```python
import pymongo
client=pymongo.MongoClient(
"mongodb://localhost:27017"
)

import pymongo
from pymongo import MongoClient
connection = MongoClient()
db = connection.student
connection.list_database_names()
```

```
['MARCOS', 'admin', 'config', 'local', 'student']
```

```python
stu=db['stude']
```

```python
for i in stu.find({},{"_id":0,"LastName":0}):
    print(i)
```

```
{'RollNum': 43, 'FirstName': 'John', 'Age': 20, 'Department':
'Computer Science', 'Mark': 78}
{'RollNum': 67, 'FirstName': 'Alice', 'Age': 22, 'Department':
'Physics', 'Mark': 59}
{'RollNum': 23, 'FirstName': 'Bob', 'Age': 21, 'Department': 'Computer
Science', 'Mark': 81}
{'RollNum': 18, 'FirstName': 'Eve', 'Age': 19, 'Department':
'Mathematics', 'Mark': 56}
{'RollNum': 84, 'FirstName': 'Mike', 'Age': 23, 'Department':
'Physics', 'Mark': 92}
```

```python
filter = { 'RollNum': 67 }

# Values to be updated.
newvalues = { "$set": { 'Age': 26 } }

# Using update_one() method for single
# updation.
stu.update_one(filter, newvalues)
for i in stu.find({}):
    print(i)
```

```
{'_id': ObjectId('654b27ee4242c2520f0f878f'), 'RollNum': 43,
'FirstName': 'John', 'LastName': 'Doe', 'Age': 20, 'Department':
'Computer Science', 'Mark': 78}
{'_id': ObjectId('654b27ee4242c2520f0f8790'), 'RollNum': 67,
'FirstName': 'Alice', 'LastName': 'Smith', 'Age': 26, 'Department':
'Physics', 'Mark': 59}
{'_id': ObjectId('654b27ee4242c2520f0f8791'), 'RollNum': 23,
'FirstName': 'Bob', 'LastName': 'Johnson', 'Age': 21, 'Department':
'Computer Science', 'Mark': 81}
{'_id': ObjectId('654b27ee4242c2520f0f8792'), 'RollNum': 18,
'FirstName': 'Eve', 'LastName': 'Adams', 'Age': 19, 'Department':
```

```
                  'Mathematics', 'Mark': 56}
{'_id': ObjectId('654b27ee4242c2520f0f8793'), 'RollNum': 84,
'FirstName': 'Mike', 'LastName': 'Brown', 'Age': 23, 'Department':
'Physics', 'Mark': 92}

filter = {}

# Values to be updated.
newvalues = { "$inc": { 'Age': 1 } }

# Using update_one() method for single
# updation.

stu.update_many(filter, newvalues)
for i in stu.find({}):
    print(i)

{'_id': ObjectId('654b27ee4242c2520f0f878f'), 'RollNum': 43,
'FirstName': 'John', 'LastName': 'Doe', 'Age': 21, 'Department':
'Computer Science', 'Mark': 78}
{'_id': ObjectId('654b27ee4242c2520f0f8790'), 'RollNum': 67,
'FirstName': 'Alice', 'LastName': 'Smith', 'Age': 27, 'Department':
'Physics', 'Mark': 59}
{'_id': ObjectId('654b27ee4242c2520f0f8791'), 'RollNum': 23,
'FirstName': 'Bob', 'LastName': 'Johnson', 'Age': 22, 'Department':
'Computer Science', 'Mark': 81}
{'_id': ObjectId('654b27ee4242c2520f0f8792'), 'RollNum': 18,
'FirstName': 'Eve', 'LastName': 'Adams', 'Age': 20, 'Department':
'Mathematics', 'Mark': 56}
{'_id': ObjectId('654b27ee4242c2520f0f8793'), 'RollNum': 84,
'FirstName': 'Mike', 'LastName': 'Brown', 'Age': 24, 'Department':
'Physics', 'Mark': 92}

filter = {"Department":"Computer Science"}

# Values to be updated.
newvalues = { "$inc": { 'Mark': 5 } }

# Using update_one() method for single
# updation.

stu.update_many(filter, newvalues)
for i in stu.find({}):
    print(i)

{'_id': ObjectId('654b27ee4242c2520f0f878f'), 'RollNum': 43,
'FirstName': 'John', 'LastName': 'Doe', 'Age': 21, 'Department':
'Computer Science', 'Mark': 83}
{'_id': ObjectId('654b27ee4242c2520f0f8790'), 'RollNum': 67,
'FirstName': 'Alice', 'LastName': 'Smith', 'Age': 27, 'Department':
```

```
'Physics', 'Mark': 59}
{'_id': ObjectId('654b27ee4242c2520f0f8791'), 'RollNum': 23,
'FirstName': 'Bob', 'LastName': 'Johnson', 'Age': 22, 'Department':
'Computer Science', 'Mark': 86}
{'_id': ObjectId('654b27ee4242c2520f0f8792'), 'RollNum': 18,
'FirstName': 'Eve', 'LastName': 'Adams', 'Age': 20, 'Department':
'Mathematics', 'Mark': 56}
{'_id': ObjectId('654b27ee4242c2520f0f8793'), 'RollNum': 84,
'FirstName': 'Mike', 'LastName': 'Brown', 'Age': 24, 'Department':
'Physics', 'Mark': 92}

filter = {"Department":"Mathematics"}

# Values to be updated.
newvalues = { "$inc": { 'Mark': -10 } }

# Using update_one() method for single
# updation.

stu.update_many(filter, newvalues)
for i in stu.find({}):
    print(i)

{'_id': ObjectId('654b27ee4242c2520f0f878f'), 'RollNum': 43,
'FirstName': 'John', 'LastName': 'Doe', 'Age': 21, 'Department':
'Computer Science', 'Mark': 83}
{'_id': ObjectId('654b27ee4242c2520f0f8790'), 'RollNum': 67,
'FirstName': 'Alice', 'LastName': 'Smith', 'Age': 27, 'Department':
'Physics', 'Mark': 59}
{'_id': ObjectId('654b27ee4242c2520f0f8791'), 'RollNum': 23,
'FirstName': 'Bob', 'LastName': 'Johnson', 'Age': 22, 'Department':
'Computer Science', 'Mark': 86}
{'_id': ObjectId('654b27ee4242c2520f0f8792'), 'RollNum': 18,
'FirstName': 'Eve', 'LastName': 'Adams', 'Age': 20, 'Department':
'Mathematics', 'Mark': 46}
{'_id': ObjectId('654b27ee4242c2520f0f8793'), 'RollNum': 84,
'FirstName': 'Mike', 'LastName': 'Brown', 'Age': 24, 'Department':
'Physics', 'Mark': 92}

filter = {"Department":"Physics"}

# Values to be updated.
newvalues = { "$set": { 'Department': "Physical Science" } }

# Using update_one() method for single
# updation.

stu.update_many(filter, newvalues)
for i in stu.find({}):
    print(i)
```

```
{'_id': ObjectId('654b27ee4242c2520f0f878f'), 'RollNum': 43,
'FirstName': 'John', 'LastName': 'Doe', 'Age': 21, 'Department':
'Computer Science', 'Mark': 83}
{'_id': ObjectId('654b27ee4242c2520f0f8790'), 'RollNum': 67,
'FirstName': 'Alice', 'LastName': 'Smith', 'Age': 27, 'Department':
'Physical Science', 'Mark': 59}
{'_id': ObjectId('654b27ee4242c2520f0f8791'), 'RollNum': 23,
'FirstName': 'Bob', 'LastName': 'Johnson', 'Age': 22, 'Department':
'Computer Science', 'Mark': 86}
{'_id': ObjectId('654b27ee4242c2520f0f8792'), 'RollNum': 18,
'FirstName': 'Eve', 'LastName': 'Adams', 'Age': 20, 'Department':
'Mathematics', 'Mark': 46}
{'_id': ObjectId('654b27ee4242c2520f0f8793'), 'RollNum': 84,
'FirstName': 'Mike', 'LastName': 'Brown', 'Age': 24, 'Department':
'Physical Science', 'Mark': 92}

pipeline=[{"$group": {'_id':'null','avgage': {'$avg':"$Age"} } }]
avg_age=list(stu.aggregate(pipeline))
print(avg_age)

[{'_id': 'null', 'avgage': 22.8}]

pipeline=[{"$match":{'Department':'Physical Science'}},{"$group":
{'_id':'null','avgmark': {'$avg':"$Mark"} } }]
avg_mark=list(stu.aggregate(pipeline))
print(avg_mark)

[{'_id': 'null', 'avgmark': 75.5}]

stu.delete_many({'Department':'Mathematics'})
for i in stu.find({}):
    print(i)

{'_id': ObjectId('654b27ee4242c2520f0f878f'), 'RollNum': 43,
'FirstName': 'John', 'LastName': 'Doe', 'Age': 21, 'Department':
'Computer Science', 'Mark': 83}
{'_id': ObjectId('654b27ee4242c2520f0f8790'), 'RollNum': 67,
'FirstName': 'Alice', 'LastName': 'Smith', 'Age': 27, 'Department':
'Physical Science', 'Mark': 59}
{'_id': ObjectId('654b27ee4242c2520f0f8791'), 'RollNum': 23,
'FirstName': 'Bob', 'LastName': 'Johnson', 'Age': 22, 'Department':
'Computer Science', 'Mark': 86}
{'_id': ObjectId('654b27ee4242c2520f0f8793'), 'RollNum': 84,
'FirstName': 'Mike', 'LastName': 'Brown', 'Age': 24, 'Department':
'Physical Science', 'Mark': 92}

stu.delete_many({'Mark':{'$lt':60}})
for i in stu.find({}):
    print(i)
```

{'_id': ObjectId('654b27ee4242c2520f0f878f'), 'RollNum': 43, 'FirstName': 'John', 'LastName': 'Doe', 'Age': 21, 'Department': 'Computer Science', 'Mark': 83}
{'_id': ObjectId('654b27ee4242c2520f0f8791'), 'RollNum': 23, 'FirstName': 'Bob', 'LastName': 'Johnson', 'Age': 22, 'Department': 'Computer Science', 'Mark': 86}
{'_id': ObjectId('654b27ee4242c2520f0f8793'), 'RollNum': 84, 'FirstName': 'Mike', 'LastName': 'Brown', 'Age': 24, 'Department': 'Physical Science', 'Mark': 92}