

# **LOGIN FORM USING PYTHON WITH MONGODB DATABASE CONNECTION**

Report -01

Assignment- 03

Branch-NIBM, Colombo

Module-Software Security

Batch-18.2HDSE (Full time)

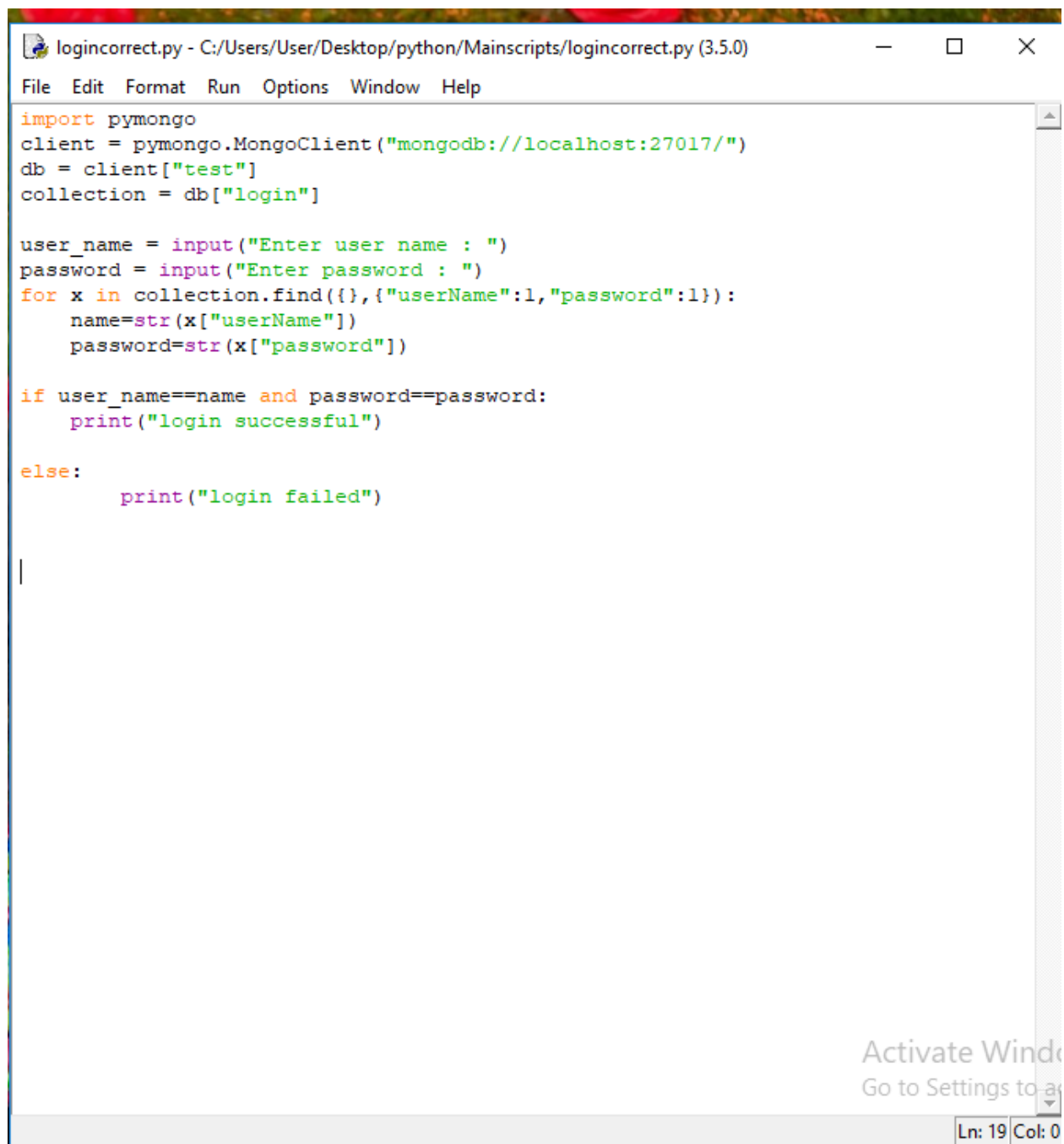
Index number-COHDSE182F-031

Name-M.S.A.M.Fernando

### **Introduction**

This is a login code using python programming language. I didn't use GUI, just create the login using python 3.5.0 shell. I didn't use the hash function. MongoDB is the database which I used to create the database on this assignment. Command prompt also used to create the database using MongoDB.

## About Python Code



The image shows a screenshot of a Python IDE window titled "logincorrect.py - C:/Users/User/Desktop/python/Mainscripts/logincorrect.py (3.5.0)". The window has a menu bar with "File", "Edit", "Format", "Run", "Options", "Window", and "Help". The main text area contains the following Python code:

```
import pymongo
client = pymongo.MongoClient("mongodb://localhost:27017/")
db = client["test"]
collection = db["login"]

user_name = input("Enter user name : ")
password = input("Enter password : ")
for x in collection.find({}, {"userName":1, "password":1}):
    name=str(x["userName"])
    password=str(x["password"])

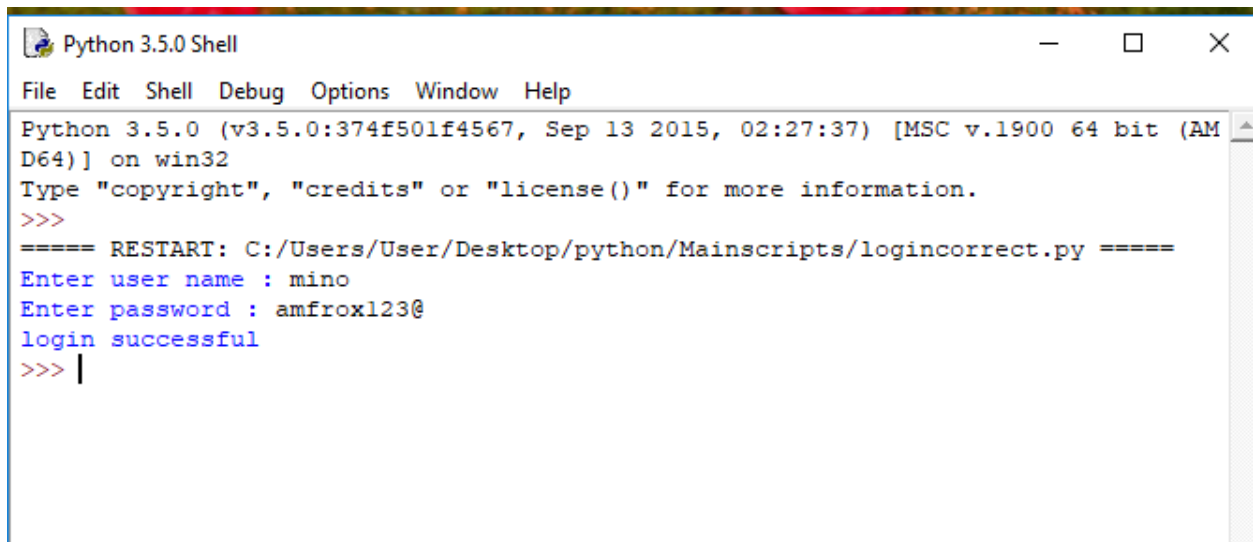
if user_name==name and password==password:
    print("login successful")
else:
    print("login failed")

|
```

The code implements a login system using PyMongo. It connects to a MongoDB instance at localhost:27017, selects the "test" database and the "login" collection. It prompts the user for a username and password, then iterates through the collection to find a matching user. If a match is found, it prints "login successful"; otherwise, it prints "login failed".

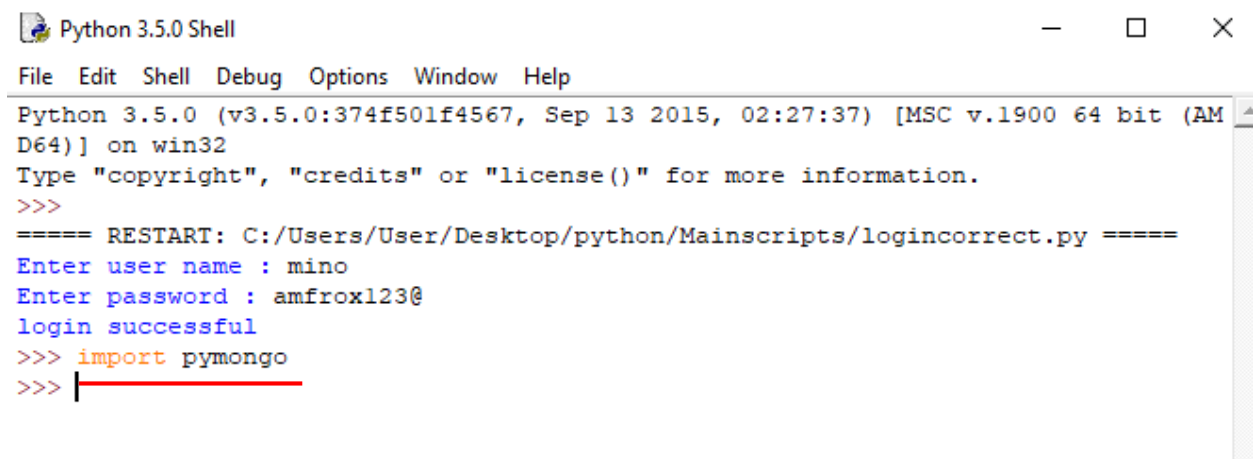
At the bottom right of the window, there is a watermark that says "Activate Windows Go to Settings to activate Windows". The status bar at the bottom right shows "Ln: 19 Col: 0".

### Python shell (Output)



```
Python 3.5.0 Shell
File Edit Shell Debug Options Window Help
Python 3.5.0 (v3.5.0:374f501f4567, Sep 13 2015, 02:27:37) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/User/Desktop/python/Mainscripts/logincorrect.py =====
Enter user name : mino
Enter password : amfroxl23@
login successful
>>> |
```

### Search Availability of pymongo



```
Python 3.5.0 Shell
File Edit Shell Debug Options Window Help
Python 3.5.0 (v3.5.0:374f501f4567, Sep 13 2015, 02:27:37) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/User/Desktop/python/Mainscripts/logincorrect.py =====
Enter user name : mino
Enter password : amfroxl23@
login successful
>>> import pymongo
>>> |
```

## About MongoDB database connection

### Introduction of MongoDB

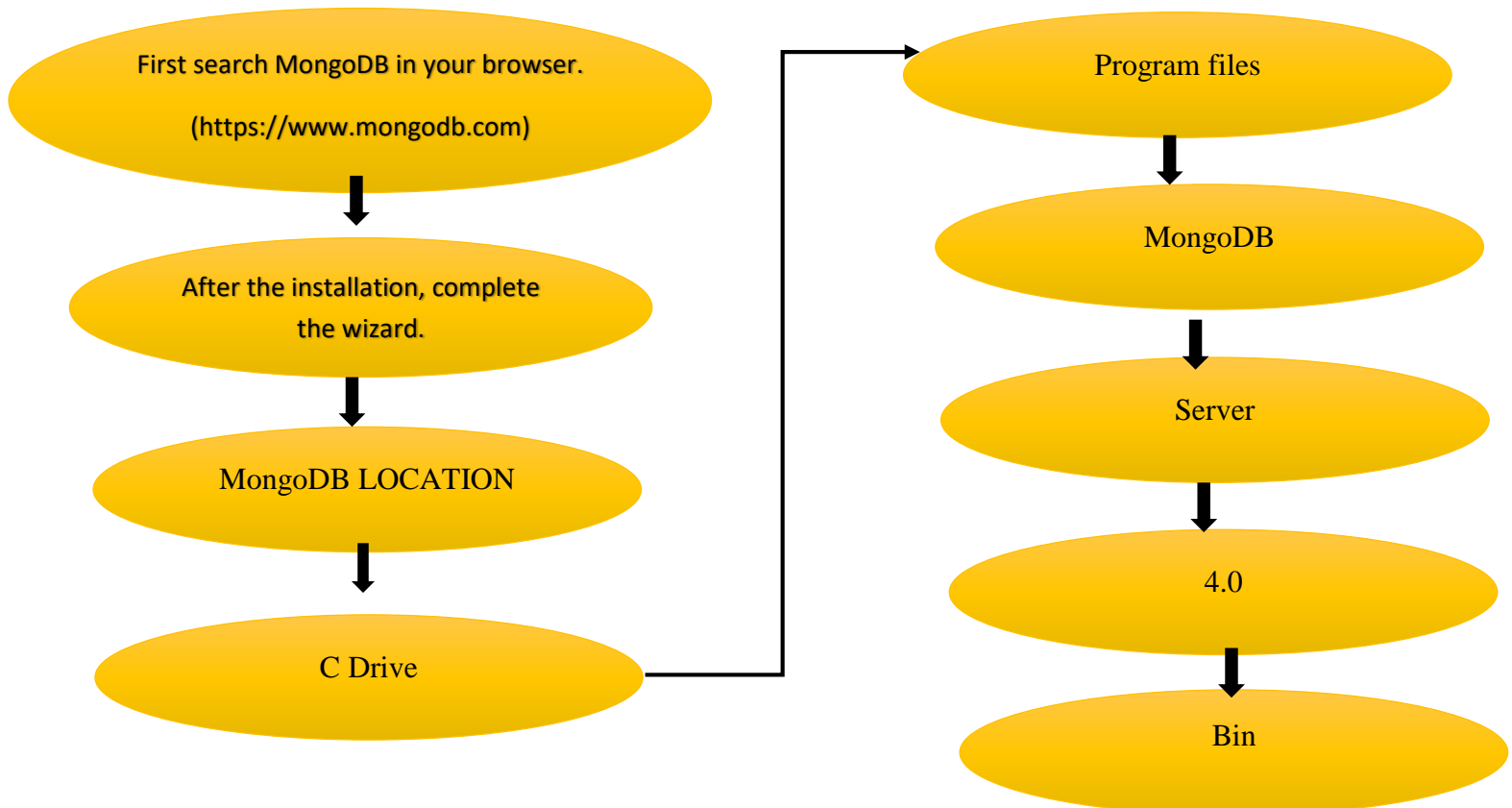


MongoDB is an open source database management system (DBMS) that uses a document-oriented database model which supports various forms of data.

It is one of numerous nonrelational database technologies which arose in the mid-2000s under the NoSQL banner for use in big data applications and other processing jobs involving data that doesn't fit well in a rigid relational model.

Instead of using tables and rows as in relational databases, the MongoDB architecture is made up of collections and documents.

### Brief steps to install MongoDB



Bin

Executable Files

This PC > Windows 10 (C:) > Program Files > MongoDB > Server > 4.0 > bin

	Name	Date modified	Type	Size
	bsondump	11/6/2018 7:49 PM	Application	8,608 KB
	InstallCompass	11/6/2018 8:15 PM	Windows PowerS...	2 KB
	libeay32.dll	4/3/2018 7:58 PM	Application extens...	2,405 KB
orer	mongo ←	11/6/2018 8:11 PM	Application	17,967 KB
	mongod.cfg	11/15/2018 2:27 AM	CFG File	1 KB
urity Scan	mongod ←	11/6/2018 8:17 PM	Application	31,722 KB
alysis Services	mongod	11/6/2018 8:17 PM	Program Debug D...	348,284 KB
IP.NET Core Runtime	mongodump	11/6/2018 7:53 PM	Application	10,674 KB
VX	mongoexport	11/6/2018 7:51 PM	Application	8,862 KB
elp Viewer	mongofiles	11/6/2018 7:51 PM	Application	8,793 KB
ffice	mongoimport	11/6/2018 7:52 PM	Application	8,961 KB
JKs	mongorestore	11/6/2018 7:52 PM	Application	11,760 KB
QL Server	mongos	11/6/2018 8:05 PM	Application	16,423 KB
QL Server Compact Ed	mongos	11/6/2018 8:05 PM	Program Debug D...	181,796 KB
sual Studio 10.0	mongostat	11/6/2018 7:50 PM	Application	8,950 KB
sual Studio 12.0	mongotop	11/6/2018 7:54 PM	Application	8,758 KB
ET	ssleay32.dll	4/3/2018 7:58 PM	Application extens...	350 KB

```
Command Prompt - mongo
Microsoft Windows [Version 10.0.17134.407]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\User>mongo
MongoDB shell version v4.0.4
connecting to: mongodb://127.0.0.1:27017
Implicit session: session { "id" : UUID("a35d96d3-7836-4703-b70c-b83464b90bc7") }
MongoDB server version: 4.0.4
Server has startup warnings:
2018-11-16T01:48:10.012-0800 I CONTROL [initandlisten]
2018-11-16T01:48:10.013-0800 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2018-11-16T01:48:10.016-0800 I CONTROL [initandlisten] **      Read and write access to data and configuration is u
nrestricted.
2018-11-16T01:48:10.019-0800 I CONTROL [initandlisten]
2018-11-16T01:48:10.021-0800 I CONTROL [initandlisten] ** WARNING: This server is bound to localhost.
2018-11-16T01:48:10.023-0800 I CONTROL [initandlisten] **      Remote systems will be unable to connect to this ser
ver.
2018-11-16T01:48:10.024-0800 I CONTROL [initandlisten] **      Start the server with --bind_ip <address> to specify
which IP
2018-11-16T01:48:10.028-0800 I CONTROL [initandlisten] **      addresses it should serve responses from, or with --
bind_ip_all to
2018-11-16T01:48:10.031-0800 I CONTROL [initandlisten] **      bind to all interfaces. If this behavior is desired,
start the
2018-11-16T01:48:10.032-0800 I CONTROL [initandlisten] **      server with --bind_ip 127.0.0.1 to disable this warn
ing.
2018-11-16T01:48:10.033-0800 I CONTROL [initandlisten]
---
Enable MongoDB's free cloud-based monitoring service, which will then receive and display
metrics about your deployment (disk utilization, CPU, operation statistics, etc).
```

```
Command Prompt - mongod
C:\Users\User>mongod
2018-11-16T01:48:07.577-0800 I CONTROL [main] Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDis
abledProtocols 'none'
2018-11-16T01:48:08.680-0800 I CONTROL [initandlisten] MongoDB starting : pid=43764 port=27017 dbpath=C:\data\db\ 64-bi
t host=DESKTOP-QUA6BDC
2018-11-16T01:48:08.681-0800 I CONTROL [initandlisten] targetMinOS: Windows 7/Windows Server 2008 R2
2018-11-16T01:48:08.682-0800 I CONTROL [initandlisten] db version v4.0.4
2018-11-16T01:48:08.682-0800 I CONTROL [initandlisten] git version: f288a3bdf201007f3693c58e140056adf8b04839
2018-11-16T01:48:08.684-0800 I CONTROL [initandlisten] allocator: tcmalloc
2018-11-16T01:48:08.686-0800 I CONTROL [initandlisten] modules: none
2018-11-16T01:48:08.688-0800 I CONTROL [initandlisten] build environment:
2018-11-16T01:48:08.690-0800 I CONTROL [initandlisten] distmod: 2008plus-ssl
2018-11-16T01:48:08.694-0800 I CONTROL [initandlisten] distarch: x86_64
2018-11-16T01:48:08.696-0800 I CONTROL [initandlisten] target_arch: x86_64
2018-11-16T01:48:08.697-0800 I CONTROL [initandlisten] options: {}
2018-11-16T01:48:08.704-0800 I STORAGE [initandlisten] Detected data files in C:\data\db\ created by the 'wiredTiger' s
torage engine, so setting the active storage engine to 'wiredTiger'.
2018-11-16T01:48:08.705-0800 I STORAGE [initandlisten] wiredtiger_open config: create,cache_size=3532M,session_max=2000
0,eviction=(threads_min=4,threads_max=4),config_base=false,statistics=(fast),log=(enabled=true,archive=true,path=journal
,compressor=snappy),file_manager=(close_idle_time=100000),statistics_log=(wait=0),verbose=(recovery_progress),
2018-11-16T01:48:09.047-0800 I STORAGE [initandlisten] WiredTiger message [1542361689:46556][43764:140705012989008], tx
n-recover: Main recovery loop: starting at 4/51456 to 5/256
2018-11-16T01:48:09.189-0800 I STORAGE [initandlisten] WiredTiger message [1542361689:189170][43764:140705012989008], t
xn-recover: Recovering log 4 through 5
2018-11-16T01:48:09.301-0800 I STORAGE [initandlisten] WiredTiger message [1542361689:300875][43764:140705012989008], t
xn-recover: Recovering log 5 through 5
2018-11-16T01:48:09.380-0800 I STORAGE [initandlisten] WiredTiger message [1542361689:379695][43764:140705012989008], t
xn-recover: Set global recovery timestamp: 0
2018-11-16T01:48:09.775-0800 I RECOVERY [initandlisten] WiredTiger recoveryTimestamp. Ts: Timestamp(0, 0)
2018-11-16T01:48:10.012-0800 I CONTROL [initandlisten]
```

*To create a new database*

### Mongo shell

>>>use...database name.....

*To see all the collections in the database*

### Python cmd shell

>>>show collections;

...collection name.....

*To check your created database*

### Mongo shell

>>>show .....database name.....

*To see the values, documents inside the collection*

### Python cmd shell

>>>db. Collection name..... . find ()

```
cmd Command Prompt - mongo
WriteResult({ "nInserted" : 1 })
> show dbs
admin      0.000GB
config     0.000GB
local      0.000GB
student    0.000GB
> use student
switched to db student
> show collections
books
> db.books.find()
{ "_id" : ObjectId("5bee95aa246b7751269594dc"), "name" : "mongodb book" }
> show dbs
library    0.000GB
admin      0.000GB
config     0.000GB
local      0.000GB
student    0.000GB
> show dbs
library    0.000GB
admin      0.000GB
config     0.000GB
local      0.000GB
student    0.000GB
```

### MongoDB connection (Combined with assignment)

```
cmd Command Prompt - python
Microsoft Windows [Version 10.0.17134.407]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\User>python
Python 3.5.0 (v3.5.0:374f501f4567, Sep 13 2015, 02:27:37) [MSC v.1900 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> from pymongo import MongoClient
>>> Client=MongoClient()
>>> db=Client["test"]
>>> collection=db["login"]
>>> login={}
>>> login["userName"]="mino"
>>> login["password"]="amfrox123@"
>>> collection.insert(login)
ObjectId('5beedba470bd843539f80c86')
>>> print(login)
{'password': 'amfrox123@', 'userName': 'mino', '_id': ObjectId('5beedba470bd843539f80c86')}
>>> cursor=collection.find()
>>> print(login['userName'])
mino
>>> print(login['password'])
amfrox123@
>>>
```



Database name – test

Collection name-login



The screenshot shows a Windows Command Prompt window titled "Command Prompt - mongo". The text inside the window is as follows:

```
admin      0.000GB
config     0.000GB
local      0.000GB
student    0.000GB
> use test
switched to db test
> show dbs
Library     0.000GB
LibraryM    0.000GB
admin       0.000GB
config      0.000GB
local       0.000GB
pns         0.000GB
student     0.000GB
> show dbs
Library     0.000GB
LibraryM    0.000GB
admin       0.000GB
config      0.000GB
local       0.000GB
pns         0.000GB
student     0.000GB
test        0.000GB
>
```

A yellow arrow points to the "test" database entry in the second "show dbs" output.

UserName-mino

Password-amfrox123@

Field was entered.

Print (login[userName])-to find & get the Username of the user.

Print (login [password])-to find & get the password of the user.