

Programming Homework 4

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Submission Instructions:

File > Print > Save As... > Save as PDF > Upload to GradeScope > Assign Pages

```
In [1]: # Use IPython Image to display screenshots, NOT embedded HTML
from IPython.display import Image
```

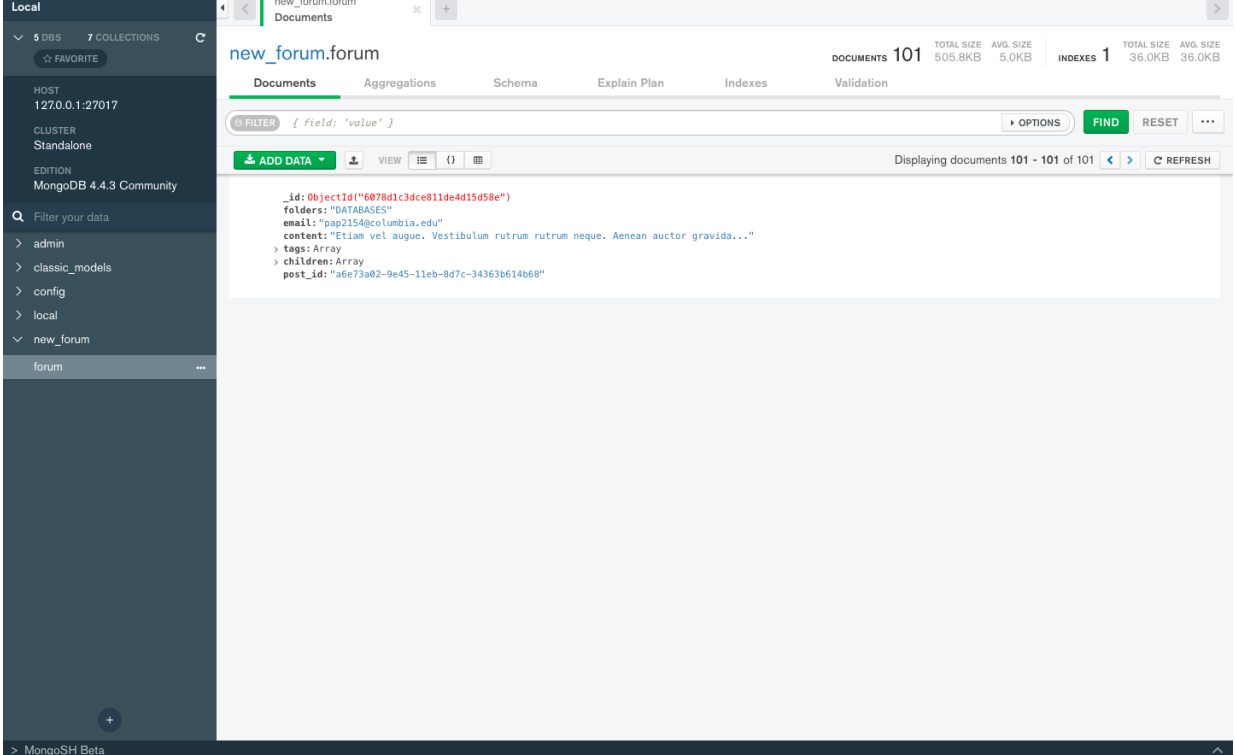
POST /api/forums

Text:

```
127.0.0.1 - - [15/Apr/2021 19:52:35] "POST /api/forums HTTP/1.1"
201 -
```

```
In [14]: #Screenshot
Image('mongoCompassPOSTforums.png')
```

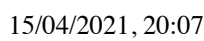
Out[14]:



The screenshot displays the MongoDB Compass web interface. On the left sidebar, the 'Local' section shows a list of databases and collections. The 'new_forum' database is selected, and the 'forum' collection is highlighted. The main panel shows the 'new_forum.forum' collection with 101 documents. A single document is displayed in the 'Documents' tab, showing fields: '_id' (ObjectId), 'folders' (string), 'email' (string), 'content' (string), 'tags' (array), 'children' (array), and 'post_id' (string). The document content is:

```
{ '_id': ObjectId('6078d1c3dce811de4d15d58e'), 'folders': 'DATABASES', 'email': 'pap2154@columbia.edu', 'content': 'Etiam vel augue. Vestibulum rutrum rutrum neque. Aenean auctor gravida...', 'tags': Array, 'children': Array, 'post_id': 'a6e73a02-9e45-11eb-8d7c-34363b614b68' }
```

```
In [15]: #Screenshot
Image('mongoPOSTforums.png')
```



Out[3]:

The screenshot shows a REST client interface with a list of requests on the left and a detailed view of a GET request on the right. The GET request is to `http://127.0.0.1:5001/api/forums` and returns a 200 OK status. The response body is a JSON object:

```

{
  "_id": "60689ecfb8f373edd26f1265",
  "post_id": "08858bfb-9e1f-4698-a55b-53d34efda015",
  "postdate": "2/25/21",
  "folders": "LOGISTICS",
  "email": "agrziesiewicz8@psu.edu",
  "content": "Etiam vel augue. Vestibulum rutrum rutrum neque. Aenean auctor gravida sem.",
  "tags": [
    "KPM",
    "EXAMS",
    "WHY_ME"
  ],
  "children": [
    {
      "comment_id": "df418109-dcd9-4492-b26f-5b5db4a32ce5",
      "parent_id": "08858bfb-9e1f-4698-a55b-53d34efda015",
      "response_date": "3/19/2021",
      "email": "swoodford5a@imdb.com",
      "response_text": "Maecenas ut massa quis augue luctus tincidunt. Nulla mollis molestie lorem. Quisque ut erat.",
      "tags": [
        "WHY_ME",
        "OFFICE_HOURS"
      ]
    }
  ]
}

```

GET /api/forums?qs

Text:

```
127.0.0.1 - - [15/Apr/2021 19:28:23] "GET
/api/forums?folders=HW1 HTTP/1.1" 200 -
```

In [4]:

```
#Screenshot
Image('mongoGETforumsQ.png')
```

Out[4]:

The screenshot shows a REST client interface with a sidebar on the left displaying a history of requests. The main panel shows an 'Untitled Request' with a GET method to the URL 'http://127.0.0.1:5001/api/forums?folders=HW1'. The 'Query Params' section shows a parameter 'folders' with the value 'HW1'. The 'Body' tab is selected, showing a JSON response in 'Pretty' format. The response status is 200 OK, with a time of 96 ms and a size of 105.37 KB. The JSON response is as follows:

```

{
  "_id": "60689ecfb8f373ed426f1266",
  "post_id": "1383e8ba-063f-42b4-b93d-34709d6ba9c5",
  "postdate": "12/16/20",
  "folders": "HW1",
  "email": "lwainman14@360.cn",
  "content": "Curabitur gravida nisi at nibh. In hac habitasse platea dictumst. Aliquam augue quam, sollicitudin vitae, consectetur eget, rutrum at, lorem.\n\nInteger tincidunt ante vel ipsum. Praesent blandit lacinia erat. Vestibulum sed magna at nunc commodo placerat.",
  "tags": [
    "HW3",
    "LOGISTICS",
    "LOGISTICS"
  ],
  "children": [
    {
      "comment_id": "fd467a6a-e98e-4383-9d24-8a83a5644fa3",
      "parent_id": "1383e8ba-063f-42b4-b93d-34709d6ba9c5",
      "response_date": "8/13/2020",
      "email": "amatiebemq@examiner.com",
      "response_text": "Cras mi pede, malesuada in, imperdiet et, commodo vulputate, justo. In blandit ultrices enim. Lorem ipsum dolor sit amet, consectetur adipiscing elit.",
      "tags": [

```

GET /api/forums/post_id

Text:

```
127.0.0.1 - - [15/Apr/2021 19:31:00] "GET /api/forums/31db189c-
f5f5-4d3e-a3b5-4f5514b40925 HTTP/1.1" 200 -
```

In [6]:

```
#Screenshot
Image('mongoGETforumspost_id.png')
```

Out[6]:

The screenshot shows a REST client interface with a sidebar on the left containing a history of requests. The main area displays an 'Untitled Request' with a GET method to the URL `http://127.0.0.1:5001/api/forums/31db189c-f5f5-4d3e-a3b5-4f5514b40925`. The response body is shown in a JSON format, indicating a successful status of 200 OK.

```

{
  "_id": "60689ecfb8f373edd26f1274",
  "post_id": "31db189c-f5f5-4d3e-a3b5-4f5514b40925",
  "postdate": "11/15/20",
  "folders": "HW1",
  "email": "ppitcaithly2e@ucsd.edu",
  "content": "Maecenas leo odio, condimentum id, luctus nec, molestie sed, justo. Pellentesque viverra pede ac diam. Cras pellentesque volutpat dui. Maecenas tristique, est et tempus semper, est quam pharetra magna, ac consequat metus sapien ut nunc. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Mauris viverra diam vitae quam. Suspendisse potenti. Nullam porttitor lacus at turpis. Donec posuere metus vitae ipsum. Aliquam non mauris.",
  "tags": [
    "HW4",
    "EXAMS",
    "HW3"
  ],
  "children": [
    {
      "comment_id": "bab9ac13-11b2-4da9-89ff-b64993600714",
      "parent_id": "31db189c-f5f5-4d3e-a3b5-4f5514b40925",
      "response_date": "8/22/2020",
      "email": "pcundyli@washington.edu",
      "response_text": "Curabitur at ipsum ac tellus semper interdum. Mauris ullamcorper purus sit amet nulla. Quisque arcu libero, rutrum ac, lobortis vel, dapibus at, diam."
    }
  ]
}

```

GET /api/forums/post_id?qs

Text:

```
127.0.0.1 - - [15/Apr/2021 19:33:41] "GET /api/forums/31db189c-f5f5-4d3e-a3b5-4f5514b40925?folders=HW1 HTTP/1.1" 200 -
```

In [7]:

```
#Screenshot
Image('mongoGETforumspost_idQ.png')
```

Out[7]:

The screenshot shows a REST client interface with the following components:

- History:** A list of recent requests, including GET and POST requests to various API endpoints.
- Untitled Request:** A configuration panel for a new request. The method is GET, and the URL is `http://127.0.0.1:5001/api/forums/31db189c-f5f5-4d3e-a3b5-4f5514b40925/folders=HW1`.
- Params:** A table for query parameters. The 'folders' parameter has a value of 'HW1'.
- Body:** The response body is displayed in JSON format, showing a detailed object with fields like `_id`, `post_id`, `postdate`, `folders`, `email`, `content`, `tags`, and `children`.
- Status:** The request was successful with a status of 200 OK, a response time of 8 ms, and a size of 4.43 KB.

GET /api/forums/post_id/comments/comment_id

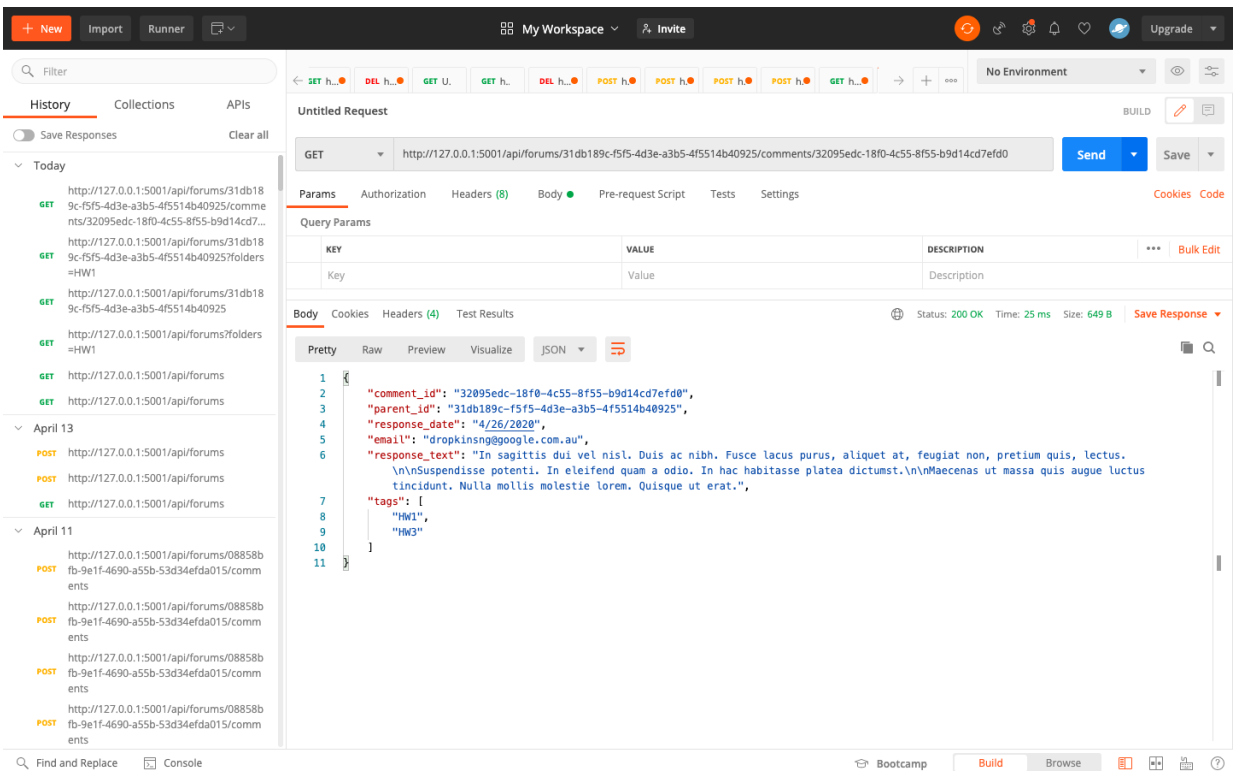
Text:

```
127.0.0.1 - - [15/Apr/2021 19:35:50] "GET /api/forums/31db189c-f5f5-4d3e-a3b5-4f5514b40925/comments/32095edc-18f0-4c55-8f55-b9d14cd7efd0 HTTP/1.1" 200 -
```

In [9]:

```
#Screenshot
Image('mongoGETforumscomment_id.png')
```

Out[9]:



The screenshot shows a REST client interface with the following details:

- History:** A list of recent requests, including GET and POST requests to various API endpoints.
- Current Request:** A GET request to `http://127.0.0.1:5001/api/forums/31db189c-f5f5-4d3e-a3b5-4f5514b40925/comments/32095edc-18f0-4c55-8f55-b9d14cd7efd0`.
- Response:** A successful response (Status: 200 OK) with a JSON body containing comment details:


```

1 {
2   "comment_id": "32095edc-18f0-4c55-8f55-b9d14cd7efd0",
3   "parent_id": "31db189c-f5f5-4d3e-a3b5-4f5514b40925",
4   "response_date": "4/26/2020",
5   "email": "dropkinsng@google.com.au",
6   "response_text": "In sagittis dui vel nisl. Duis ac nibh. Fusce lacus purus, aliquet at, feugiat non, pretium quis, lectus.
7   \n\nSuspendisse potenti. In eleifend quam a odio. In hac habitasse platea dictumst.\n\nMaecenas ut massa quis augue luctus
8   tincidunt. Nulla mollis molestie lorem. Quisque ut erat.",
9   "tags": [
10     "HW1",
11     "HW3"
12   ]
13 }
```

GET /api/forums/post_id/comments/comment_id?qs

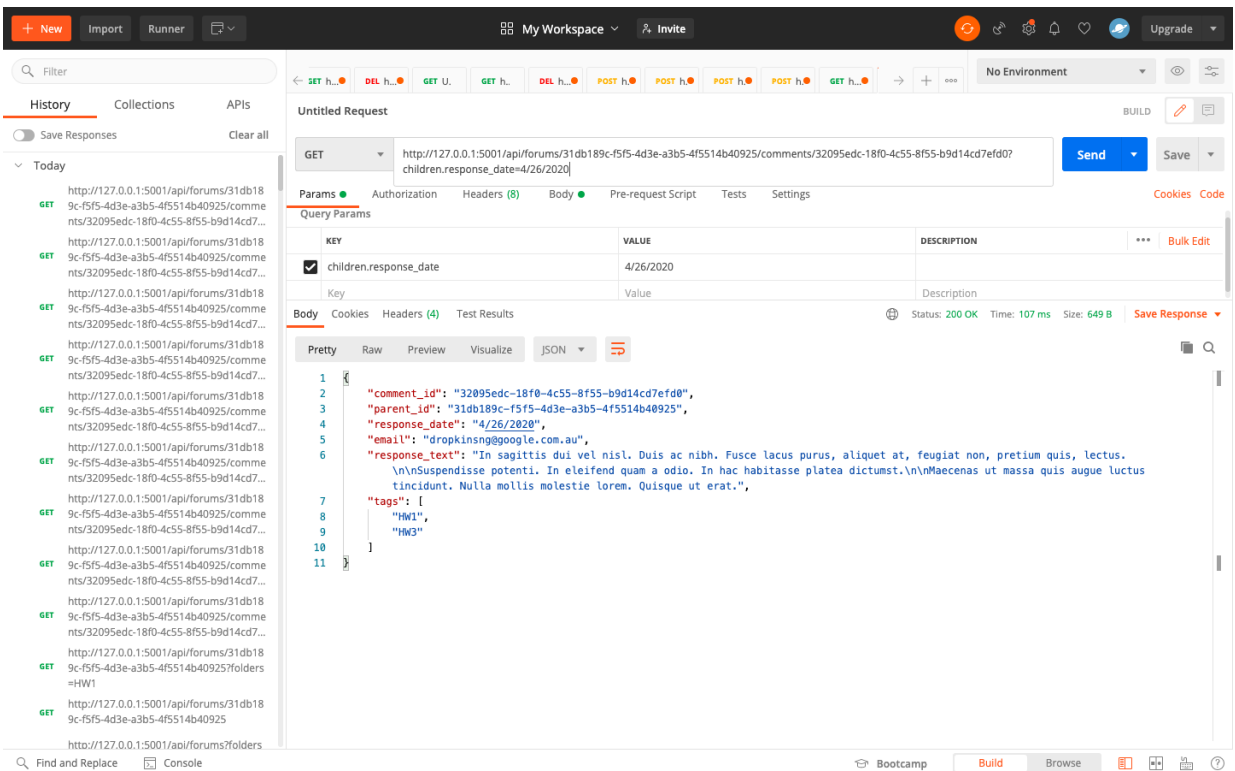
Text:

```
127.0.0.1 - - [15/Apr/2021 19:43:16] "GET /api/forums/31db189c-f5f5-4d3e-a3b5-4f5514b40925/comments/32095edc-18f0-4c55-8f55-b9d14cd7efd0?children.response_date=4/26/2020 HTTP/1.1" 200 -
```

In [10]:

```
#Screenshot
Image('mongoGETforumscomment_idQ.png')
```

Out[10]:



The screenshot shows a REST client interface with a list of requests on the left and a detailed view of a selected GET request on the right. The selected request is to the endpoint `http://127.0.0.1:5001/api/forums/31db189c-f5f5-4d3e-a3b5-4f5514b40925/comments/32095edc-18f0-4c55-8f55-b9d14cd7efd0?children.response_date=4/26/2020`. The response is a JSON object with the following structure:

```

{
  "comment_id": "32095edc-18f0-4c55-8f55-b9d14cd7efd0",
  "parent_id": "31db189c-f5f5-4d3e-a3b5-4f5514b40925",
  "response_date": "4/26/2020",
  "email": "dropkinsng@google.com.au",
  "response_text": "In sagittis dui vel nisl. Duis ac nibh. Fusce lacus purus, aliquet at, feugiat non, pretium quis, lectus. \n\nSuspendisse potenti. In eleifend quam a odio. In hac habitasse platea dictumst.\n\nMaecenas ut massa quis augue luctus tincidunt. Nulla mollis molestie lorem. Quisque ut erat.",
  "tags": [
    "HW1",
    "HW3"
  ]
}

```

GET /api/forums/post_id/comments

Text:

```
127.0.0.1 - - [15/Apr/2021 19:46:06] "GET /api/forums/31db189c-f5f5-4d3e-a3b5-4f5514b40925/comments HTTP/1.1" 200 -
```

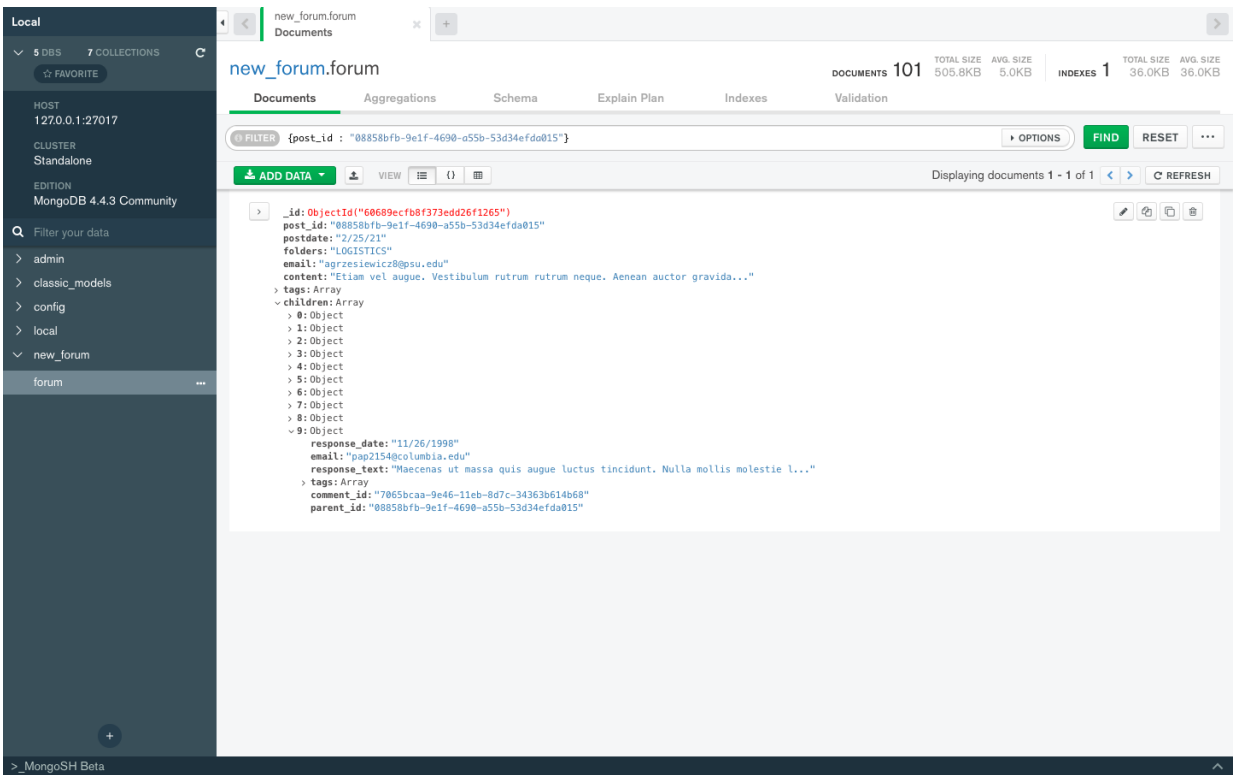
In [11]:

```
#Screenshot
Image('mongoGETforumscomments.png')
```



```
#Screenshot
Image('mongoCompassPOSTcomments.png')
```

Out[16]:



```

{
  "_id": ObjectId("60609ecfb8f373edd26f1265"),
  "post_id": "08858bfb-9e1f-4690-a55b-53d34efda015",
  "postdate": "2/25/21",
  "folders": "LOGISTICS",
  "email": "agresiewicz@psu.edu",
  "content": "Etiam vel augue. Vestibulum rutrum rutrum neque. Aenean auctor gravida...",
  "tags": Array,
  "children": Array,
  "response_date": "11/26/1998",
  "email": "pap2154@columbia.edu",
  "response_text": "Maecenas ut massa quis augue luctus tincidunt. Nulla mollis molestie l...",
  "comment_id": "7865bcaa-9e46-11eb-8d7c-34363b614b68",
  "parent_id": "08858bfb-9e1f-4690-a55b-53d34efda015"
}

```

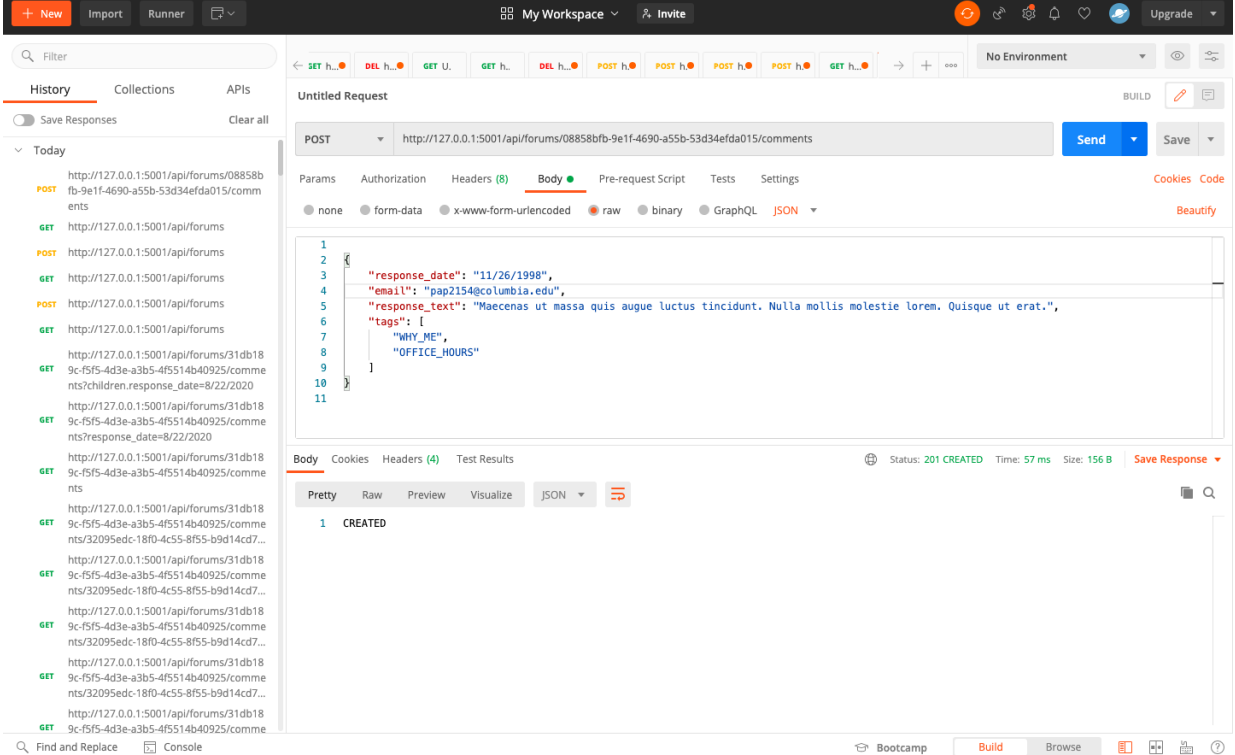
In [17]:

```

#Screenshot
Image( 'mongoPOSTcomments.png' )

```

Out[17]:



```

POST http://127.0.0.1:5001/api/forums/08858bfb-9e1f-4690-a55b-53d34efda015/comments
{
  "response_date": "11/26/1998",
  "email": "pap2154@columbia.edu",
  "response_text": "Maecenas ut massa quis augue luctus tincidunt. Nulla mollis molestie lorem, Quisque ut erat.",
  "tags": [
    "WHY_ME",
    "OFFICE_HOURS"
  ]
}

```

Status: 201 CREATED Time: 57 ms Size: 156 B Save Response

GET /api/forums/post_id/comments?qs

Text:

...

```
127.0.0.1 - - [15/Apr/2021 19:49:40] "GET /api/forums/31db189c-
f5f5-4d3e-a3b5-4f5514b40925/comments?children.response_date=8
/22/2020 HTTP/1.1" 200 -
```
```

In [13]:

#Screenshot

Image('mongoGETforumscommentsQ.png')

Out[13]:

The screenshot shows a REST client interface with a list of requests on the left and a detailed view of a selected GET request on the right. The selected request is to the endpoint `http://127.0.0.1:5001/api/forums/31db189c-f5f5-4d3e-a3b5-4f5514b40925/comments?children.response_date=8/22/2020`. The response is a JSON object with the following structure:

```
{
 "_id": "60609ecfb8f373edd26f1274",
 "post_id": "31db189c-f5f5-4d3e-a3b5-4f5514b40925",
 "children": {
 "comment_id": "bab9ac13-11b2-4da9-89ff-b64993600714",
 "parent_id": "31db189c-f5f5-4d3e-a3b5-4f5514b40925",
 "response_date": "8/22/2020",
 "email": "pcundy11@washington.edu",
 "response_text": "Curabitur at ipsum ac tellus semper interdum. Mauris ullamcorper purus sit amet nulla. Quisque arcu libero, rutrum ac, lobortis vel, dapibus at, diam.",
 "tags": [
 "HW2",
 "OFFICE_HOURS"
]
 }
}
```

In [ ]: