	Bansilal Ramnath Agarwal Charitable Trust's Vishwakarma Institute of Information Technology **Department of** **Artificial Intelligence and Data Science**

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Class: SY	Division: B	Roll No: 272028
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Subject Name & Code: Database Management System: ADUA21204		
Title of Assignment: Design and Develop Mongo DB Queries using CRUD operations		

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Assignment no 7

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1. Brief about Database in Mongo DB

Ans MongoDB is a non relational document database that provide support for JSON-like storage. The Mongo DB database has a flexible data model that enables you to store unstructured data, and it provide full indexing support, and replication with rich and intuitive API

2. Brief about collection in MongoDB?

Ans A collection in MongoDB is analog to a table in a relational SQL database, similarly, a document in MongoDB is analog to a row in a relational SQL database. The existence of collection in a database is not required before inserting a document in MongoDB.

3. Brief about document in MongoDB?

Ans MongoDB store data record as BSON document. BSON is a binary representation of JSON document, though it contain more data types than JSON. for the BSON spec. A collection in MongoDB is analog to a table in a relational SQL database, similarly, a document in MongoDB is analog to a row in a relational SQL database, ~~The existence of collection in a database~~.

Implementation:

1. Creates a new database (here demo1) if it does not exist and switches to the database

```
> use demo1
switched to db demo1
```

2. Shows the current database

```
> db
demo1
```

3. Shows list of databases which have at least one document in it or else it won't be shown. Since "demo1" database does not have any document, it is not shown

```
> show dbs
admin   0.000GB
config  0.000GB
local   0.000GB
```

4. Creates collection (equivalent to tables in RDBMS) in the database

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

5. Shows collections

```
> show collections
stud_info
```

6. Inserts document (equivalent to rows in RDBMS) into the collection

```
> db.stud_info.insert({"Name":"AAA","Div":"A","Marks":60})
WriteResult({ "nInserted" : 1 })
```

7. To display the inserted documents

```
> db.stud_info.find()
{ "_id" : ObjectId("61a7681cd88f14c96e60ba59"), "Name" : "AAA", "Div" : "A", "Marks" : 60 }
{ "_id" : ObjectId("61a76869d88f14c96e60ba5a"), "Name" : "BBB", "Div" : "B", "Marks" : 70 }
{ "_id" : ObjectId("61a7687ad88f14c96e60ba5b"), "Name" : "CCC", "Div" : "A", "Marks" : 60 }
{ "_id" : ObjectId("61a76887d88f14c96e60ba5c"), "Name" : "DDD", "Div" : "C", "Marks" : 90 }
```

8. To display the inserted documents a little better

```
> db.stud_info.find().pretty()
{
        "_id" : ObjectId("61a7681cd88f14c96e60ba59"),
        "Name" : "AAA",
        "Div" : "A",
        "Marks" : 60
}
{
        "_id" : ObjectId("61a76869d88f14c96e60ba5a"),
        "Name" : "BBB",
        "Div" : "B",
        "Marks" : 70
}
{
        "_id" : ObjectId("61a7687ad88f14c96e60ba5b"),
        "Name" : "CCC",
        "Div" : "A",
        "Marks" : 60
}
{
        "_id" : ObjectId("61a76887d88f14c96e60ba5c"),
        "Name" : "DDD",
        "Div" : "C",
        "Marks" : 90
}
```

9. To update the particular values from the document and displaying the new updated result

```
> db.stud_info.update({"Name":"DDD"},{$set:{"Marks":75}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

```
> db.stud_info.find().pretty()
{
        "_id" : ObjectId("61a7681cd88f14c96e60ba59"),
        "Name" : "AAA",
        "Div" : "A",
        "Marks" : 60
}
{
        "_id" : ObjectId("61a76869d88f14c96e60ba5a"),
        "Name" : "BBB",
        "Div" : "B",
        "Marks" : 70
}
{
        "_id" : ObjectId("61a7687ad88f14c96e60ba5b"),
        "Name" : "CCC",
        "Div" : "A",
        "Marks" : 60
}
{
        "_id" : ObjectId("61a76887d88f14c96e60ba5c"),
        "Name" : "DDD",
        "Div" : "C",
        "Marks" : 75
}
```

10. Removing particular value from the collection and displaying the new deleted results

```
> db.stud_info.remove({"Name":"BBB"})
WriteResult({ "nRemoved" : 1 })
```

```
> db.stud_info.find().pretty()
{
        "_id" : ObjectId("61a7681cd88f14c96e60ba59"),
        "Name" : "AAA",
        "Div" : "A",
        "Marks" : 60
}
{
        "_id" : ObjectId("61a7687ad88f14c96e60ba5b"),
        "Name" : "CCC",
        "Div" : "A",
        "Marks" : 60
}
{
        "_id" : ObjectId("61a76887d88f14c96e60ba5c"),
        "Name" : "DDD",
        "Div" : "C",
        "Marks" : 75
}
```

11. Since the database now has some value in it so it will be displayed

```
> show dbs
admin   0.000GB
config  0.000GB
demo1   0.000GB
local   0.000GB
```

12. Deletes the collection from the database

```
> db.stud_info.drop()
true
```

13. Drops the current database

```
> db.dropDatabase()
{ "ok" : 1 }
```