Nama: Frila Cahya Wardani

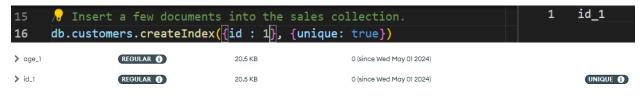
Kelas: TI – 21 – PA NPM: 212310014

Lab. Basis Data Lanjut Modul 6

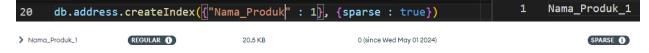
- 1. Buatlah dan jalankan query untuk membuat setiap jenis tipe index pada database rentalfilm yang berbeda dengan contoh pada tahapan kerja.
 - ensureIndex()

```
12  // Select the database to use.
13  use('rentalfilm');
14
15  // Insert a few documents into the sales collection.
16  db.customers.createIndex({age : 1})
```

- unique



- sparse



- expireAfterSeconds



- weights

```
26 db.film.createIndex({Title : "text"}, {weights: {Title : 5}})
1 Title_text
```

- default language

- 2. Buatlah dan jalankan setiap query aggregate pada database rentalfilm yang berbeda dengan contoh yang telah diberikan.
 - \$Sum

- \$Avg

- \$Min

- \$Max

```
db.customers.aggregate([ {$group: {_id: null, age: {$max: '$age'}}}}])

db.customers.aggregate([ {$group: {_id: null, age: {_id: nul
```

- \$Push

- \$AddToSet

- \$First

- \$Last

- 3. Buatlah dan jalankan setiap query pipeline pada database rentalfilm yang berbeda dengan contoh yang telah diberikan.
 - \$Project

```
db.customers.aggregate([{
    $project: {
      "joinedDate": 0
                                                                                                 -
"$oid": "663120d3c6b740f95d7523d0"
                                                                                               "fullname": "Fernanda Ramos",
                                                                                               "email": "fernadaramos4@uol.com.br",
                                                                                               "age": 24
                                                                                              "_id": {
| "$oid": "663120d3c6b740f95d7523d1"
                                                                                               "id": "Mark",
"fullname": "Mark Daihatsu",
                                                                                               "email": "mphilips12@shaw.ca",
"city": "San Francisco"
                                                                                            "$oid": "663120d3c6b740f95d7523d2"
                                                                                               "fullname": "Jennifer Aniston",
                                                                                               "email": "jenniferp@rogers.ca",
                                                                                               "occupation": "teacher
                                                                                                 "$oid": "6631bcca2ef4cd49b0326872"
```

- \$Match

- \$Group

- \$Sort

- \$Limit

- 4. Buatlah dan jalankan minimal 3 buah gabungan query pipeline pada database rentalfilm.
 - Mengambil semua actor yang memiliki nama depan "Frila"

```
db.actor.aggregate([{
    $match: {First_Name: "Frila"}
                                                                                                    "_id": {
                                                                                                      "$oid": "6631213ba5f96bac26d62799"
                                                                                                    "id": 1,
                                                                                                    "First_Name": "Frila",
                                                                                                    "Last_Name": "Cw",
"Last_Update": "2024-03-11 10:46:54",
                                                                                                    "Usia": [
                                                                                                      70
                                                                                                      "$oid": "6631213ba5f96bac26d6279a"
                                                                                                    },
"id": 2,
" N
                                                                                                    "First_Name": "Frila",
                                                                                                    "Last_Name": "Cahya",
                                                                                                    "Last_Update": "2024-03-11 10:46:54"
                                                                                                      "$oid": "6631213ba5f96bac26d6279b"
                                                                                                    "id": 3,
                                                                                                    "First_Name": "Frila",
"Last_Name": "Wardani",
                                                                                                    "Last_Update": "2024-03-11 10:46:54"
```

- Mengambil dua film dengan rating tertinggi

```
db.film.aggregate([{
    $sort: {
                                                                                                    "_id": {
         Rating: -1
                                                                                                      "$oid": "6631c6b27f35fb7ab70e6f0b"
                                                                                                    "id": 2,
"Title": "Exhuma",
    $limit: 2
                                                                                                    "Release_Year": 2024,
<u>}]</u>)
                                                                                                    "Genre": "Horror",
"Director": "Jang Jae-Hyun",
                                                                                                    "Rating": 5
                                                                                                    "_id": {
                                                                                                      "$oid": "6631c6757f35fb7ab70e6f0a"
                                                                                                    "id": 3,
                                                                                                    "Title": "Mission Impossible: Fallout"
                                                                                                    "Release_Year": 2018,
                                                                                                    "Genre": "Action",
                                                                                                    "Director": "Christoper",
                                                                                                    "Rating": 5
```

- Menghitung jumlah film yang dirilis pada setiap tahun

- Menggabungkan data actor dan film yang mereka bintangi

```
db.actor.aggregate([{
   $lookup: {|
| from: "actor_film",
                                                                                                    localField: "Id",
foreignField: "Actor Id",
                                                                                                  },
"id": 6,
                                                                                                  "Fisrt_Name": "Song",
"Last_Name": "Joong-Ki",
      as: "films"
                                                                                                   "Last_Update": {
                                                                                                     "$date": "2024-05-01T04:44:26.409Z"
                                                                                                   "films": []
                                                                                                   "_id": {
| "$oid": "6631c8aabff744428b27dff3"
                                                                                                  },
"id": 7,
                                                                                                   "Fisrt_Name": "Tom",
                                                                                                   "Last_Name": "Cruise",
                                                                                                   "Last_Update": {
                                                                                                     "$date": "2024-05-01T04:44:26.409Z"
                                                                                                   },
"films": []
                                                                                        84
```

- Menghitung rata-rata durasi film