

## Python mongodb

### (w3 schools)

**`pip install pymongo`**

```
1 import pymongo
```

```
myclient = pymongo.MongoClient("mongodb://localhost:27017/")
```

```
mydb = myclient["mydatabase"]
```

```
mycol = mydb["customers"]
```

```
mydict = { "name": "John", "address": "Highway 37" }
```

```
x = mycol.insert_one(mydict)
```

```
2 import pymongo
```

```
myclient = pymongo.MongoClient("mongodb://localhost:27017/")
```

```
mydb = myclient["mydatabase"]
```

```
mycol = mydb["customers"]
```

```
mylist = [
```

```
    { "name": "Amy", "address": "Apple st 652"},
```

```
    { "name": "Hannah", "address": "Mountain 21"},
```

```
    { "name": "Michael", "address": "Valley 345"},
```

```
    { "name": "Sandy", "address": "Ocean blvd 2"},
```

```
    { "name": "Betty", "address": "Green Grass 1"},
```

```
    { "name": "Richard", "address": "Sky st 331"},
```

```
    { "name": "Susan", "address": "One way 98"},
```

```
    { "name": "Vicky", "address": "Yellow Garden 2"},
```

```
    { "name": "Ben", "address": "Park Lane 38"},
```

```
    { "name": "William", "address": "Central st 954"},
```

```
    { "name": "Chuck", "address": "Main Road 989"},
```

```
    { "name": "Viola", "address": "Sideway 1633"}  
]
```

```
x = mycol.insert_many(mylist)

#print list of the _id values of the inserted documents:
print(x.inserted_ids)
```

## **3 Employee**

### **Insertion**

```
import pymongo

myclient = pymongo.MongoClient("mongodb://localhost:27017/")
mydb = myclient["mydatabase"]
mycol = mydb["employee"]

mylist = [
    {"empid": "1", "name": "Amy", "department": "cs", "designation":
"teaching staff", "salary": "50000"},
    {"empid": "2", "name": "Hannah", "department": "electronics",
"designation": "manager", "salary": "40000"},
    {"empid": "3", "name": "Michael", "department": "electronics",
"designation": "clerk", "salary": "30000"},
    {"empid": "4", "name": "Sandy", "department": "electronics",
"designation": "salesman", "salary": "20000"},
    {"empid": "5", "name": "Betty", "department": "mechanical",
"designation": "salesman", "salary": "10000"},
    {"empid": "6", "name": "Richard", "department": "cs", "designation":
"manager", "salary": "60000"},
    {"empid": "7", "name": "Susan", "department": "music",
"designation": "musician", "salary": "70000"},
    {"empid": "8", "name": "Vicky", "department": "mechanial",
"designation": "clerk", "salary": "30000"},
    {"empid": "9", "name": "Ben", "department": "music", "designation":
"teacher", "salary": "50000"},
    {"empid": "10", "name": "William", "department": "cs",
"designation": "salesman", "salary": "20000"},
]
x = mycol.insert_many(mylist)

#print list of the _id values of the inserted documents:
print(x.inserted_ids)
```

## Output

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f0'), 'empid': '1', 'name':  
'Amy', 'department': 'cs', 'designation': 'teaching staff', 'salary':  
'50000'}  
{'_id': ObjectId('6295dd932a5e7a68c68e00f1'), 'empid': '2', 'name':  
'Hannah', 'department': 'electronics', 'designation': 'manager',  
'salary': '40000'}  
{'_id': ObjectId('6295dd932a5e7a68c68e00f2'), 'empid': '3', 'name':  
'Michael', 'department': 'electronics', 'designation': 'clerk',  
'salary': '30000'}  
{'_id': ObjectId('6295dd932a5e7a68c68e00f3'), 'empid': '4', 'name':  
'Sandy', 'department': 'electronics', 'designation': 'salesman',  
'salary': '20000'}  
{'_id': ObjectId('6295dd932a5e7a68c68e00f4'), 'empid': '5', 'name':  
'Betty', 'department': 'mechanical', 'designation': 'salesman',  
'salary': '10000'}  
{'_id': ObjectId('6295dd932a5e7a68c68e00f5'), 'empid': '6', 'name':  
'Richard', 'department': 'cs', 'designation': 'manager', 'salary':  
'60000'}  
{'_id': ObjectId('6295dd932a5e7a68c68e00f6'), 'empid': '7', 'name':  
'Susan', 'department': 'music', 'designation': 'musician', 'salary':  
'70000'}  
{'_id': ObjectId('6295dd932a5e7a68c68e00f7'), 'empid': '8', 'name':  
'Vicky', 'department': 'mechanial', 'designation': 'clerk', 'salary':  
'30000'}  
{'_id': ObjectId('6295dd932a5e7a68c68e00f8'), 'empid': '9', 'name':  
'Ben', 'department': 'music', 'designation': 'teacher', 'salary':  
'50000'}  
{'_id': ObjectId('6295dd932a5e7a68c68e00f9'), 'empid': '10', 'name':  
'William', 'department': 'cs', 'designation': 'salesman', 'salary':  
'20000'}
```

## Find

### Find all

```
import pymongo

print("select all:")

myclient = pymongo.MongoClient("mongodb://localhost:27017/")
mydb = myclient["mydatabase"]
mycol = mydb["employee"]

for x in mycol.find():
    print(x)
```

### find One

```
myclient = pymongo.MongoClient("mongodb://localhost:27017/")
mydb = myclient["mydatabase"]
mycol = mydb["employee"]

x = mycol.find_one()

print(x)
```

### Find some

```
print("select some :")

myclient = pymongo.MongoClient("mongodb://localhost:27017/")
mydb = myclient["mydatabase"]
mycol = mydb["customers"]

for x in mycol.find({}, {"_id": 0, "name": 1, "address": 1 }):
    print(x)
```

## Output

select all:

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f0'), 'empid': '1',
'name': 'Amy', 'department': 'cs', 'designation': 'teaching
staff', 'salary': '50000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f1'), 'empid': '2',
'name': 'Hannah', 'department': 'electronics', 'designation':
'manager', 'salary': '40000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f2'), 'empid': '3',
'name': 'Michael', 'department': 'electronics', 'designation':
'clerk', 'salary': '30000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f3'), 'empid': '4',
'name': 'Sandy', 'department': 'electronics', 'designation':
'salesman', 'salary': '20000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f4'), 'empid': '5',
'name': 'Betty', 'department': 'mechanical', 'designation':
'salesman', 'salary': '10000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f5'), 'empid': '6',
'name': 'Richard', 'department': 'cs', 'designation': 'manager',
'salary': '60000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f6'), 'empid': '7',
'name': 'Susan', 'department': 'music', 'designation':
'musician', 'salary': '70000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f7'), 'empid': '8',
'name': 'Vicky', 'department': 'mechanial', 'designation':
'clerk', 'salary': '30000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f8'), 'empid': '9',
'name': 'Ben', 'department': 'music', 'designation': 'teacher',
'salary': '50000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f9'), 'empid': '10',
'name': 'William', 'department': 'cs', 'designation':
'salesman', 'salary': '20000'}
```

select one:

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f0'), 'empid': '1',
'name': 'Amy', 'department': 'cs', 'designation': 'teaching
staff', 'salary': '50000'}
```

select some :

```
{'name': 'John', 'address': 'Highway 37'}
```

## sort

### Sort the result alphabetically by name:

```
import pymongo

print("alphabetical order :")
myclient = pymongo.MongoClient("mongodb://localhost:27017/")
mydb = myclient["mydatabase"]
mycol = mydb["employee"]

mydoc = mycol.find().sort("name")

for x in mydoc:
    print(x)
```

## Output

alphabetical order :

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f0'), 'empid': '1',
'name': 'Amy', 'department': 'computer', 'designation':
'teaching staff', 'salary': '50000'}

{'_id': ObjectId('6295e0e6f3b6f638c36be70c'), 'empid': '9',
'name': 'Ben', 'department': 'music', 'designation': 'teacher',
'salary': '50000'}

{'_id': ObjectId('6295e0e6f3b6f638c36be708'), 'empid': '5',
'name': 'Betty', 'department': 'mechanical', 'designation':
'salesman', 'salary': '10000'}

{'_id': ObjectId('6295dfdb840c813d253c7f8c'), 'empid': '2',
'name': 'Hannah', 'department': 'electronics', 'designation':
'manager', 'salary': '40000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f2'), 'empid': '3',  
'name': 'Michael', 'department': 'electronics', 'designation':  
'clerk', 'salary': '30000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f9'), 'empid': '10',  
'name': 'Minnie', 'department': 'computer', 'designation':  
'salesman', 'salary': '20000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f5'), 'empid': '6',  
'name': 'Richard', 'department': 'computer', 'designation':  
'manager', 'salary': '60000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f3'), 'empid': '4',  
'name': 'Sandy', 'department': 'electronics', 'designation':  
'salesman', 'salary': '20000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f6'), 'empid': '7',  
'name': 'Susan', 'department': 'music', 'designation':  
'musician', 'salary': '70000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f7'), 'empid': '8',  
'name': 'Vicky', 'department': 'mechanial', 'designation':  
'clerk', 'salary': '30000'}
```

### **Sort the result reverse alphabetically by name:**

```
print("reverse order :")  
myclient = pymongo.MongoClient("mongodb://localhost:27017/")  
mydb = myclient["mydatabase"]  
mycol = mydb["employee"]  
  
mydoc=mycol.find().sort("name", -1)  
  
for x in mydoc:  
    print(x)
```

## Output

reverse order :

```
{'_id': ObjectId('6295e0e6f3b6f638c36be70b'), 'empid': '8',  
'name': 'Vicky', 'department': 'mechanical', 'designation':  
'clerk', 'salary': '30000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f6'), 'empid': '7',  
'name': 'Susan', 'department': 'music', 'designation':  
'musician', 'salary': '70000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f3'), 'empid': '4',  
'name': 'Sandy', 'department': 'electronics', 'designation':  
'salesman', 'salary': '20000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f5'), 'empid': '6',  
'name': 'Richard', 'department': 'computer', 'designation':  
'manager', 'salary': '60000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f9'), 'empid': '10',  
'name': 'Minnie', 'department': 'computer', 'designation':  
'salesman', 'salary': '20000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f2'), 'empid': '3',  
'name': 'Michael', 'department': 'electronics', 'designation':  
'clerk', 'salary': '30000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f1'), 'empid': '2',  
'name': 'Hannah', 'department': 'electronics', 'designation':  
'manager', 'salary': '40000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f4'), 'empid': '5',  
'name': 'Betty', 'department': 'mechanical', 'designation':  
'salesman', 'salary': '10000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f8'), 'empid': '9',  
'name': 'Ben', 'department': 'music', 'designation': 'teacher',  
'salary': '50000'}
```



```
{'_id': ObjectId('6295dd932a5e7a68c68e00f0'), 'empid': '1',  
'name': 'Amy', 'department': 'computer', 'designation':  
'teaching staff', 'salary': '50000'}
```

## Update

### updateOne

**Change the department from "cs" to "computer":**

```
import pymongo  
  
print("update one :")  
myclient = pymongo.MongoClient("mongodb://localhost:27017/")  
mydb = myclient["mydatabase"]  
mycol = mydb["employee"]  
  
myquery = { "department": "cs" }  
newvalues = { "$set": { "department": "computer" } }  
  
mycol.update_one(myquery, newvalues)  
  
#print "customers" after the update:  
for x in mycol.find():  
    print(x)
```

## Output

update one :

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f0'), 'empid': '1',  
'name': 'Amy', 'department': 'computer', 'designation':  
'teaching staff', 'salary': '50000'}
```

```
{'_id': ObjectId('6295dd932a5e7a68c68e00f1'), 'empid': '2',
'name': 'Hannah', 'department': 'electronics', 'designation':
'manager', 'salary': '40000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f2'), 'empid': '3',
'name': 'Michael', 'department': 'electronics',
'designation': 'clerk', 'salary': '30000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f3'), 'empid': '4',
'name': 'Sandy', 'department': 'electronics', 'designation':
'salesman', 'salary': '20000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f4'), 'empid': '5',
'name': 'Betty', 'department': 'mechanical', 'designation':
'salesman', 'salary': '10000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f5'), 'empid': '6',
'name': 'Richard', 'department': 'cs', 'designation':
'manager', 'salary': '60000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f6'), 'empid': '7',
'name': 'Susan', 'department': 'music', 'designation':
'musician', 'salary': '70000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f7'), 'empid': '8',
'name': 'Vicky', 'department': 'mechanial', 'designation':
'clerk', 'salary': '30000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f8'), 'empid': '9',
'name': 'Ben', 'department': 'music', 'designation':
'teacher', 'salary': '50000'}
{'_id': ObjectId('6295dd932a5e7a68c68e00f9'), 'empid': '10',
'name': 'Minnie', 'department': 'cs', 'designation':
'salesman', 'salary': '20000'}
```

## updateMany

**Update all documents where the name starts with the letter "W":**

```
print("update many :")
myclient = pymongo.MongoClient("mongodb://localhost:27017/")
mydb = myclient["mydatabase"]
mycol = mydb["employee"]

myquery = { "name": { "$regex": "^W" } }
```

```
newvalues = { "$set": { "name": "Minnie" } }

x = mycol.update_many(myquery, newvalues)

print(x.modified_count, "documents updated.")
```

## Output

update many :  
4 documents updated.

## Delete

### delete\_one()

#### **Delete the document with the department "computer":**

```
import pymongo

print("update one")
myclient = pymongo.MongoClient("mongodb://localhost:27017/")
mydb = myclient["mydatabase"]
mycol = mydb["employee"]

myquery = { "department": "computer" }

mycol.delete_one(myquery)
print(x.deleted_count, " documents deleted.")
```

### delete\_many()

#### **Delete all documents where the department starts with the letter c:**

```
print("delete many :")

myclient = pymongo.MongoClient("mongodb://localhost:27017/")
mydb = myclient["mydatabase"]
mycol = mydb["employee"]

myquery = { "department": {"$regex": "^c" } }
```

```
x = mycol.delete_many(myquery)

print(x.deleted_count, " documents deleted.")
```

delete\_many()

**Delete all documents in the "employee" collection:**

```
print("delete all docs in employee :")
myclient = pymongo.MongoClient("mongodb://localhost:27017/")
mydb = myclient["mydatabase"]
mycol = mydb["customers"]

x = mycol.delete_many({})

print(x.deleted_count, " documents deleted.")
```

## **Output**

delete one :

1 documents deleted.

delete many :

2 documents deleted.

delete all docs in employee :

7 documents deleted.