Title: Update, remove and delete command

Aim: To demonstrate variations of update, findOneAndReplace and delete commands on any dataset

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Class: 4BSc DS

NoSQL Lab6

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Importing the dataset

```
C:\Program Files\MongoDB>mongoimport --db employee --collection spotify_data --type=csv --headerline --file="D:/Z/Downloads/Spotify.csv"
2023-03-29T09:20:46.648+0530    connected to: mongodb://localhost/
2023-03-29T09:20:47.217+0530    20718 document(s) imported successfully. 0 document(s) failed to import.
```

```
employee> db.spotify_data.find()
[
  {
    _id: ObjectId("6423b5968bafc3f1b9991695"),
    '': 0,
    Artist: 'Gorillaz',
    Track: 'Feel Good Inc.',
    Album: 'Demon Days',
    Album_type: 'album',
    Danceability: 0.82,
    Energy: 0.71,
    Key: 6,
    Loudness: -6.68,
    Speechiness: 0.18,
    Acousticness: 0.01,
    Instrumentalness: 0,
    Liveness: 0.61,
    Valence: 0.77,
    Tempo: 138.56,
    Duration_ms: 222640
  },
  {
    _id: ObjectId("6423b5968bafc3f1b9991696"),
    '': 1,
    Artist: 'Gorillaz',
    Track: 'Rhinestone Eyes',
    Album: 'Plastic Beach',
    Album_type: 'album',
    Danceability: 0.68,
    Energy: 0.7,
    Key: 8,
    Loudness: -5.82,
    Speechiness: 0.03,
    Acousticness: 0.09,
    Instrumentalness: 0,
    Liveness: 0.05,
    Valence: 0.85,
    Tempo: 92.76,
    Duration_ms: 200173
  },
```

Q1) Update Command

Syntax: db.spotify_data.update({Track: "New Gold (feat. Tame Impala and Bootie Brown) - Dom Dolla Remix"}, {$set: {Album: "New Gold (feat. Tame Impala and Bootie Brown) [Dom Dolla Remix]"}})

Syntax: db.spotify_data.update({Track: "New Gold (feat. Tame Impala and Bootie Brown) - Dom Dolla Remix"}, {$set: {Album_type: "album"}})

Syntax: db.spotify_data.find({Track: {$eq: "New Gold (feat. Tame Impala and Bootie Brown) - Dom Dolla Remix"}})

```
employee> db.spotify_data.update({Track: "New Gold (feat. Tame Impala and Bootie Brown) - Dom Dolla Remix"}, {$set: {Album_type: "album"}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
employee> db.spotify_data.update({Track: "New Gold (feat. Tame Impala and Bootie Brown) - Dom Dolla Remix"}, {$set: {Album: "New Gold (feat. Tame Impala and Bootie Brown) [Dom Dolla Remix]"}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
employee> db.spotify_data.find({Track: {$eq: "New Gold (feat. Tame Impala and Bootie Brown) - Dom Dolla Remix"}})
[
  {
    _id: ObjectId("6423b5968bafc3f1b999169a"),
    '': 6,
    Artist: 'Gorillaz',
    Track: 'New Gold (feat. Tame Impala and Bootie Brown) - Dom Dolla Remix',
    Album: 'New Gold (feat. Tame Impala and Bootie Brown) [Dom Dolla Remix]',
    Album_type: 'album',
    Danceability: 0.72,
    Energy: 0.9,
    Key: 4,
    Loudness: -7.19,
    Speechiness: 0.06,
    Acousticness: 0.01,
    Instrumentalness: 0.26,
    Liveness: 0.33,
    Valence: 0.36,
    Tempo: 127.03,
    Duration_ms: 274142
  },
  {
    _id: ObjectId("6423b5978bafc3f1b9994b8a"),
    '': 13557,
    Artist: 'Tame Impala',
    Track: 'New Gold (feat. Tame Impala and Bootie Brown) - Dom Dolla Remix',
    Album: 'New Gold (feat. Tame Impala and Bootie Brown) [Dom Dolla Remix]',
    Album_type: 'single',
    Danceability: 0.72,
    Energy: 0.9,
    Key: 4,
    Loudness: -7.19,
    Speechiness: 0.06,
    Acousticness: 0.01,
    Instrumentalness: 0.26,
```

Q2) Update command to update more than one document

Syntax: db.spotify_data.update({Album: "Get Rich Or Die Tryin'"}, {$set: {Instrumentalnass: 0.02}}, {multi: true})

Syntax: db.spotify_data.find({Album: "Get Rich Or Die Tryin'"}, {Instrumentalnass: 1})

```
employee> db.spotify_data.update({Album: "Get Rich Or Die Tryin'"}, {$set: {Instrumentalnass: 0.02}}, {multi: true})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 5,
  modifiedCount: 5,
  upsertedCount: 0
}
```

```
employee> db.spotify_data.find({Album: "Get Rich Or Die Tryin'"}, {Instrumentalnass: 1})
[
  { _id: ObjectId("6423b5968bafc3f1b99916a8"), Instrumentalnass: 0.02 },
  { _id: ObjectId("6423b5968bafc3f1b99916ab"), Instrumentalnass: 0.02 },
  { _id: ObjectId("6423b5968bafc3f1b99916ac"), Instrumentalnass: 0.02 },
  { _id: ObjectId("6423b5968bafc3f1b99916b0"), Instrumentalnass: 0.02 },
  { _id: ObjectId("6423b5968bafc3f1b99916b1"), Instrumentalnass: 0.02 }
]
```

Q3) updateMany command

Syntax: db.updateMany({Album: "Californication (Deluxe Edition)"}, {$set: {Instrumentalnass: 0.05}})

```
employee> db.spotify_data.updateMany({Album: "Californication (Deluxe Edition)"}, {$set: {Instrumentalnass: 0.05}})
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 3,
  modifiedCount: 3,
  upsertedCount: 0
}
employee> db.spotify_data.find({Album: "Californication (Deluxe Edition)"}, {Instrumentalnass: 1})
[
  { _id: ObjectId("6423b5968bafc3f1b999169e"), Instrumentalnass: 0.05 },
  { _id: ObjectId("6423b5968bafc3f1b99916a1"), Instrumentalnass: 0.05 },
  { _id: ObjectId("6423b5968bafc3f1b99916a3"), Instrumentalnass: 0.05 }
]
```

Q4) FindOneAndReplace to find one key:value and update more than one key:value pairs.

Syntax: db.spotify_data.findOneAndUpdate({Loudness: {$lt: -10}}, {$inc: {Danceability: 0.1}}, {returnNewDocument: true})

```
employee> db.spotify_data.findOneAndUpdate({Loudness: {$lt: -10}}, {$inc: {Danceability: 0.1}}, {returnNewDocument: true})
{
  _id: ObjectId("6423b5968bafc3f1b99916a0"),
  '': 11,
  Artist: 'Red Hot Chili Peppers',
  Track: 'Under the Bridge',
  Album: 'Blood Sugar Sex Magik (Deluxe Edition)',
  Album_type: 'album',
  Danceability: 0.66,
  Energy: 0.35,
  Key: 4,
  Loudness: -13.5,
  Speechiness: 0.05,
  Acousticness: 0.06,
  Instrumentalness: 0,
  Liveness: 0.14,
  Valence: 0.46,
  Tempo: 84.58,
  Duration_ms: 264307
}
```

Q5) findOneAndUpdate with projection, sort, upsert, returnNewDocument, arrayFilters option.

Syntax: db.spotify_data.findOneAndUpdate({Loudness: {$lt: -10}}, {$inc: {Danceability: 0.1}}, {projection: {Artist: 1, Track: 1, Album: 1}, sort: {"Duration_ms": 1}, returnNewDocument: true, upsert: true})

```
employee> db.spotify_data.findOneAndUpdate({Loudness: {$lt: -10}}, {$set: {Danceability: 0.5}}, {projection: {Artist: 1, Track: 1, Album: 1}, sort: {"Duration_ms": 1}, returnNewDocument: true, upsert: true})
{
  _id: ObjectId("6423b5968bafc3f1b999452b"),
  Artist: 'Estelle',
  Track: 'Steven Universe Future (Opening Theme) / Title Card',
  Album: 'Steven Universe Future (Original Soundtrack)'
}
employee> db.spotify_data.find({Track: "Steven Universe Future (Opening Theme) / Title Card"})
[
  {
    _id: ObjectId("6423b5968bafc3f1b999452b"),
    '': 11926,
    Artist: 'Estelle',
    Track: 'Steven Universe Future (Opening Theme) / Title Card',
    Album: 'Steven Universe Future (Original Soundtrack)',
    Album_type: 'album',
    Danceability: 0.5,
    Energy: 0.43,
    Key: 9,
    Loudness: -10.76,
    Speechiness: 0.04,
    Acousticness: 0.44,
    Instrumentalness: 0,
    Liveness: 0.09,
    Valence: 0.27,
    Tempo: 92.77,
    Duration_ms: 30985
  }
]
```

Q6) findOneAndUpdate with aggregation operators and inc

Syntax: db.spotify_data.findOneAndUpdate({": {$gt:0}}, {$set: {"Total": {$sum: ["$Danceability", "$Energy", "$Key", "$Loudness", "$Speechiness", "$Acousticness", "$Instrumentalness", "$Liveness", "$Valence", "$Tempo", "$Acoustine"]}}}, {upsert: true})

Q7) Replace command in try catch block

Syntax: try{db.spotify_data.findOneAndUpdate({": {$gt:0}}, {$set: {"Total": {$sum: ["$Danceability", "$Energy", "$Key", "$Loudness", "$Speechiness", "$Acousticness", "$Instrumentalness", "$Liveness", "$Valence", "$Tempo", "$Acoustine"]}}}, {upsert: true})}

catch(e) {print(e);}

```
employee> try{
... db.spotify_data.findOneAndUpdate({'': {$gt:0}}, {$set: {"Total": {$sum: ["$Danceability", "$Energy", "$Key", "$Loudness", "$Speechiness", "$Acousticness", "$Instrumentalness", "$Liveness", "$Valence", "$Tempo", "$Acoustine"]}}}, {upsert: true})}
... catch(e){
... print(e);}
{
  _id: ObjectId("6423b5968bafc3f1b9991696"),
  '': 1,
  Artist: 'Gorillaz',
  Track: 'Rhinestone Eyes',
  Album: 'Plastic Beach',
  Album_type: 'album',
  Danceability: 0.68,
  Energy: 0.7,
  Key: 8,
  Loudness: -5.82,
  Speechiness: 0.03,
  Acousticness: 0.09,
  Instrumentalness: 0,
  Liveness: 0.05,
  Valence: 0.85,
  Tempo: 92.76,
  Duration_ms: 200173,
  Total: {
    '$sum': [
      '$Danceability',
      '$Energy',
      '$Key',
      '$Loudness',
      '$Speechiness',
      '$Acousticness',
      '$Instrumentalness',
      '$Liveness',
      '$Valence',
      '$Tempo',
      '$Acoustine'
    ]
  }
}
```

Q8) Remove command, deleteOne and deleteMany commands

Syntax: db.spotify_collection.remove({": (db.spotify_data.count() - 1)})

Syntax: db.spotify_data.find({":20717})

```
employee> db.spotify_collection.remove({'': (db.spotify_data.count() - 1)})
{ acknowledged: true, deletedCount: 0 }
employee> db.spotify_data.find({'':20717})
[
  {
    _id: ObjectId("6423b5978bafc3f1b9996782"),
    '': 20717,
    Artist: 'SICK LEGEND',
    Track: 'MISS YOU HARDSTYLE',
    Album: 'MISS YOU HARDSTYLE',
    Album_type: 'single',
    Danceability: 0.5,
    Energy: 0.94,
    Key: 6,
    Loudness: -4.54,
    Speechiness: 0.11,
    Acousticness: 0,
    Instrumentalness: 0.91,
    Liveness: 0.14,
    Valence: 0.08,
    Tempo: 160.07,
    Duration_ms: 181500
  }
]
```

Syntax: db.spotify_data.find({Album: "Get Rich Or Die Tryin'"}).count()

Syntax: db.spotify_collection.deleteOne({Album: "Get Rich Or Die Tryin'"})

```
employee> db.spotify_data.find({Album: "Get Rich Or Die Tryin'"}).count()
5

employee> db.spotify_collection.deleteOne({Album: "Get Rich Or Die Tryin'"})
{ acknowledged: true, deletedCount: 0 }
```

Syntax: db.spotify_collection.deleteMany({Album: "Get Rich Or Die Tryin'"})

```
employee> db.spotify_collection.deleteMany({Album: "Get Rich Or Die Tryin'"})
{ acknowledged: true, deletedCount: 0 }
```