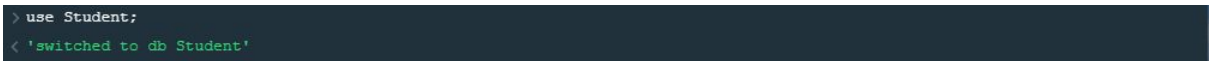
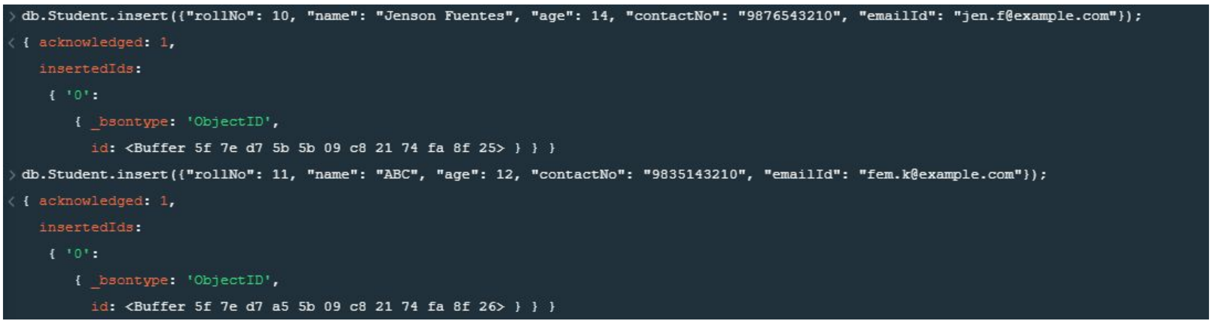
BDA LAB 3 - 1BM17CS086 SAIFUR RAHMAN

1.1. Create a database “Student” with the following attributes Rollno, Age, ContactNo, Email-Id.



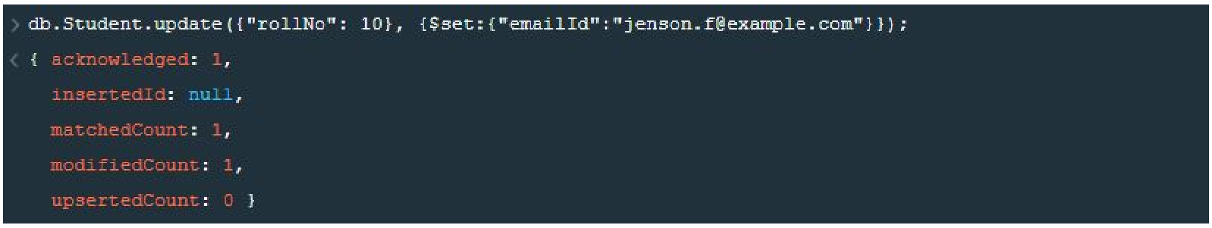
```
> use Student;
< 'switched to db Student'
```

1.2. Insert appropriate values



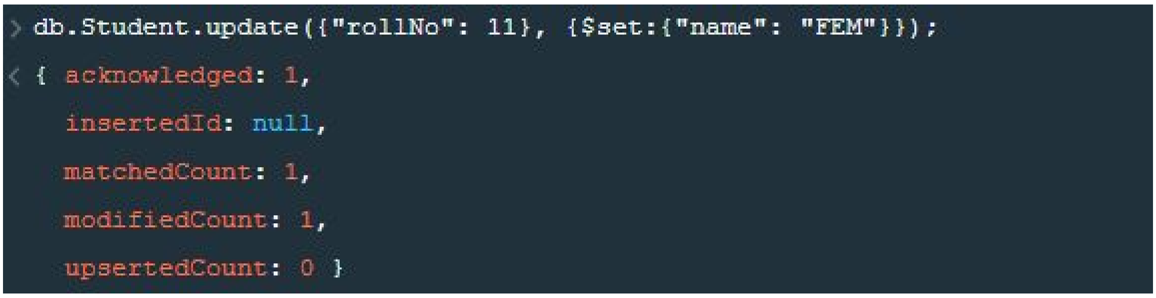
```
> db.Student.insert({"rollNo": 10, "name": "Jenson Fuentes", "age": 14, "contactNo": "9876543210", "emailId": "jen.f@example.com"});
< { acknowledged: 1,
    insertedIds:
     { '0':
        { _bsontype: 'ObjectID',
          id: <Buffer 5f 7e d7 5b 5b 09 c8 21 74 fa 8f 25> } } }
> db.Student.insert({"rollNo": 11, "name": "ABC", "age": 12, "contactNo": "9835143210", "emailId": "fem.k@example.com"});
< { acknowledged: 1,
    insertedIds:
     { '0':
        { _bsontype: 'ObjectID',
          id: <Buffer 5f 7e d7 a5 5b 09 c8 21 74 fa 8f 26> } } }
```

1.3. Write a query to update Email-Id of a student with rollno 10.



```
> db.Student.update({"rollNo": 10}, {$set:{"emailId":"jenson.f@example.com"}});
< { acknowledged: 1,
    insertedId: null,
    matchedCount: 1,
    modifiedCount: 1,
    upsertedCount: 0 }
```

1.4. Replace the student name from “ABC” to “FEM” of rollno 11.



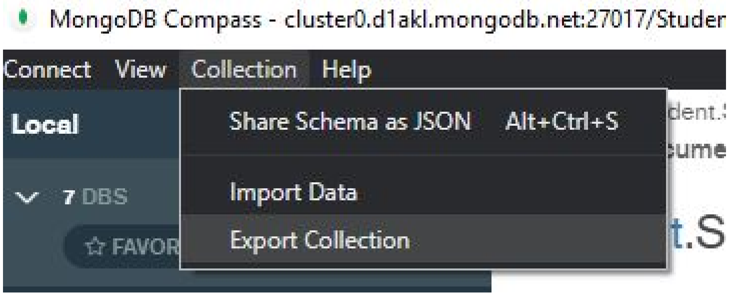
```
> db.Student.update({"rollNo": 11}, {$set:{"name": "FEM"}});
< { acknowledged: 1,
    insertedId: null,
    matchedCount: 1,
    modifiedCount: 1,
    upsertedCount: 0 }
```

1.5. Export the created table into local file system

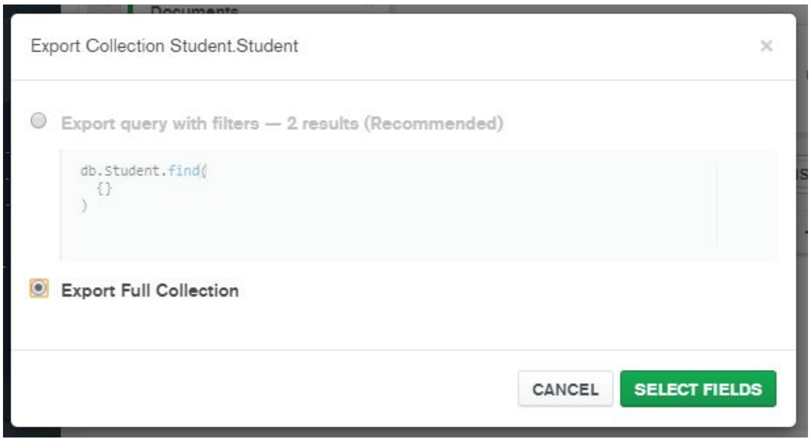
CLI:

```
mongoexport -c Student -d Student -f _id,rollNo,name,age,contactNo,emailId
--type csv -o exported.csv
```

GUI:



MongoDB Compass - cluster0.d1akl.mongodb.net:27017/Studer

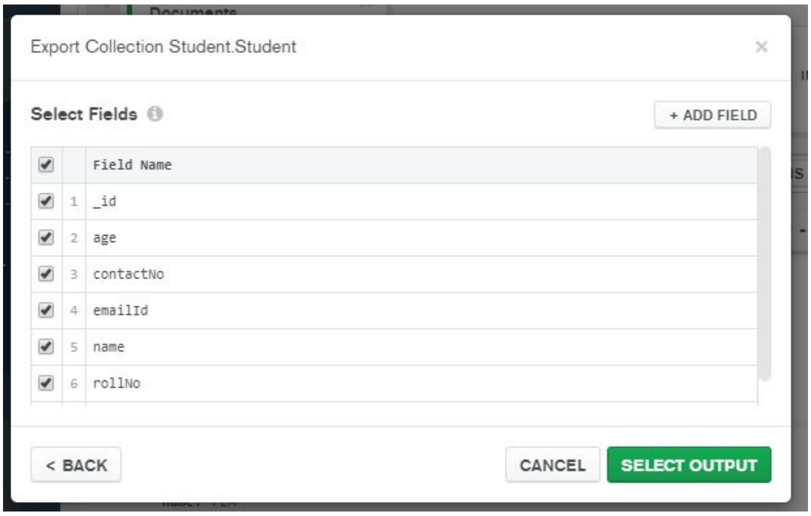


Export Collection Student.Student

○ Export query with filters — 2 results (Recommended)

```
db.Student.find(
  {}
)
```

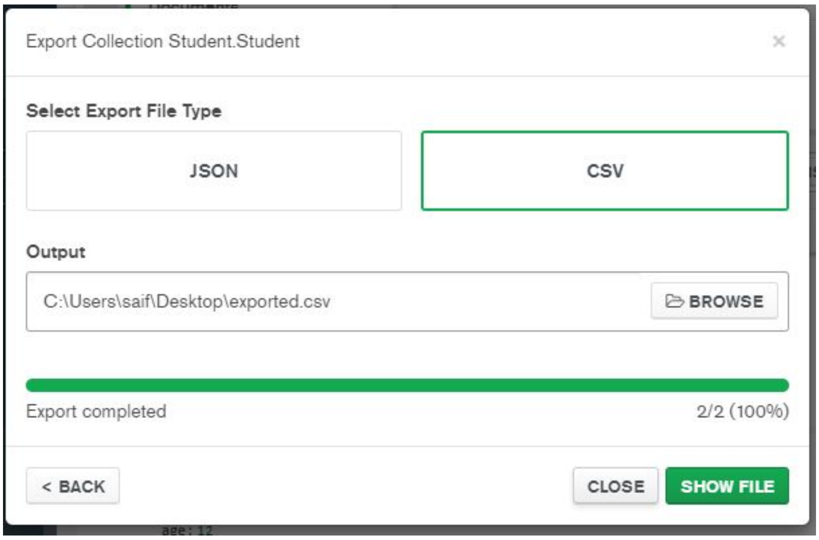
● Export Full Collection



Export Collection Student.Student

Select Fields

☑		Field Name
☑	1	_id
☑	2	age
☑	3	contactNo
☑	4	emailId
☑	5	name
☑	6	rollNo



Export Collection Student.Student

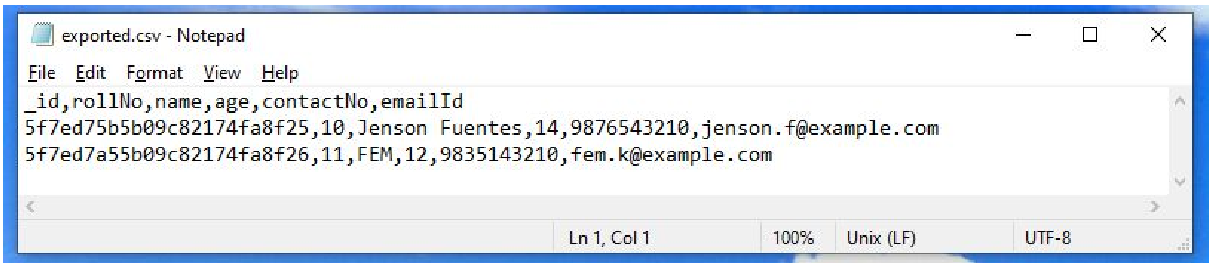
Select Export File Type

JSON [✓ CSV]

Output

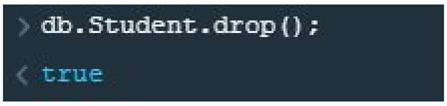
C:\Users\saif\Desktop\exported.csv

Export completed 2/2 (100%)



```
_id,rollNo,name,age,contactNo,emailId
5f7ed75b5b09c82174fa8f25,10,Jenson Fuentes,14,9876543210,jenson.f@example.com
5f7ed7a55b09c82174fa8f26,11,FEM,12,9835143210,fem.k@example.com
```

1.6. Drop the table



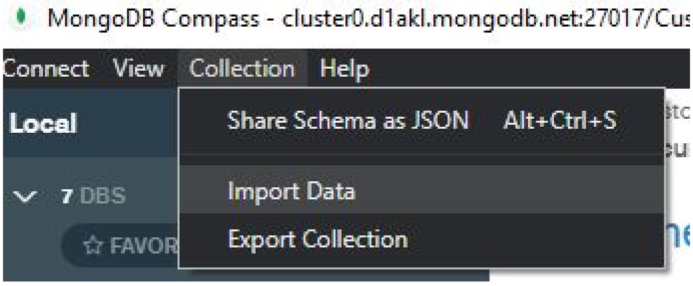
```
> db.Student.drop();
< true
```

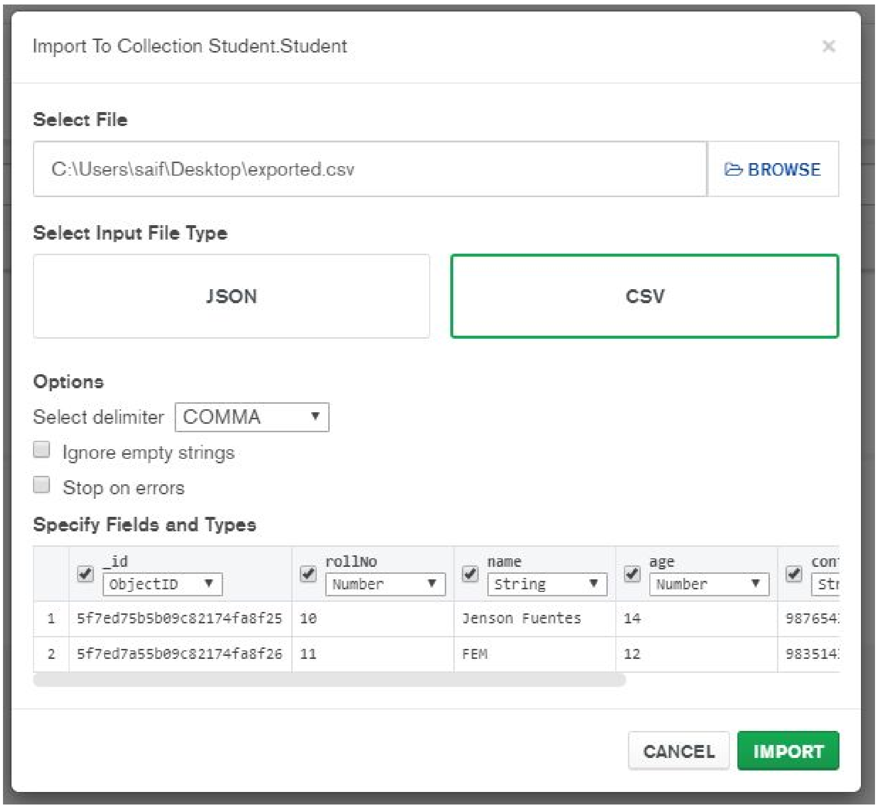
1.7. Import a given csv dataset from local file system into mongodb collection

CLI:

```
mongoimport -d Student -c Student --type csv --file exported.csv
--headerline
```

GUI:


MongoDB Compass - cluster0.d1akl.mongodb.net:27017/Cus
Connect
View
Collection
Help
Local
7 DBS
☆ FAVOR
Share Schema as JSON Alt+Ctrl+S
Import Data
Export Collection



Import To Collection Student.Student ×

Select File

C:\Users\saif\Desktop\exported.csv BROWSE

Select Input File Type

JSON CSV

Options

Select delimiter COMMA ▾

□ Ignore empty strings

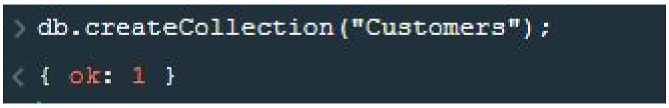
□ Stop on errors

Specify Fields and Types

	☑ _id ObjectID ▾	☑ rollNo Number ▾	☑ name String ▾	☑ age Number ▾	☑ con Str
1	5f7ed75b5b09c82174fa8f25	10	Jenson Fuentes	14	987654
2	5f7ed7a55b09c82174fa8f26	11	FEM	12	983514

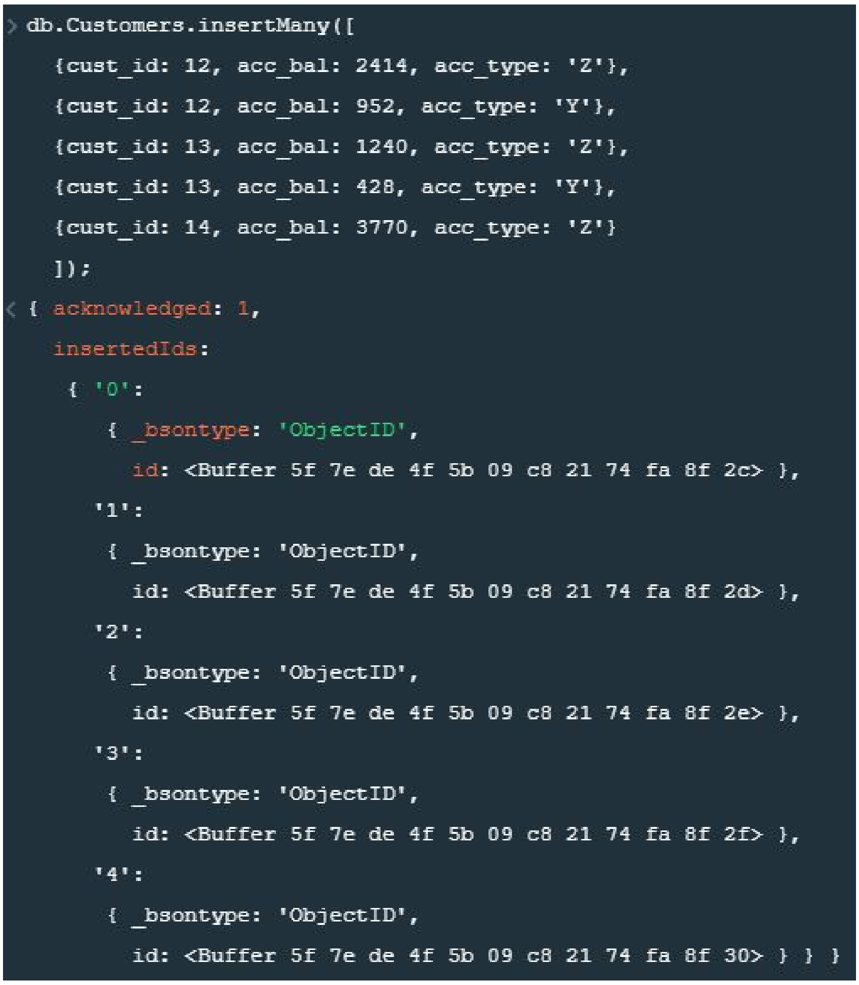
CANCEL IMPORT

2.1. Create a collection by name Customers with the following attributes. Cust_id, Acc_Bal, Acc_Type



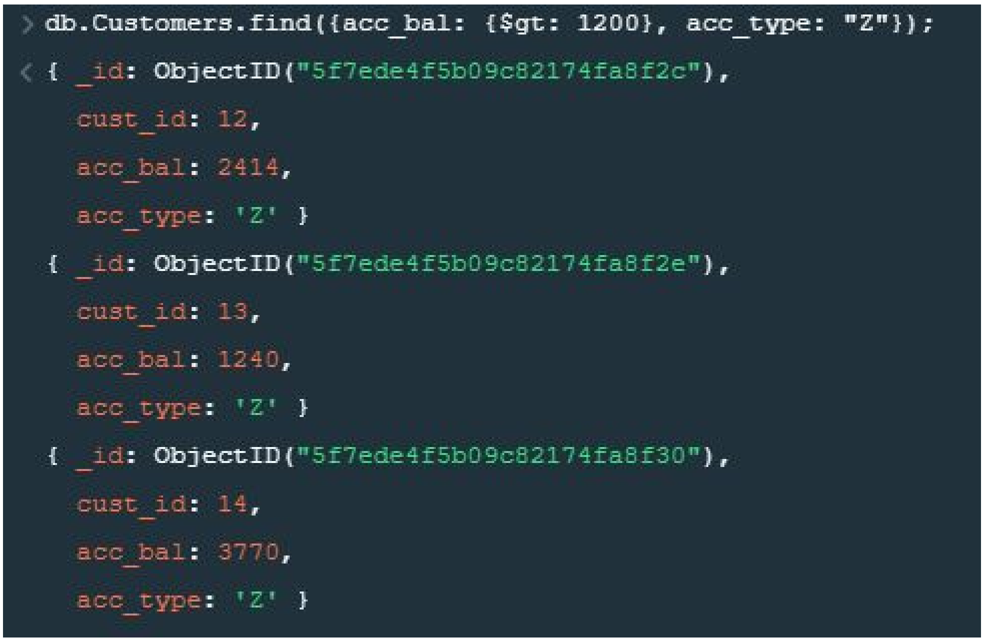
```
> db.createCollection("Customers");
< { ok: 1 }
```

2.2. Insert at least 5 values into the table



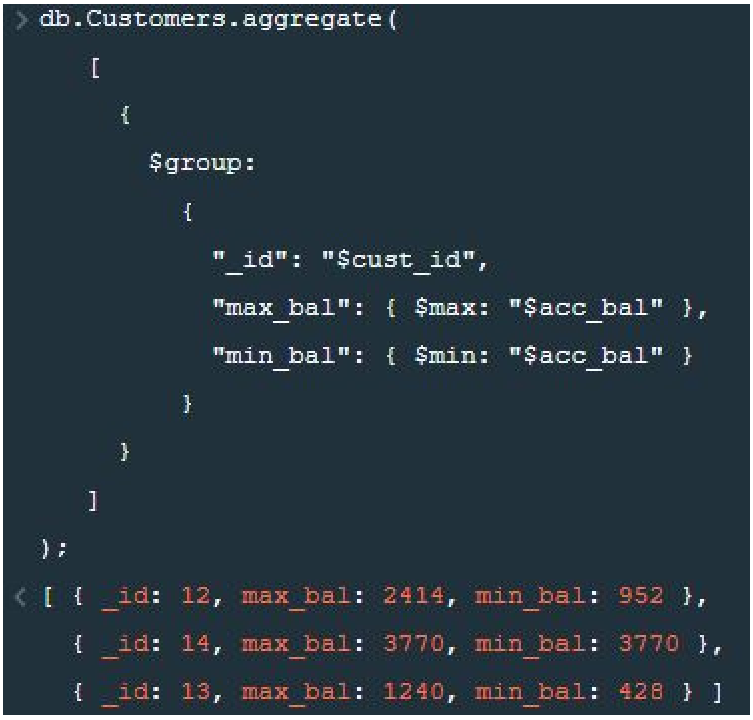
```
> db.Customers.insertMany([
    {cust_id: 12, acc_bal: 2414, acc_type: 'Z'},
    {cust_id: 12, acc_bal: 952, acc_type: 'Y'},
    {cust_id: 13, acc_bal: 1240, acc_type: 'Z'},
    {cust_id: 13, acc_bal: 428, acc_type: 'Y'},
    {cust_id: 14, acc_bal: 3770, acc_type: 'Z'}
    ]);
< { acknowledged: 1,
    insertedIds:
     { '0':
        { _bsontype: 'ObjectID',
          id: <Buffer 5f 7e de 4f 5b 09 c8 21 74 fa 8f 2c> },
       '1':
        { _bsontype: 'ObjectID',
          id: <Buffer 5f 7e de 4f 5b 09 c8 21 74 fa 8f 2d> },
       '2':
        { _bsontype: 'ObjectID',
          id: <Buffer 5f 7e de 4f 5b 09 c8 21 74 fa 8f 2e> },
       '3':
        { _bsontype: 'ObjectID',
          id: <Buffer 5f 7e de 4f 5b 09 c8 21 74 fa 8f 2f> },
       '4':
        { _bsontype: 'ObjectID',
          id: <Buffer 5f 7e de 4f 5b 09 c8 21 74 fa 8f 30> } } }
```

2.3. Write a query to display those records whose total account balance is greater than 1200 of account type ‘Z’ for each customer_id.



```
> db.Customers.find({acc_bal: {$gt: 1200}, acc_type: "Z"});
< { _id: ObjectID("5f7ede4f5b09c82174fa8f2c"),
    cust_id: 12,
    acc_bal: 2414,
    acc_type: 'Z' }
  { _id: ObjectID("5f7ede4f5b09c82174fa8f2e"),
    cust_id: 13,
    acc_bal: 1240,
    acc_type: 'Z' }
  { _id: ObjectID("5f7ede4f5b09c82174fa8f30"),
    cust_id: 14,
    acc_bal: 3770,
    acc_type: 'Z' }
```

2.4. Determine Minimum and Maximum account balance for each customer_id.



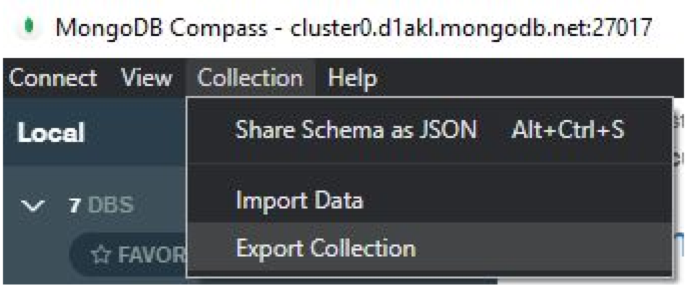
```
> db.Customers.aggregate(
     [
       {
         $group:
           {
             "_id": "$cust_id",
             "max_bal": { $max: "$acc_bal" },
             "min_bal": { $min: "$acc_bal" }
           }
       }
     ]
  );
< [ { _id: 12, max_bal: 2414, min_bal: 952 },
    { _id: 14, max_bal: 3770, min_bal: 3770 },
    { _id: 13, max_bal: 1240, min_bal: 428 } ]
```

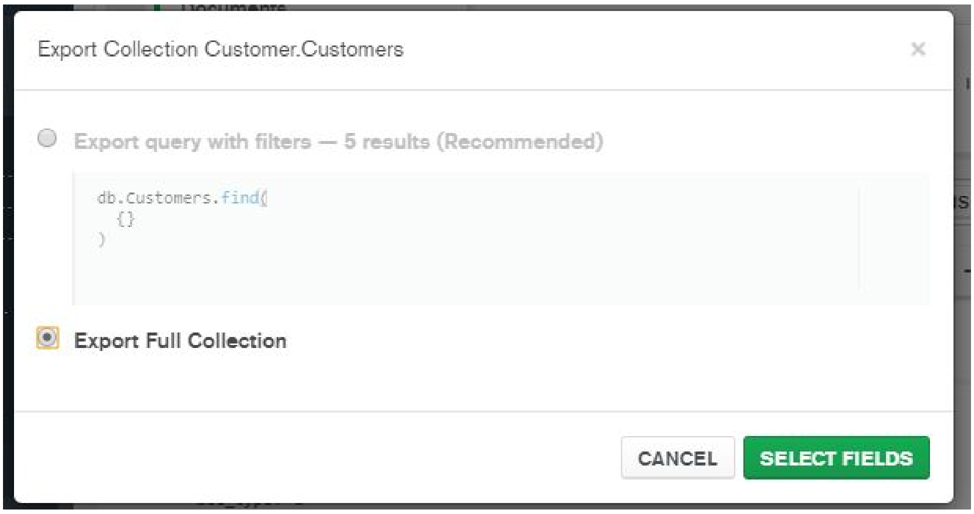
2.5. Export the created collection into local file system

CLI:

```
mongoexport -c Customers -d Customers -f _id,acc_bal,acc_type --type csv -o
exported.csv
```

GUI:

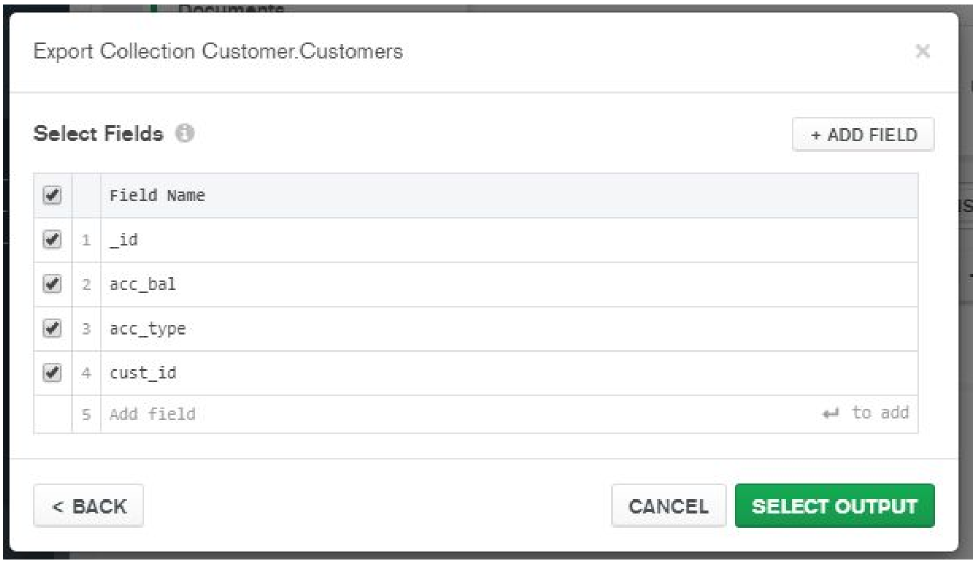

MongoDB Compass - cluster0.d1akl.mongodb.net:27017
Connect
View
Collection
Help
Local
7 DBS
FAVOR
Share Schema as JSON Alt+Ctrl+S
Import Data
Export Collection


Export Collection Customer.Customers

○ Export query with filters — 5 results (Recommended)

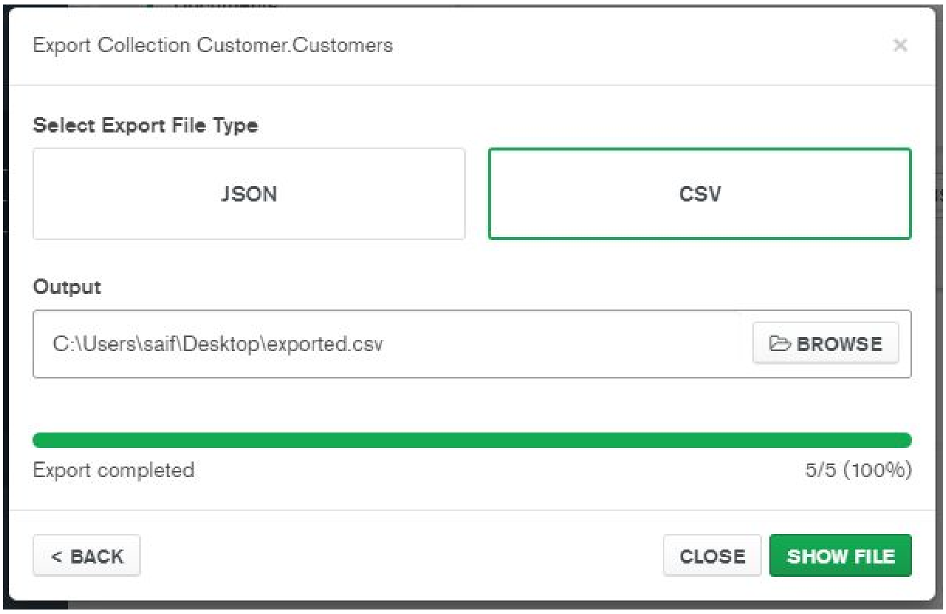
```
db.Customers.find(
  {}
)
```

● Export Full Collection


Export Collection Customer.Customers

Select Fields

☑		Field Name
☑	1	_id
☑	2	acc_bal
☑	3	acc_type
☑	4	cust_id
	5	Add field ↵ to add

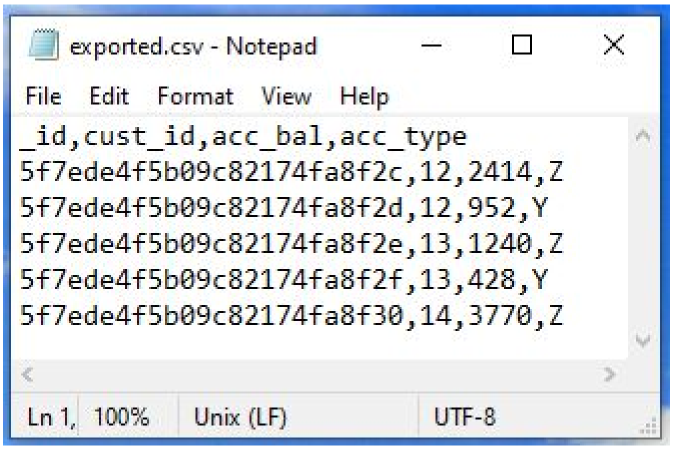


Export Collection Customer.Customers

Select Export File Type: CSV

Output: C:\Users\saif\Desktop\exported.csv

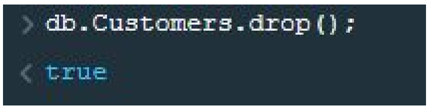
Export completed 5/5 (100%)



exported.csv - Notepad

```
_id,cust_id,acc_bal,acc_type
5f7ede4f5b09c82174fa8f2c,12,2414,Z
5f7ede4f5b09c82174fa8f2d,12,952,Y
5f7ede4f5b09c82174fa8f2e,13,1240,Z
5f7ede4f5b09c82174fa8f2f,13,428,Y
5f7ede4f5b09c82174fa8f30,14,3770,Z
```

2.6. Drop the table



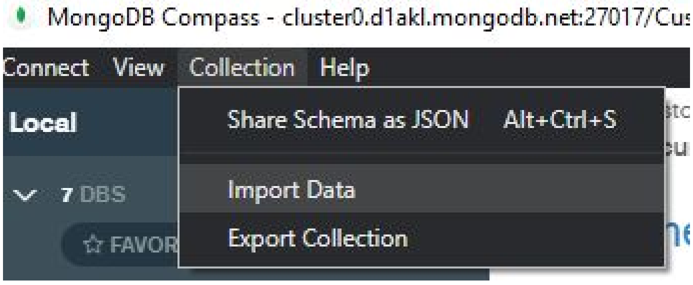
```
> db.Customers.drop();
< true
```

2.7. Import a given csv dataset from the local file system into mongodb collection.

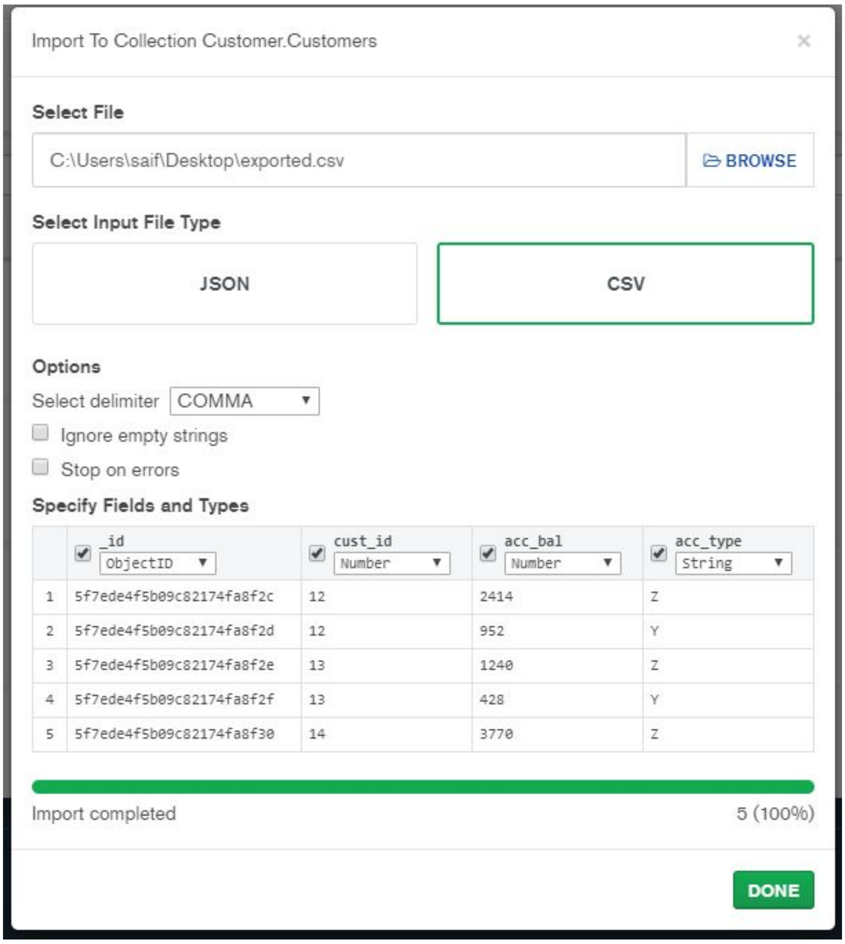
CLI:

```
mongoimport -d Customers-c Customers --type csv --file exported.csv
--headerline
```

GUI:



MongoDB Compass - cluster0.d1akl.mongodb.net:27017/Cus
Connect
View
Collection
Help
Local
7 DBS
☆ FAVOR
Share Schema as JSON Alt+Ctrl+S
Import Data
Export Collection



Import To Collection Customer.Customers

Select File

C:\Users\saif\Desktop\exported.csv

Select Input File Type

Options

Select delimiter: COMMA ▼

□ Ignore empty strings

□ Stop on errors

Specify Fields and Types

	☑ _id ObjectID ▼	☑ cust_id Number ▼	☑ acc_bal Number ▼	☑ acc_type String ▼
1	5f7ede4f5b09c82174fa8f2c	12	2414	Z
2	5f7ede4f5b09c82174fa8f2d	12	952	Y
3	5f7ede4f5b09c82174fa8f2e	13	1240	Z
4	5f7ede4f5b09c82174fa8f2f	13	428	Y
5	5f7ede4f5b09c82174fa8f30	14	3770	Z

Import completed 5 (100%)