Week2_Implementation

Exercise 1 - Check the lab environment

Before you proceed with the assignment :

Check if you have the 'mongoimport' and 'mongoexport' installed on the lab, otherwise install them.

`wget https://fastdl.mongodb.org/tools/db/mongodb-database-tools-ubuntu1804-x86_64-100.3.1.tgz`

`tar -xf mongodb-database-tools-ubuntu1804-x86_64-100.3.1.tgz`

`export PATH=$PATH:/home/project/mongodb-database-tools-ubuntu1804-x86_64-100.3.1/bin`

`mongoimport --version`
`mongoexport --version`

Download the catalog.json file from https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBM-DB0321EN-SkillsNetwork/nosql/catalog.json.

`wget https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBM-DB0321EN-SkillsNetwork/nosql/catalog.json`

Exercise 2 - Working with MongoDB

Task 1 - Import 'catalog.json' into mongodb server into a database named 'catalog' and a collection named 'electronics'

`start_mongo`

```
mongoimport -u root -p my_password --authenticationDatabase admin --db
catalog --collection electronics --file catalog.json
```

Task 2 - List out all the databases

`mongo -u root -p MjQ0MS1qb2FvcGF1 --authenticationDatabase admin local`

`show dbs`

Task 3 - List out all the collections in the database catalog.
`use catalog`
`show collections`

Task 4 - Create an index on the field "type"
`db.electronics.createIndex({"type":1})`

Task 5 - Write a query to find the count of laptops

```
db.electronics.aggregate([

    {
        "$match": { "type": "laptop" }
    },
    {
        "$count": "number of occurrences"
    }
])
```

Task 6 - Write a query to find the number of smart phones with screen size of 6 inches.

```
db.electronics.aggregate([

    {
        "$match": {"$and":
        [{"type": "smart phone"}, {"screen size":6}] }
    },
    {
        "$count": "number of 6 inches"
    }
])
```

Task 7. Write a query to find out the average screen size of smart phones

```
db.electronics.aggregate(
   [

   {
        "$match": { "type": "smart phone" }
   },

   {
     $group:
       {
         _id: null,
         avgScreen: { $avg: "$screen size" }
       }
     }
   ]
)
```

Task 8 - Export the fields _id, "type", "model", from the 'electronics' collection into a file named electronics.csv

```
mongoexport -u root -p MjQ0MS1qb2FvGF1 --authenticationDatabase admin --db catalog
--collection electronics --out electronics.csv --type=csv --fields _id,type,model
```