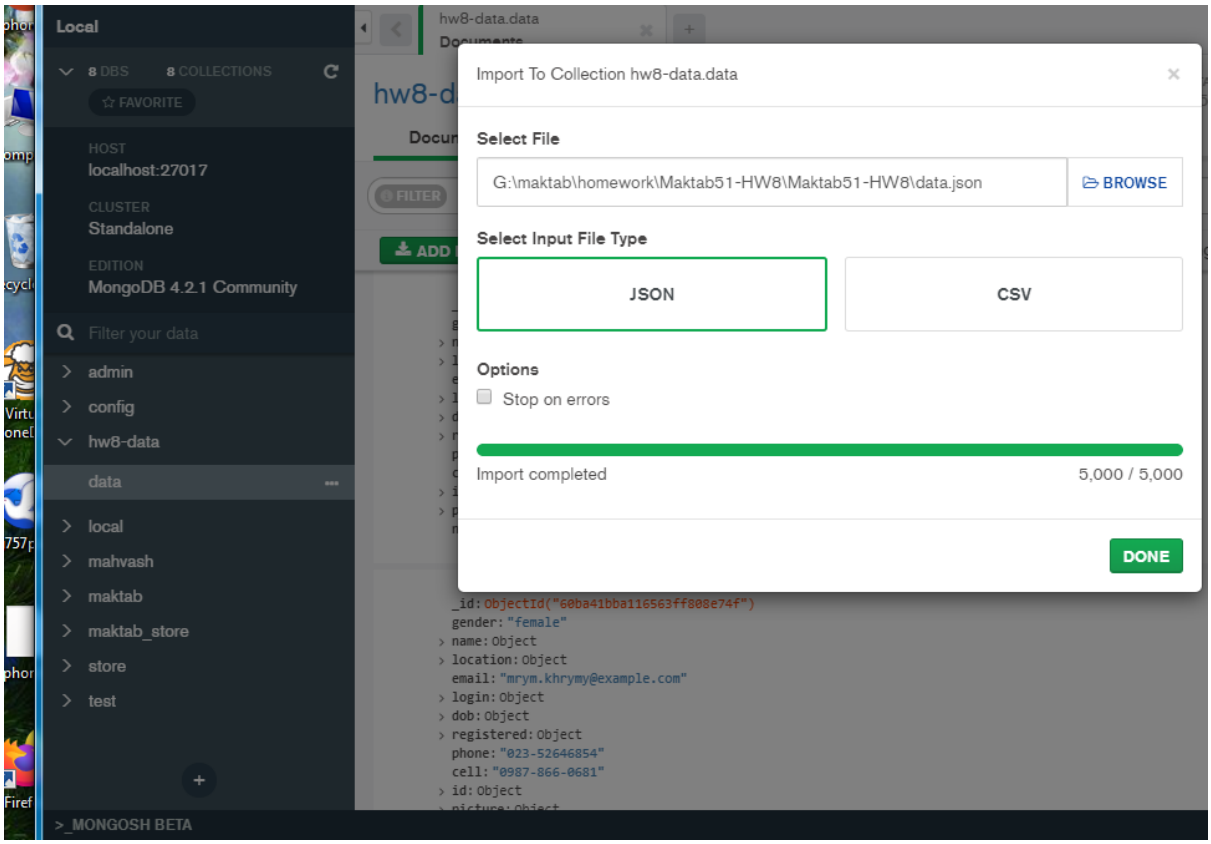
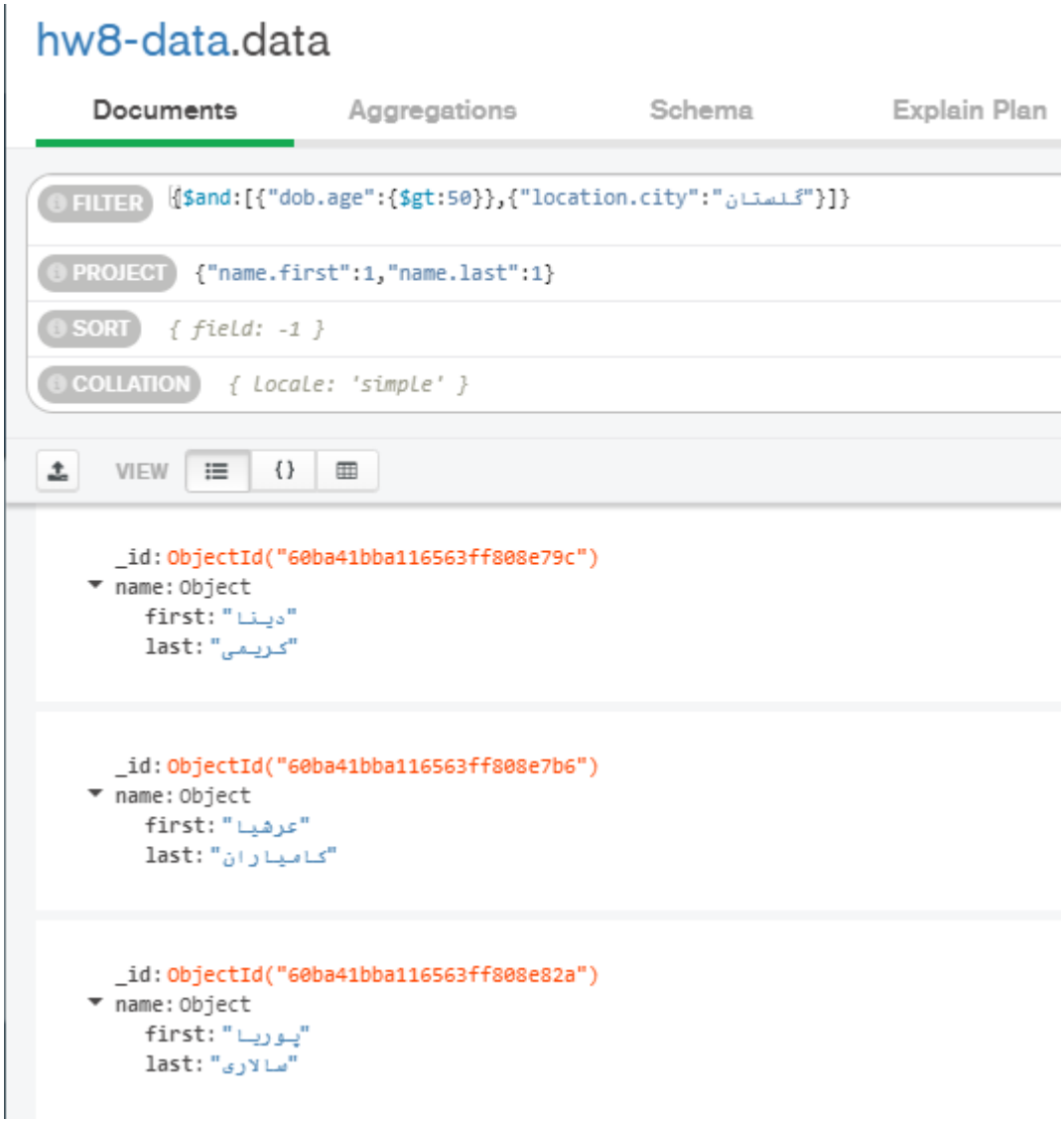
A. After downloading data, save them to the mongodb manually.
(capture one sample of adding your data to your answer(PDF))
Note: Capture your insert code and it's result. If you have many things, capture just one
sample of insertion.



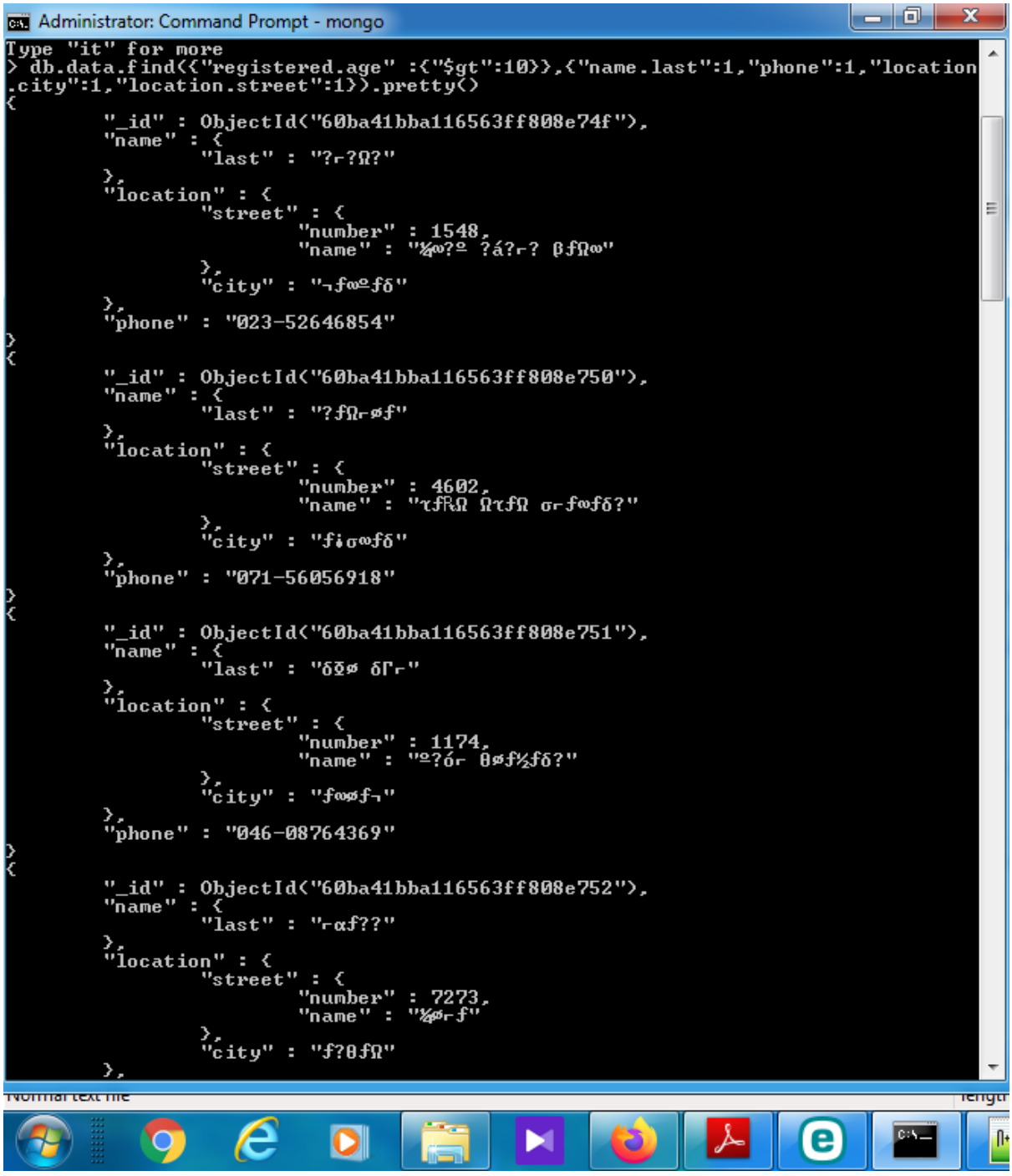
B. Make the following queries. Capture the results and paste them to your answer(PDF).

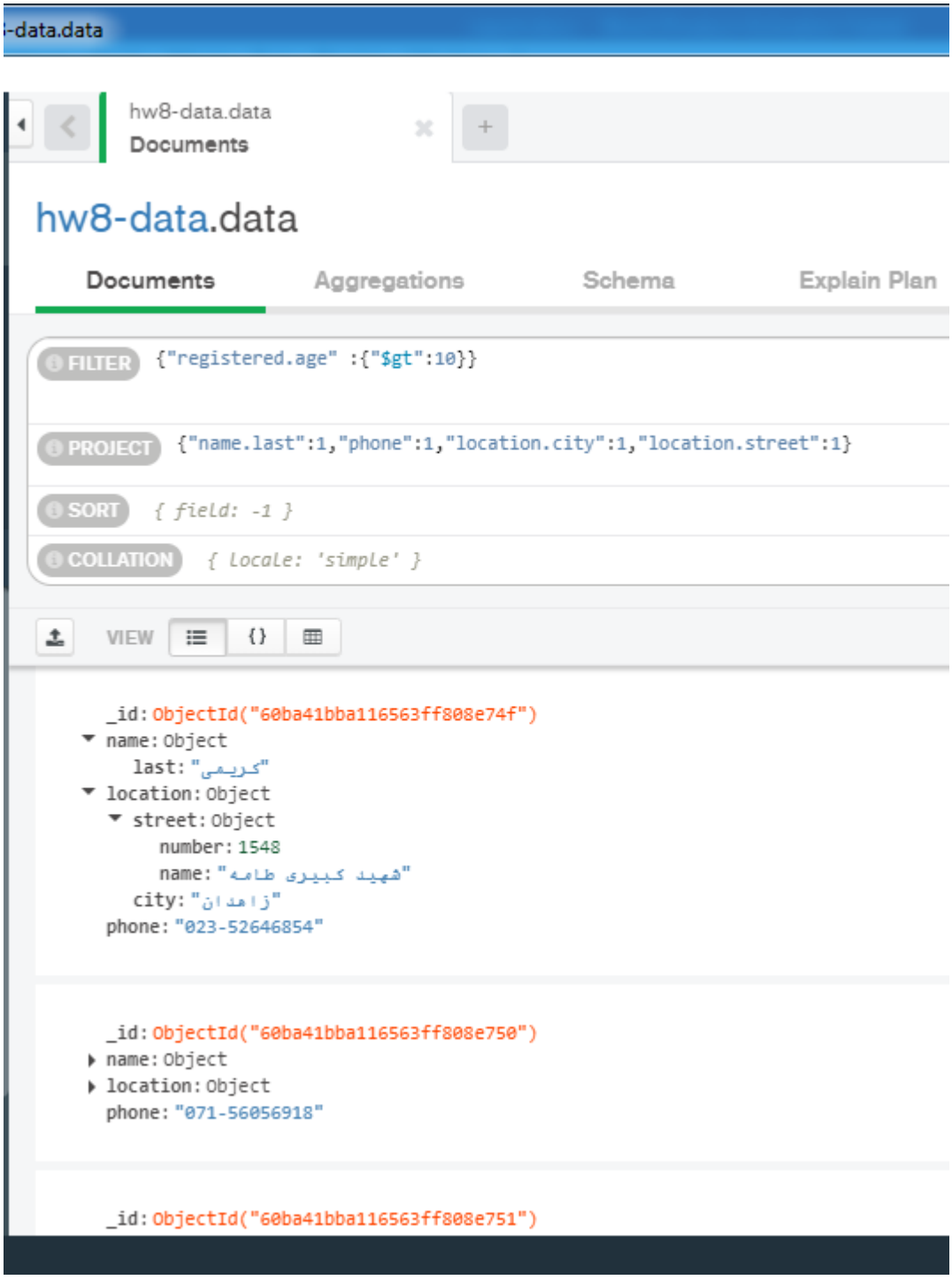
Note: Capture the queries and its results.

1-Find the firstname and lastname of all users that have more than 50 years and reside on (their city = ' (ʾگلستان)



2--We want to reward those users who have registered on our site for more than 20 years. Find their last name, phone and address.


Administrator: Command Prompt - mongo
Type "it" for more
> db.data.find({"registered.age" :{"$gt":10}},{"name.last":1,"phone":1,"location
.city":1,"location.street":1}).pretty()
{
"_id" : ObjectId("60ba41bba116563ff808e74f"),
"name" : {
"last" : "?r?Ω?"
},
"location" : {
"street" : {
"number" : 1548,
"name" : "⅛ω?º ?á?r? βfΩω"
},
"city" : "¬fωºfδ"
},
"phone" : "023-52646854"
}
{
"_id" : ObjectId("60ba41bba116563ff808e750"),
"name" : {
"last" : "?fΩrøf"
},
"location" : {
"street" : {
"number" : 4602,
"name" : "τfRΩ ΩτfΩ σrfωfδ?"
},
"city" : "f↓σωfδ"
},
"phone" : "071-56056918"
}
{
"_id" : ObjectId("60ba41bba116563ff808e751"),
"name" : {
"last" : "δ∑ø δΓr"
},
"location" : {
"street" : {
"number" : 1174,
"name" : "º?ór θøf½fδ?"
},
"city" : "fωøf¬"
},
"phone" : "046-08764369"
}
{
"_id" : ObjectId("60ba41bba116563ff808e752"),
"name" : {
"last" : "rαf??"
},
"location" : {
"street" : {
"number" : 7273,
"name" : "⅛ørf"
},
"city" : "f?θfΩ"
},

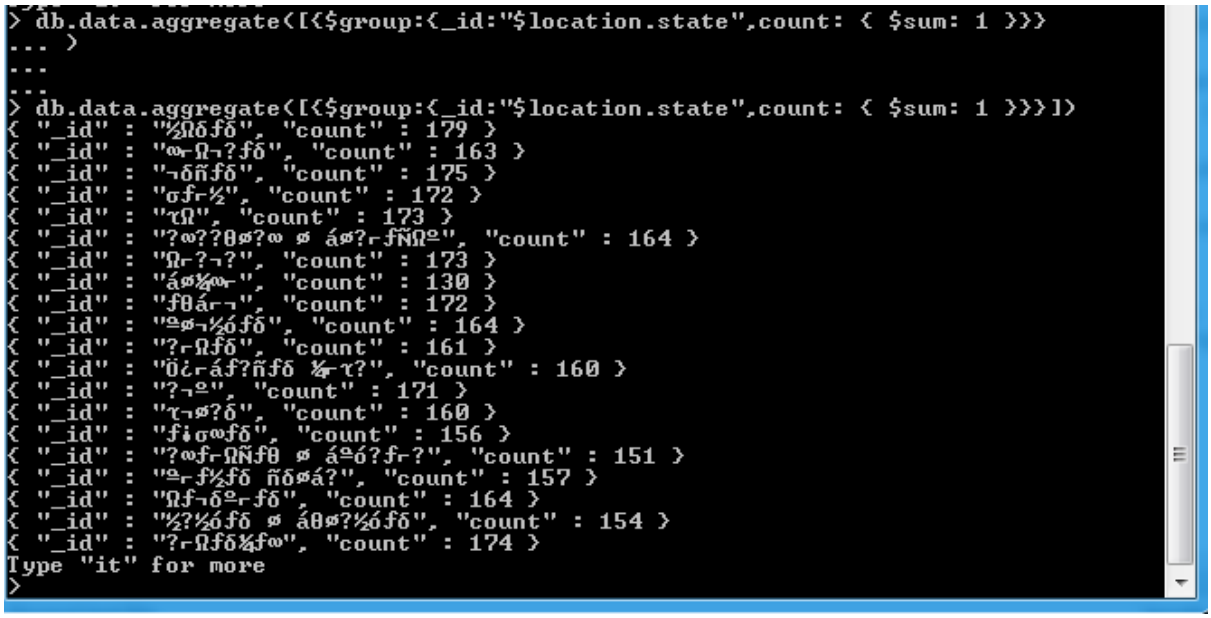


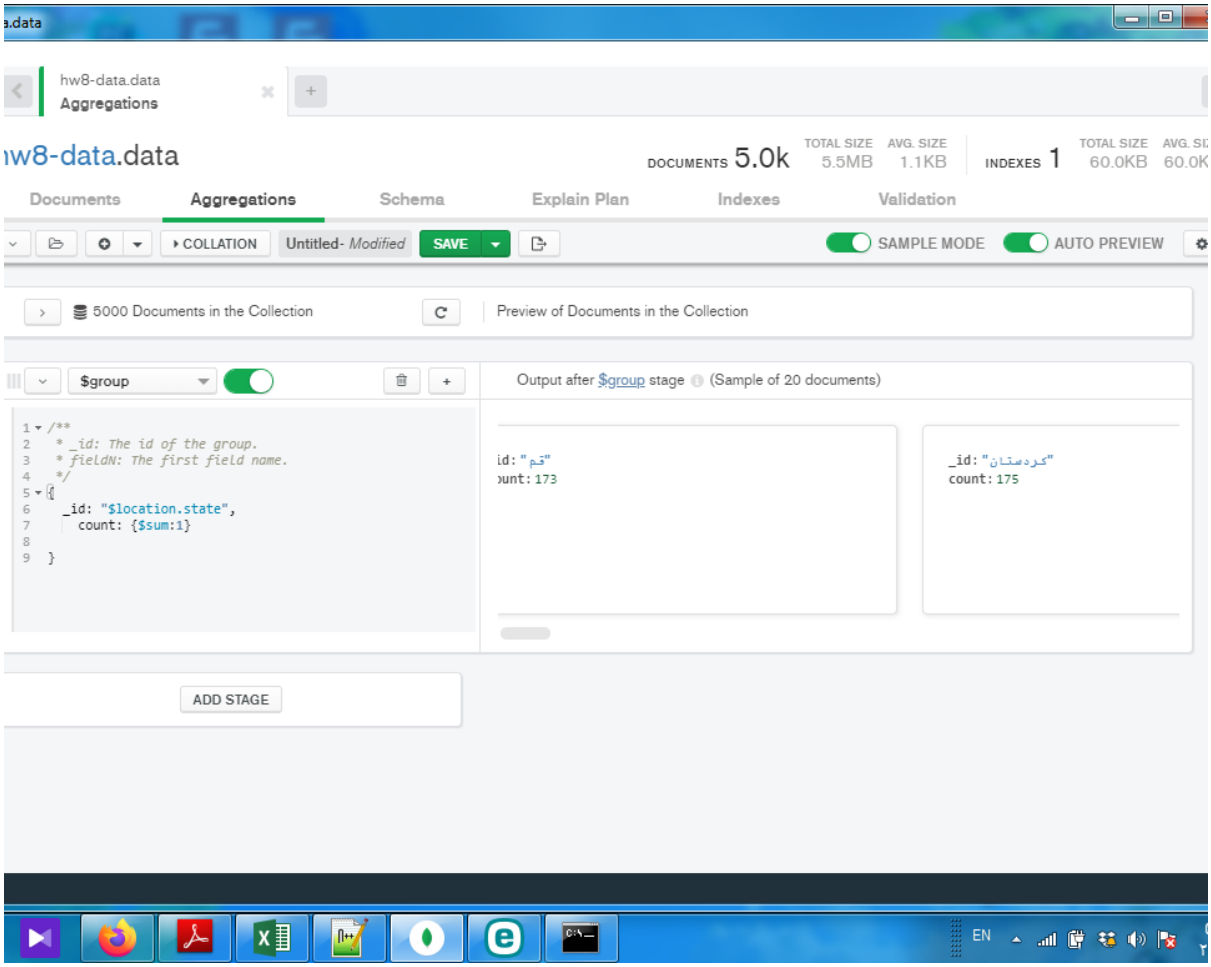
3-At the end of each day, we want to grant a discount code or a gift to those whose birthday is today and send them a "Happy Birthday" email. Find the full name and email address of these
guys.(By running the query we can have the info of those users which their birthday is today)

```
"$expr": {
    "$and": [
```

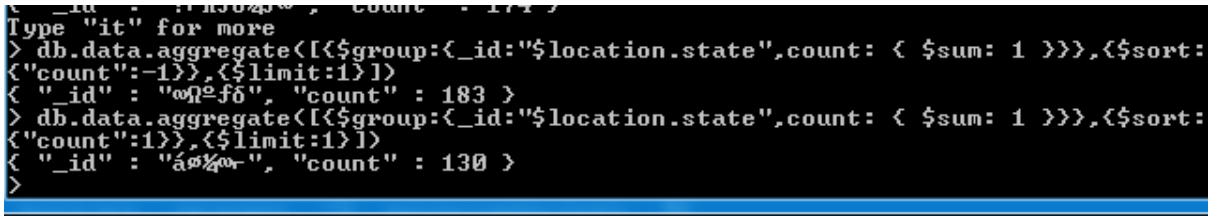
```
        { "$eq": [ { "$dayOfMonth": "$dob.date" }, { "$dayOfMonth": new Date() } ] },
        { "$eq": [ { "$month"     : "$dob.date" }, { "$month"     : new Date() } ] }
    ]
}
```

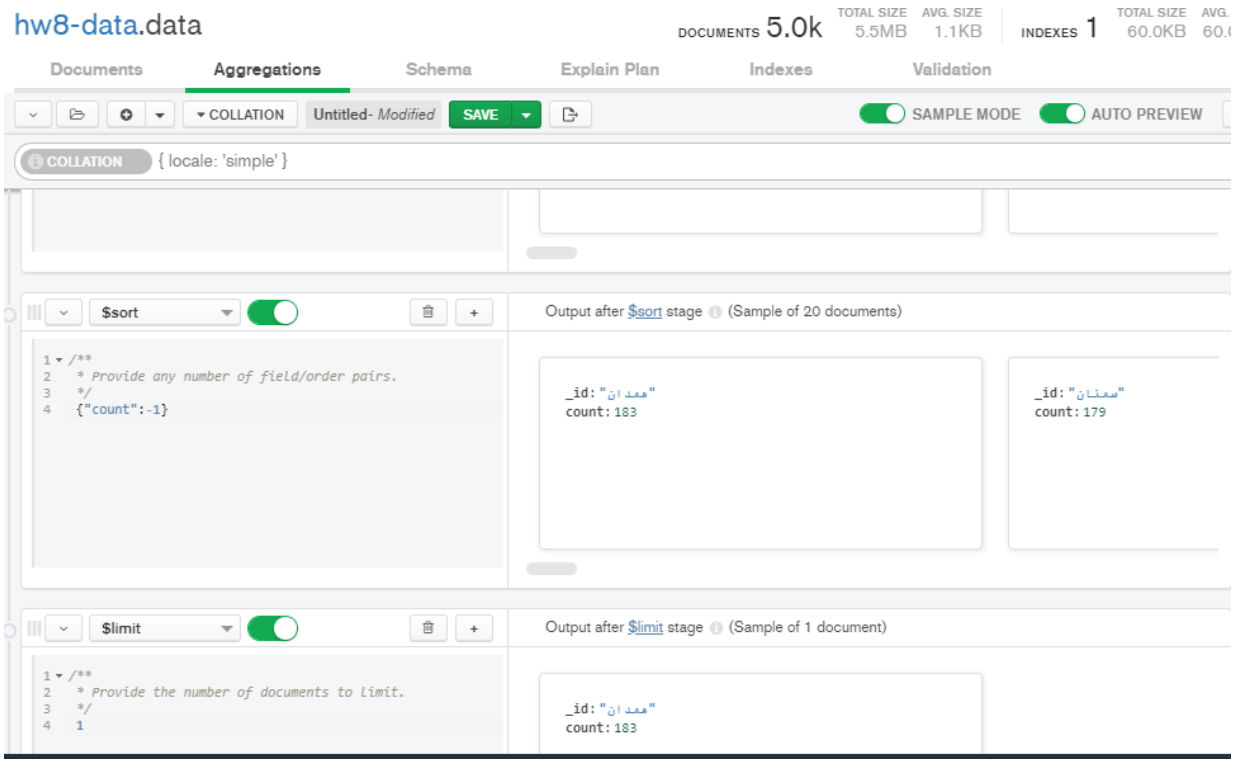
4-Find the number of users based on their province(=state). For example Isfahan, 30
Tehran, 50





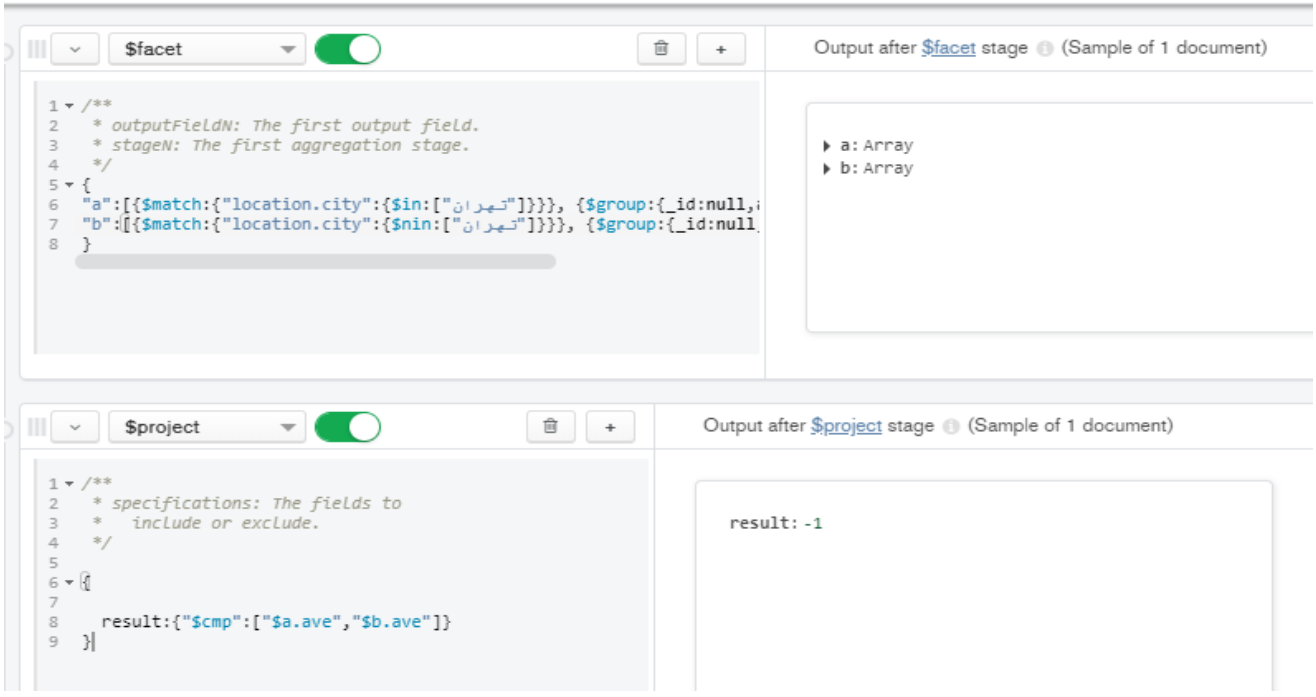
5-Which city has the most number of users and which one has the least number of users?



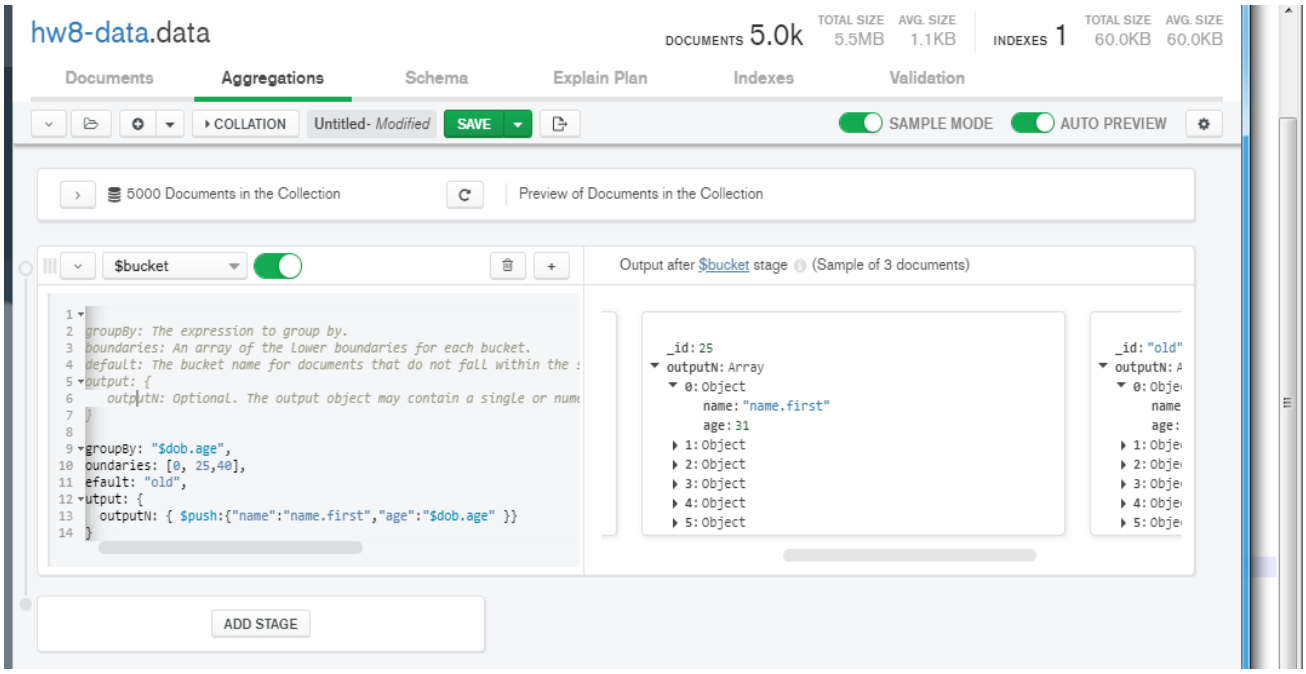


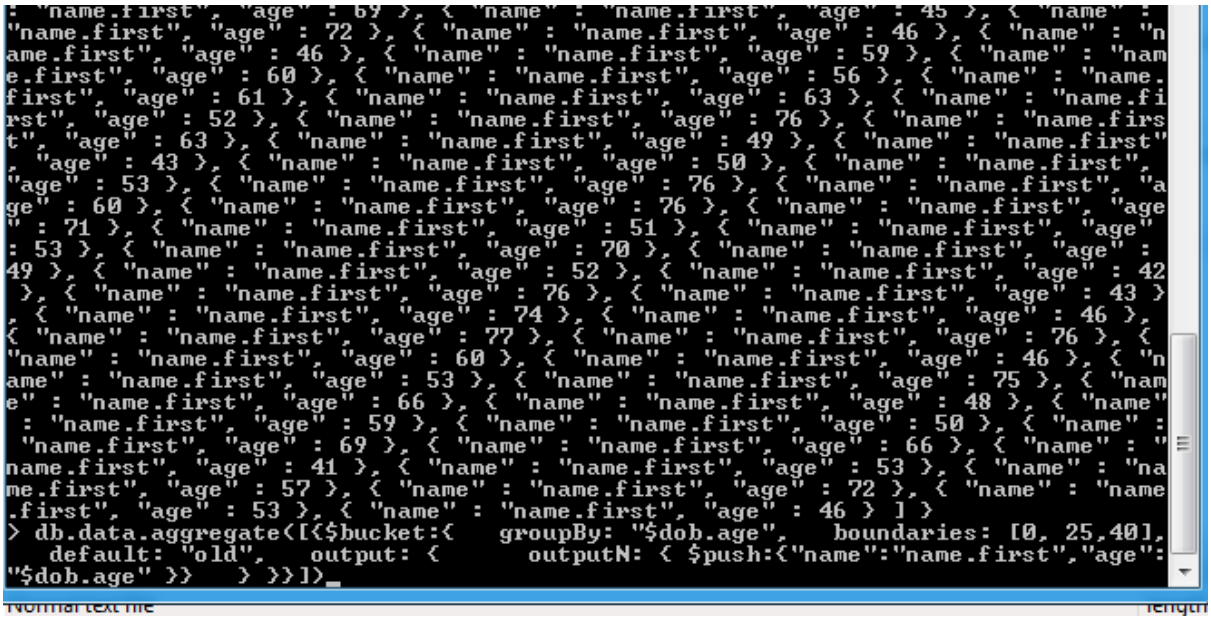
6-Compare the average of users' age in Tehran with the average of users' age in other cities.

```
> use hw8-data
switched to db hw8-data
> db.data.aggregate([{$facet:{"a":[{$match:{"location.city":{$in:["ó‹-fδ"]}}}, {
$group:{_id:null,ave: { $avg: "$dob.age" }}}], "b":[{$match:{"location.city":{$n
in:["ó‹-fδ"]}}}, {$group:{_id:null,ave: { $avg: "$dob.age" }}}]},{$project:{res
ult:{"$cmp":["$a.ave","$b.ave"]}}})
{ "result" : -1 }
>
```



7-For an advertisement, we want to categorize users based on their age. Write a query to categorize them into three groups 1)youth 2)middle-aged 3)old:
Youth for ages < 16
Middle-aged for 16 < ages <40
Old for ages >40





By using pymongo, save the information of these users to a new collection and make sure that the info of all users is saved to your collection using "count".

Note: Capture your code and it's result. Do not forget to append your python file to your document.

main.py | mongo.py | hw8.py

```
from pymongo import MongoClient
import json

client = MongoClient('localhost', 27017)
db = client.hw8_data
inventory = db.inventory
#print(inventory.find_one())

with open('G:\maktab\homework\Maktab51-HW8\Maktab51-HW8\data.json') as info:
    read = json.load(info)
inventory.insert_many(read)
#inventory.delete_many({})

a = db.inventory.count()
print(a)
```

hw8

```
G:\maktab\venv\venv_database\database_venv\Scripts\python.exe G:/maktab/homework/
5000

Process finished with exit code 0
```