

```
import pymongo
client=pymongo.MongoClient("mongodb+srv://t23cs010:deibynta@cluster0.ugatn9a.m
ongodb.net/?retryWrites=true&w=majority")
db=client.test
```

```
db=client['mongodb']
```

Q1-Design a MongoDB schema for a "Student" collection with the following fields:

```
collection = db["Student"]
```

Q2- Insert the following student data in the collection

```
student_data=[
{"RollNum": 43, "FirstName": "John","LastName":"Doe","Age":
20,"Department":"Computer Science","Mark": 78},
{"RollNum": 67, "FirstName": "Alice","LastName":"Smith","Age":
22,"Department":"Physics","Mark": 59},
{"RollNum": 23, "FirstName": "Bob","LastName":"Johnson","Age":
21,"Department":"Computer Science","Mark": 81},
{"RollNum": 18, "FirstName": "Eve","LastName":"Adams","Age":
19,"Department":"Mathematics","Mark": 56},
{"RollNum": 84, "FirstName": "Mike","LastName":"Brown","Age":
23,"Department":"Physics","Mark": 92}
]
```

```
result = collection.insert_many(student_data)
```

Q3-Write a MongoDB query to find all students.

```
for i in db.Student.find({}):
    print(i)
```

Q4-Write a MongoDB query to find all students in the "Computer Science" department.

```
for i in db.Student.find({"Department": "Computer Science"}):
    print(i)
```

Q5-Write a MongoDB query to find all students whose age is greater than or equal to 20.

```
for i in db.Student.find({"Age": {"$gte": 20}}):
    print(i)
```

Q6-Write a MongoDB query to find all students whose mark is less than 60.

```
for i in db.Student.find({"Mark": {"$lt": 60}}):  
    print(i)
```

Q7-Write a MongoDB query to show the first name and Mark of all students in the "Physics" department.

```
for i in db.Student.find({"Department": "Physics"}, {"FirstName": 1, "Mark":  
1}):  
    print(i)
```

Q8-Write a MongoDB query to find all students in the descending order of Mark.

```
for i in db.Student.find().sort({"Mark": -1}):  
    print(i)
```

Q9-Write a MongoDB query to find the youngest student.

```
for i in db.Student.find().sort({"Age": 1}).limit(1):  
    print(i)
```

Q10-Write a MongoDB query to find all students in the "Physics" department whose RollNum is greater than or equal to 70.

```
for i in db.Student.find({"Department": "Physics", "RollNum": {"$gte": 70}}):  
    print(i)
```