W9 Class Activity : Insert Update

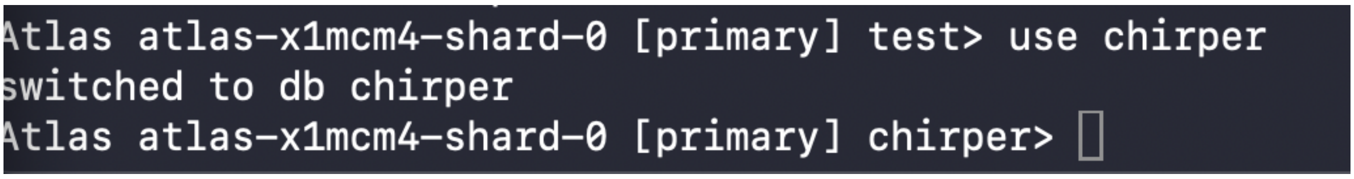
#CS364 #mongoDB

Exercise 1: Create Database

The use keyword allows us to either switch to or create a database

- Create a new database named chirper with the following command:

  `use chirper`



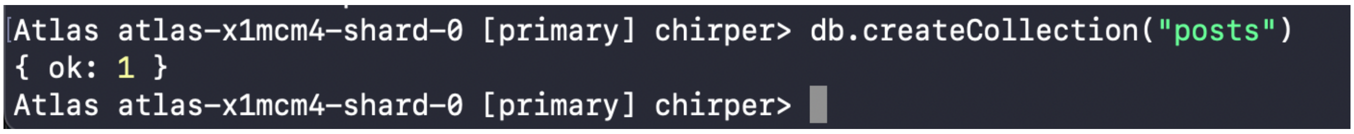
```
Atlas atlas-x1mcm4-shard-0 [primary] test> use chirper
switched to db chirper
Atlas atlas-x1mcm4-shard-0 [primary] chirper>
```

Exercise 2: Create Collection

We can create a new collection one of two ways, this one is less accident prone.

- Use the createCollection function to create a new collection:

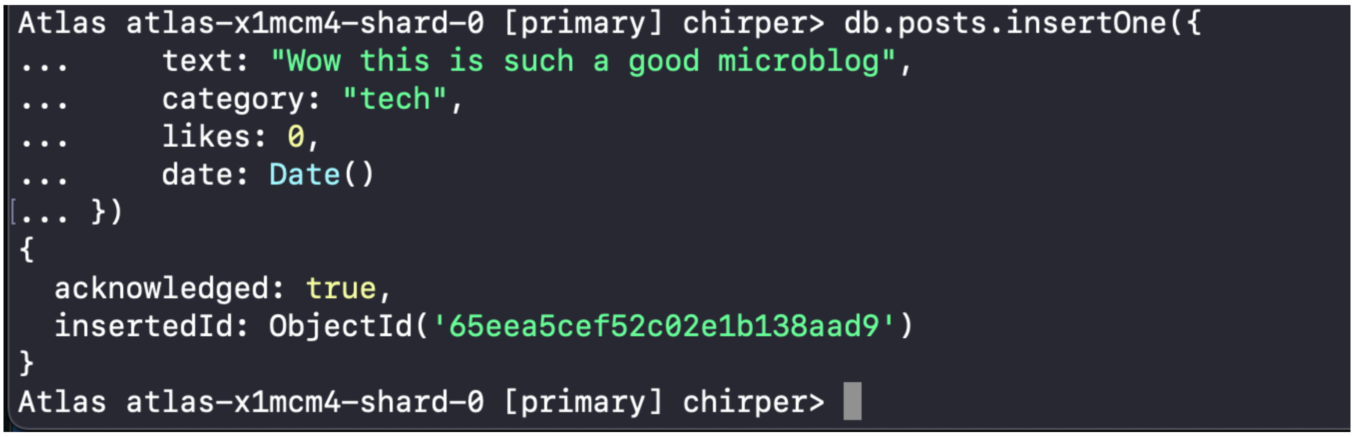
  `db.createCollection("posts")`



```
Atlas atlas-x1mcm4-shard-0 [primary] chirper> db.createCollection("posts")
{ ok: 1 }
Atlas atlas-x1mcm4-shard-0 [primary] chirper>
```

Exercise 3: Insert into collection

Now we have a posts collection with no data in it. Let's put a post in there.

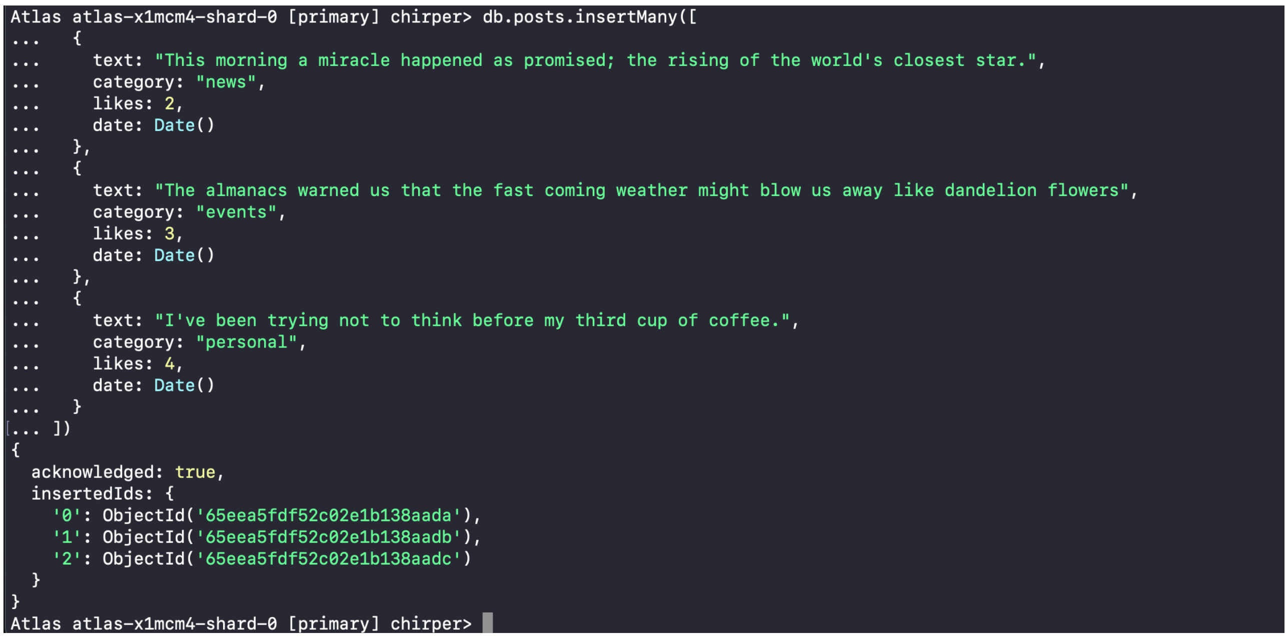


```
Atlas atlas-x1mcm4-shard-0 [primary] chirper> db.posts.insertOne({
...     text: "Wow this is such a good microblog",
...     category: "tech",
...     likes: 0,
...     date: Date()
... })
{
  acknowledged: true,
  insertedId: ObjectId('65eea5cef52c02e1b138aad9')
}
Atlas atlas-x1mcm4-shard-0 [primary] chirper>
```

Exercise 4: Insert Many

We can do a batch insert if we use the insertMany function.

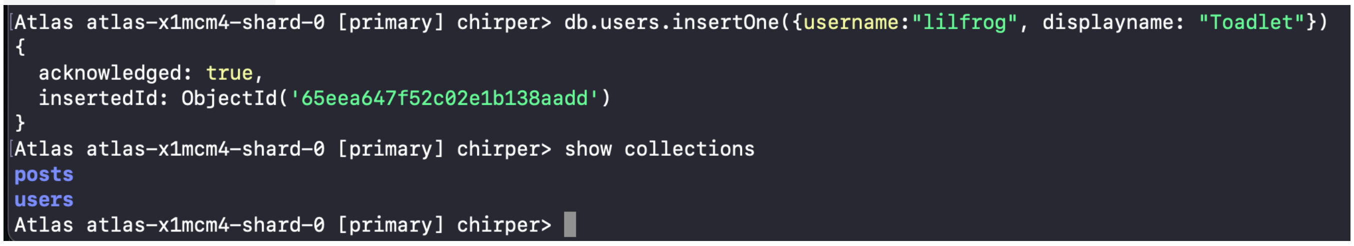
- Use the `db.posts.insertMany([])` function to insert at least 3 posts.
- You can use whatever object formatting you like, but should include the fields in the following:

- 

```
Atlas atlas-x1mcm4-shard-0 [primary] chirper> db.posts.insertMany([
...   {
...     text: "This morning a miracle happened as promised; the rising of the world's closest star.",
...     category: "news",
...     likes: 2,
...     date: Date()
...   },
...   {
...     text: "The almanacs warned us that the fast coming weather might blow us away like dandelion flowers",
...     category: "events",
...     likes: 3,
...     date: Date()
...   },
...   {
...     text: "I've been trying not to think before my third cup of coffee.",
...     category: "personal",
...     likes: 4,
...     date: Date()
...   }
... ])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('65eea5fdf52c02e1b138aada'),
    '1': ObjectId('65eea5fdf52c02e1b138aadb'),
    '2': ObjectId('65eea5fdf52c02e1b138aadc')
  }
}
Atlas atlas-x1mcm4-shard-0 [primary] chirper>
```

Exercise 5: Create on Insert

```
db.users.insertOne({username:"lilfrog", displayname: "Toadlet"})
show collections
```

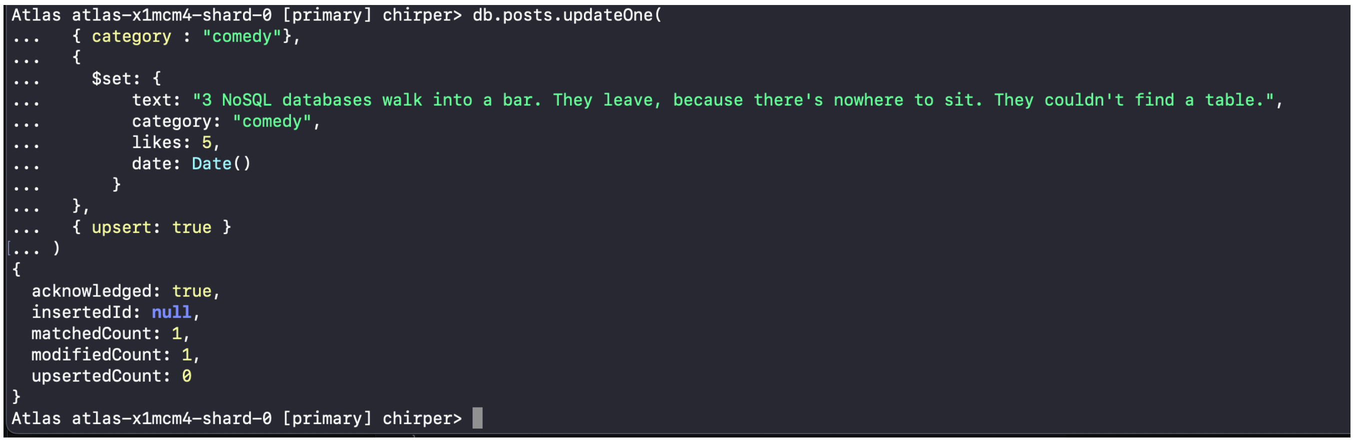


```
Atlas atlas-x1mcm4-shard-0 [primary] chirper> db.users.insertOne({username:"lilfrog", displayname: "Toadlet"})
{
  acknowledged: true,
  insertedId: ObjectId('65eea647f52c02e1b138aadd')
}
Atlas atlas-x1mcm4-shard-0 [primary] chirper> show collections
posts
users
Atlas atlas-x1mcm4-shard-0 [primary] chirper>
```

Exercise 7: Upsert

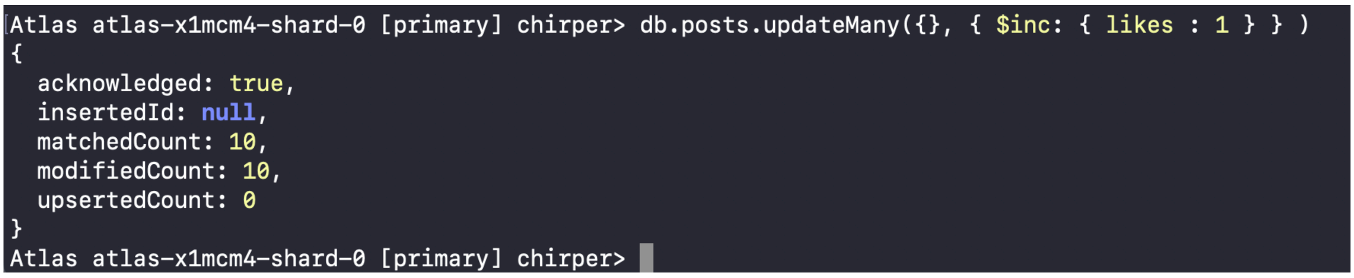
We can pass in an object to signal to mongodb to both either update an existing document, or if the document doesn't already exist, to create one.

- We we're going to use 3 objects:
  - An object used to query, the first object
    - { category : "comedy"}
  - An object to target, and then update, a particular set of fields
    - { $set: { field: ...} }
  - An object used to signal the "update if doesn't exist", aka upsert.
    - { upsert : true}



```
Atlas atlas-x1mcm4-shard-0 [primary] chirper> db.posts.updateOne(
...    { category : "comedy"},
...    {
...      $set: {
...          text: "3 NoSQL databases walk into a bar. They leave, because there's nowhere to sit. They couldn't find a table.",
...          category: "comedy",
...          likes: 5,
...          date: Date()
...        }
...    },
...    { upsert: true }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
Atlas atlas-x1mcm4-shard-0 [primary] chirper>
```

Exercise 8: Update Many



```
Atlas atlas-x1mcm4-shard-0 [primary] chirper> db.posts.updateMany({}, { $inc: { likes : 1 } } )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 10,
  modifiedCount: 10,
  upsertedCount: 0
}
Atlas atlas-x1mcm4-shard-0 [primary] chirper>
```