Thursday, 22 October 2020

Submit both experiments by colab link(s).

1 Insert API (30 mins)

1.1 Objectives

1. Can use pymongo to store data

2. Understand the document in mongoDB

3. Redo the **insert_one** function

1.2 Description

Same as the previous lab, read the score.csv file which is attached in the lab zip file. The file format is same as in the previous lab as shown below.

```
5995778521,4,0,4,6,7
5974831121,6,5,0,6,4
5992211621,9,2,0,0,4
5987519321,3,5,1,4,3
5979431521,5,7,1,8,2
5976635721,5,6,5,5,1
5911249921,0,6,1,3,7
```

Add a new path, **/insertscore**, which gets a string of `id,quiz1,quiz2,quiz3,quiz4,quiz5` from the parameter `score`. Then, store scores of this student in the collection `scores` in your mongodb database. The format of each document should be `{'id':xxxxxxxxx,'quiz 1':x,'quiz 2':x,'quiz 3':x,'quiz 4':x,'quiz 5':x,'sum':xx}` as an example below.

```
{'id':5995778521,'quiz 1':4,'quiz 2':0,'quiz 3:4',
'quiz 4':6,'quiz 5':7,'sum':21}
```

1.3 Procedure

Use google colab for this experiment.

1. Write a cell or cells that provide the insert score service. Run the cell(s) on your Colab VM.

2. Read all lines of student scores. Send each line to the service on your server one by one.
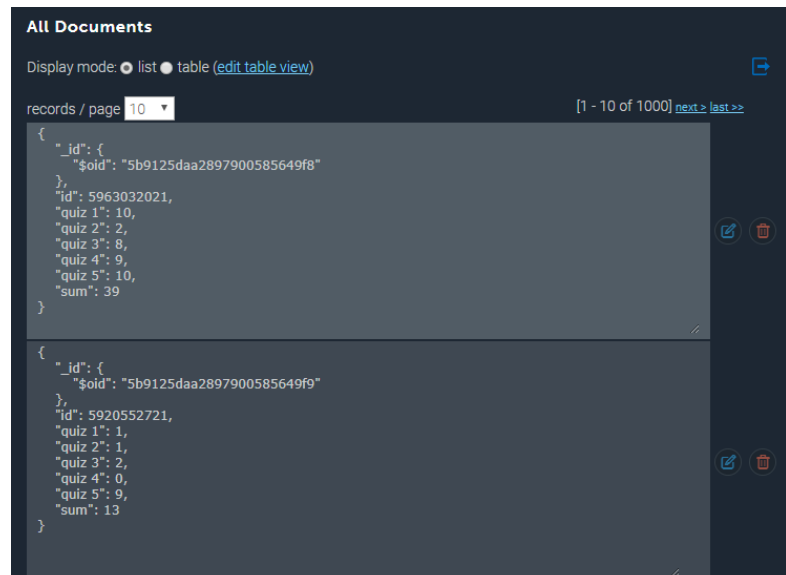
1.4 Sample Output

Figure 1: *Sample documents*

2 Search API (30 mins)

2.1 Objectives

1. Be able to create a new path on a server side service

2. Can use the function **find_one** in **pymongo**

3. Can return the correct json from the service

2.2 Description

From the database in Lab 1. Write your flask application to support getting all scores of a student.

2.3 Procedure

Modify the **app.py** file. Add a new path, **/findscore** to your server side code. Under the **@app.route("/findscore")**, create a new function, in which it can get a parameter from the URI, find the score of that id and return a json containing quiz scores and sum score.

2.4 Sample Output

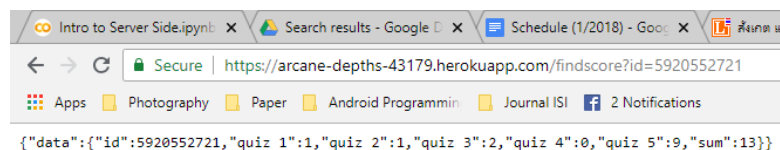The sample input uri and the wanted result format is given in the figure. Please replace the server address by yours.

Figure 2: *Sample documents*