Vaishnavi Vishwas Pawar

Lab Task Week 10

Part I: Create a JSON file that is equivalent to the related relational tables below.

1-a) Choose an appropriate data type for the BandPhone field and add values to the field.

1-b) Choose an appropriate data type for the Instruments field and add values to the field.

```
{
   "BandID": "TF",
   "BandName": "The Flags",
   "BandPhone": [
      "5551234567",
      "5551238901",
      "5551232345"
   ],
   "Instruments": [
      {
         "InsSerialNo": "1234",
         "InsBrand": "Bender",
         "InsModel": "Mellowcaster"
      },
      {
         "InsSerialNo": "5678",
         "InsBrand": "Atlantic Drums",
         "InsModel": "Jazz Club Pro"
      }
   ]
}
```

Part II: Write MongoDB queries to retrieve data from the *movie* collection containing the six documents below. (Import movie_lab13.json Download movie_lab13.json to populate your MongoDB collection)

2. (Scalar, number, and $gt) Find all documents whose year value is greater than *2010*.

Answer:

{year: {$gt: 2010}}

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Result:

Filter 🔗   {year: {$gt: 2010}}

QUERY RESULTS: **1-3 OF 3**

```
_id: ObjectId('6616ddbfa1c354999fa06783')
title : "Parasite"
year : 2019
▸ genre : Array (3)
▸ director : Object
▸ cast : Array (2)
```

```
_id: ObjectId('6616ddbfa1c354999fa06785')
title : "Begin Again"
year : 2013
▸ genre : Array (3)
▸ director : Object
▸ cast : Array (2)
```

```
_id: ObjectId('6616ddbfa1c354999fa06786')
title : "A Star is Born"
year : 2018
▸ genre : Array (3)
▸ director : Object
▸ cast : Array (2)
```

3. (Scalar and string) Find all documents whose title value is *"Once"*.

Answer:

{title: "Once"}

Result:

Filter ⧉   {title: "Once"}

QUERY RESULTS: 1-1 OF 1

_id: ObjectId('6616ddbfa1c354999fa06784')
title : "Once"
year : 2007
▸ genre : Array (3)
▸ director : Object
▸ cast : Array (2)

4. (Array) Find all documents where genre value is an array that contains the string *"Drama"* as one of its elements.

Answer:

{genre: "Drama"}

Result:

Filter ⧉   {genre: "Drama"}

QUERY RESULTS: 1-6 OF 6

_id: ObjectId('6616ddbfa1c354999fa06781')
title : "Memories of Murder"
year : 2003
▸ genre : Array (5)
▸ director : Object
▸ cast : Array (1)

```
_id: ObjectId('6616ddbfa1c354999fa06782')
title : "Mother"
year : 2009
▶ genre : Array (3)
▶ director : Object
▶ cast : Array (2)
```

```
_id: ObjectId('6616ddbfa1c354999fa06783')
title : "Parasite"
year : 2019
▶ genre : Array (3)
▶ director : Object
▶ cast : Array (2)
```

```
_id: ObjectId('6616ddbfa1c354999fa06784')
title : "Once"
year : 2007
▶ genre : Array (3)
▶ director : Object
▶ cast : Array (2)
```

```
_id: ObjectId('6616ddbfa1c354999fa06785')
title : "Begin Again"
year : 2013
▶ genre : Array (3)
▶ director : Object
▶ cast : Array (2)
```

```
_id: ObjectId('6616ddbfa1c354999fa06786')
title : "A Star is Born"
year : 2018
▶ genre : Array (3)
▶ director : Object
▶ cast : Array (2)
```

5. (Array of documents) Find all documents where the cast array has at least one embedded document that contains the field name that is equal to *"Lady Gaga"*.

Answer:

{"cast.name": "Lady Gaga"}

Result:

```
Filter⬈                  {"cast.name": "Lady Gaga"}
```

QUERY RESULTS: 1-1 OF 1

```
_id: ObjectId('6616ddbfa1c354999fa06786')
title : "A Star is Born"
year : 2018
▶ genre : Array (3)
▶ director : Object
▶ cast : Array (2)
```

6. (Nested field) Find all documents that are directed by *"Bradley Cooper"*.

Answer:

{"director.name": "Bradley Cooper"}

Result:

Filter [link]   {"director.name": "Bradley Cooper"}

QUERY RESULTS: 1-1 OF 1

```
_id: ObjectId('6616ddbfa1c354999fa06786')
title : "A Star is Born"
year : 2018
▸ genre : Array (3)
▸ director : Object
▸ cast : Array (2)
```

7. (Array and $or) Find all documents where the genre is an array that contains either *"Music"* or *"Comedy"*.

Answer:

{$or: [{ genre: 'Music'},{ genre: 'Comedy'}]}

Result:

Filter [link]   {$or: [{ genre: 'Music'},{ genre: 'Comedy'}]}

QUERY RESULTS: 1-4 OF 4

```
_id: ObjectId('6616ddbfa1c354999fa06783')
title : "Parasite"
year : 2019
▸ genre : Array (3)
▸ director : Object
▸ cast : Array (2)
```

```
_id: ObjectId('6616ddbfa1c354999fa06784')
title : "Once"
year : 2007
▸ genre : Array (3)
▸ director : Object
▸ cast : Array (2)
```

```
_id: ObjectId('6616ddbfa1c354999fa06785')
title : "Begin Again"
year : 2013
▸ genre : Array (3)
▸ director : Object
▸ cast : Array (2)
```

```
_id: ObjectId('6616ddbfa1c354999fa06786')
title : "A Star is Born"
year : 2018
▸ genre : Array (3)
▸ director : Object
▸ cast : Array (2)
```

8. (Nested Field and array) Among movies directed by "*Joon-ho Bong*", find all movies where the cast array has at least one embedded document that contains the field name that is equal to *"Kang-ho Song"*.

Answer:

{ "director.name": "Joon-ho Bong", "cast.name": "Kang-ho Song"}

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Result:

Filter⧉   { "director.name": "Joon-ho Bong", "cast.name": "Kang-ho Song"}

QUERY RESULTS: 1-2 OF 2

    _id: ObjectId('6616ddbfa1c354999fa06781')
    title : "Memories of Murder"
    year : 2003
  ▸ genre : Array (5)
  ▸ director : Object
  ▸ cast : Array (1)

    _id: ObjectId('6616ddbfa1c354999fa06783')
    title : "Parasite"
    year : 2019
  ▸ genre : Array (3)
  ▸ director : Object
  ▸ cast : Array (2)