field or set of fields.

Mention what is the basic syntax to use index in MongoDB?

- The basic syntax to use in MongoDB is >db.COLLECTION_NAME.ensureIndex ({KEY:1}). In here the key is the the name of the COLUMN (or KEY:VALUE pair) which is present in the documents.

19) Explain what is GridFS in MongoDB?

- For storing and retrieving large files such as images, video files and audio files GridFS is used. By default, it uses two files fs.files and fs.chunks to store the file's metadata and the chunks.

20) What are alternatives to MongoDB?

- Cassandra, CouchDB, Redis, Riak, Hbase

are a few good alternatives.

What makes MongoDB the best?

- MongoDB is considered to be the best NoSQL database because of its following features:
- Document-oriented (DO)
- High performance (HP)
- High availability (HA)
- Easy scalability
- Rich query language

How does Journaling work in MongoDB?

- Write operations are saved in memory while journaling is going on.
- The on-disk journal files are really dependable for the reason that the journal writes are habitual. Inside **dbPath**, a journal subdirectory is designed by MongoDB.

How can you isolate the cursors from intervening with the write operations?

- The **snapshot()** method is used to isolate the cursors from intervening with writes.
- This method negotiates the index and makes sure that each query comes to any article only once.

What is Storage Encryption?

- Storage encryption encrypts all MongoDB data on storage or on the operating system to ensure that only authorized processes can access the protected data.

What is Replica set oplog?

- The oplog records all operations that modify the data in the replica set.

What is Vertical Scaling?

- Vertical scaling adds more CPU and storage resources to increase capacity.

40. Define Horizontal Scaling.

- Horizontal scaling divides the dataset and distributes data over multiple servers, or shards.

Which command is used to create a database?

- To create a database, we can use the **Database_Name** command.

Which command is used to drop a database?

- The **db.dropDatabse()** command is used to drop a database.

What is the use of the pretty() method?

- The pretty() method is used to show the results in a formatted way.

Which method is used to remove a document from a collection?

- The remove() method is used to remove a document from a collection.

Define MongoDB Projection.

- Projection is used to select only the necessary data.

Which command is used to create a backup of the database?

- The mongodump command is used to create a backup of the database.

Which command is used to restore the backup?

- The mongorestore command is used to restore the backup.

What is the use of the dot notation in MongoDB?

- MongoDB uses the dot notation to access the elements of an array and the fields of an embedded document.

Summary:

FAQ……..

Thank You……

If you have any quries please write to info@uplatz.com".