

LAB 4: MIDDLEWARE WITH BACKEND

Date: October 22, 2024

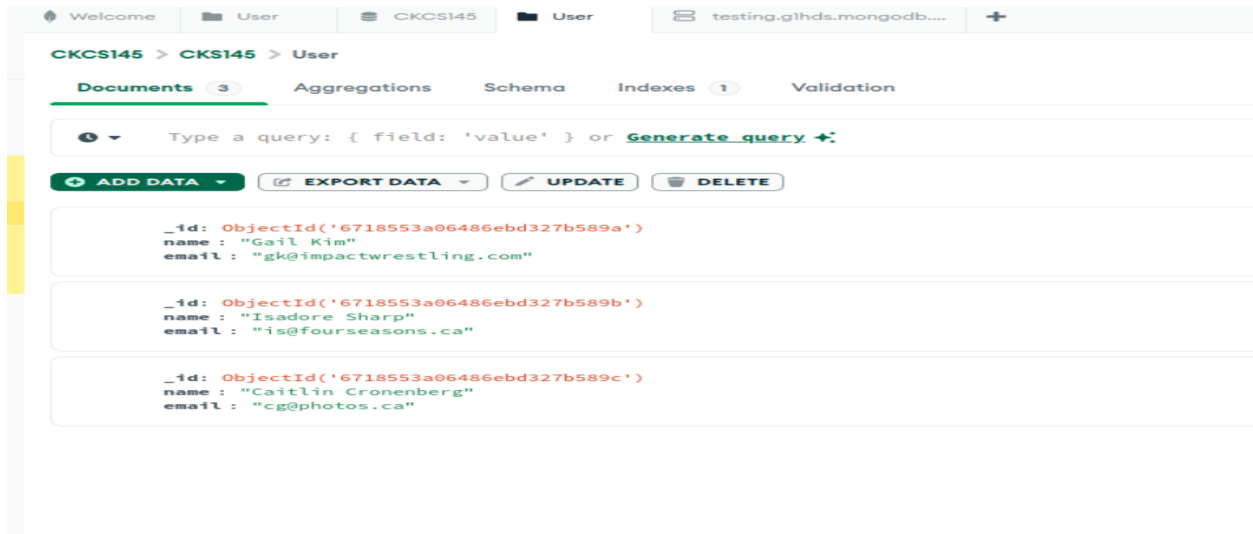
1 Python Code

```
1 from flask import Flask, jsonify, request
2 import mongoengine as db
3 import json
4
5 # Create Flask application object
6 app = Flask(__name__)
7
8 # Create connection to CKCS145 MongoDB database
9 client = db.connect('CKS145', username='', password='')
10
11 # Data Class for accessing MongoDB collection
12 class User(db.Document):
13     name = db.StringField(required=True)
14     email = db.StringField(required=True)
15     meta = {'collection': 'User', 'allow_inheritance': False}
16
17 # A test route to determine if Flask application is initialized properly.
18 # http://localhost:5000/test
19 @app.route('/test', methods=['GET'])
20 def test_route():
21     return 'test'
22
23 # A route to list all users.
24 # http://localhost:5000/user/list
25 @app.route('/user/list', methods=['GET'])
26 def list_all_users():
27     users = User.objects()
28     return jsonify(json.loads(users.to_json()))
29
30 # A route that allows the insertion of a single user.
31 # http://localhost:5000/user/insert
32 @app.route('/user/insert', methods=['POST'])
33 def create_user():
34     name = request.form.get('user_name')
35     email = request.form.get('user_email')
```

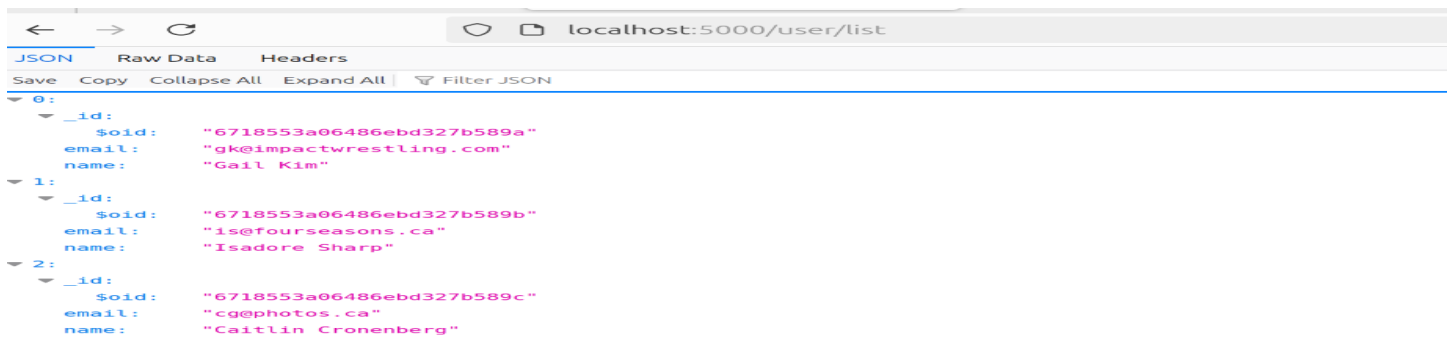
2 <http://localhost:5000/test>



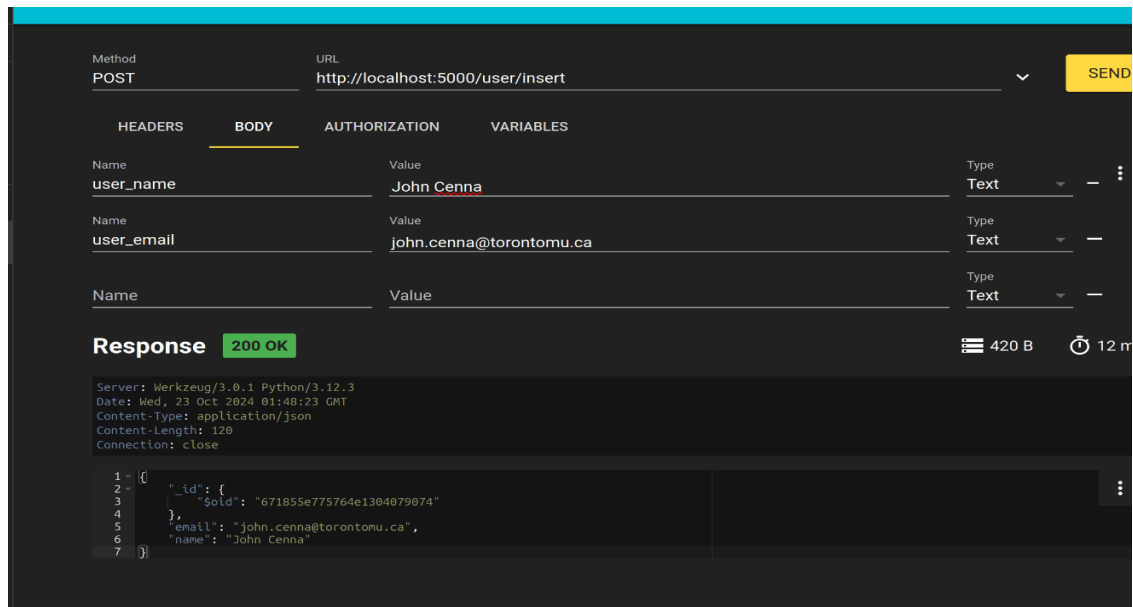
3 MongoDB Compass and CKCS145 database with collection



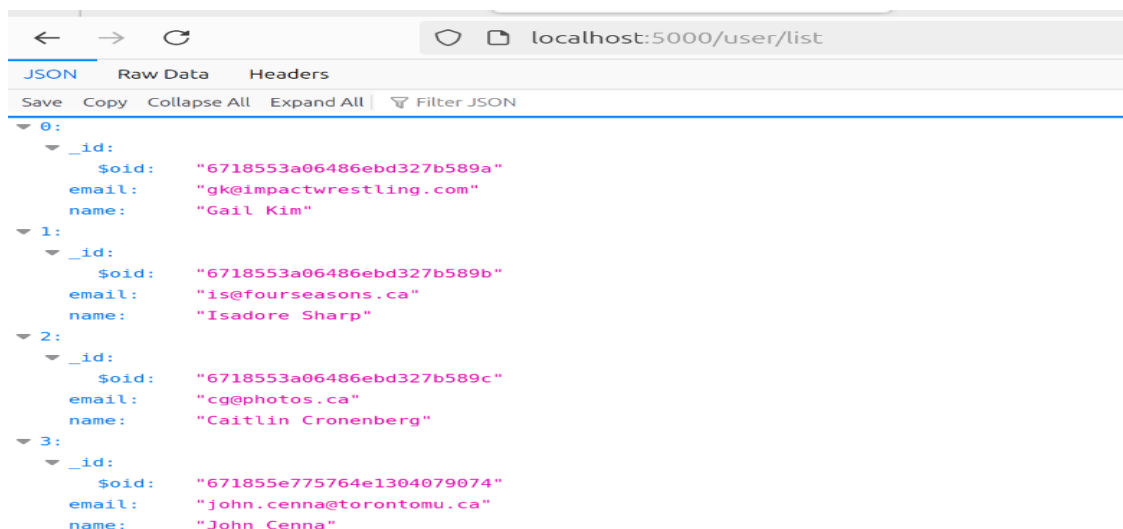
4 <http://localhost:5000/user/list>



5 POST request using RESTer



6 MongoDB Compass and with updated CKCS145 database



7 In this lab, only GET and POST requests are used. Why are PUT and DELETE requests not used?

The lab uses GET and POST for simplicity and compatibility, while PUT and DELETE are not needed for the basic scenarios covered in the lab.