API Content from the Document Created By Wilson, with reduced set of API's

Please note that there would be some changes on going (minor) as we are implementing the different features.

If you have any comments regarding the API's please mail manoi.dhoble@gmail.com

Response for Add Requests and Dealing with ObjectId:

```
if Success:
```

```
output = {"success" : True, "id": objectIdFromMongoAsString}
else:
output = {"success" : False}
```

When an item is inserted in mongo, its objectId is created. But mongo stores it as an object, which cannot be serialized to JSON. Hence, on each insert, convert the generated ObjectId to string, and send it in the response. (The mongo insert function returns the generated ObjectId)

```
e.g.
    obj_id = self.course.insert(json)
    obj_id = str(obj_id)
```

Now, this obj_id is a string and hence JSON Serializable.

Similarly, when you get/update an item, you need to convert the id string that is passed in the request url to its ObjectId before performing the db operation.

```
e.g
     obj_id = ObjectId(id)
     query = {"_id": obj_id}
```

Now u can perform the db operation according to this "query"

Also, when you perform the "Get" request, you should remove the "_id" from the entity returned, or simply

```
for c in self.quiz.find(query):
    return {"id": idFromRequestUrl,"courseId": c["courseId"],"questions": c["questions"]}
```

This should simplify things for everyone :)

For Login/ Logout/ User Authentication, we are following Django's Inbuild User Authentication Mechanism: https://docs.djangoproject.com/en/1.0/topics/auth/

```
Structure of API
User
   Create User
         Request
             Response
   Get User
      <u>Usage</u>
         Request
         Response
   Update User
      Usage
          Request
         Response
   Delete User
         Request
         Response
   Enroll Course
         Request
             Response
   Drop Course
         Request
             Response
Category
   Add Category
          Request
             Response
   Get Category
         Request
         Response
   List Category
         Request
             Response
Course
   Add Course
         Request
             Response
   Get Course
          Request
         Response
   <u>List Course</u>
          Request
```

Response **Update Course** Request Response **Delete Course** Request Response Quiz Add Quiz Request Response **Get Quiz** Request Response List Quiz Request Response **Update Quiz** Request Response **Delete Quiz** Request Response <u>Announcement</u> **Add Announcement** Request Response **List Announcement** Request Response **Get Announcement** Request Response **Update Announcement** Request Response **Delete Announcement** Request Response **Discussion Add Discussion** Request Response **List Discussion**

Request

Response

Get Discussion

Request

Response

Update Discussion

Request

Response

Delete Discussion

Request

Response

<u>Message</u>

Add Message

Request

Response

List Message

Request

Response

<u>Update Message</u>

Request

Response

Delete Message

Request

Response

Database Collections

usercollection

catagorycollection

coursecollection

discussioncollection

Structure of API

/user

- 1) create
- 2) sign In
- 3) sign Out
- 4) update
- 5) delete
- 6) get
- 7) enroll
- 8) drop

/category

- 1) add
- 2) list
- 3) get

/course

- 1) add
- 2) edit
- 3) list
- 4) delete

/course/quiz

- 1) add --> only the person adding course can add quiz.
- 2) edit --> only the person adding course can add quiz.
- 3) list
- 4) get
- 5) delete --> only the person adding course can add quiz.

/course/announcement

- 1) add --> only the person adding course can add announcement.
- 2) edit --> only the person adding course can add announcement.
- 3) list
- 4) delete --> only the person adding course can add announcement.
- 5) get (do we need it?)

/course/discussion

- 1) add
- 2) edit
- 3) list
- 4) delete
- 5) get

/course/discussion/message

- 1) add
- 2) edit
- 3) list
- 4) delete

User

Create User

The password should be always hashed by SHA-1, lower-cased hex string.

Request

Method	URL	Request Body
POST	http://host:port/user	Register User JSON

Status Code	Response Body	Condition
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201 (Created)	Success JSON	Success
409 (Conflict)	Error JSON	Email is duplicated

Get User

Usage

It used for any situation when servers or clients need the user's information by given email.

Request

Method	URL	Request Body
GET	http://host:port/user/:email	-

<u>Response</u>

Status Code	Response Body	Condition
200 (OK)	User JSON w/o password	Success
400 (Bad Request)	Error JSON	Email is invalid
404 (Not Found)	Error JSON	User not found
500 (Internal Server Error)	Error JSON	Other Errors

Update User

Usage

Can be used for both creating and updating user, since the email address is unique.

Request

Method	URL	Request Body
PUT	http://host:port/user/ update/:email	User JSON *

^{*}Password is required for creating new user, but it will be ignored for updating.

Status Code	Response Body	Condition
201 (Created)	User JSON w/o password	Create new user if not exists
200 (OK)	User JSON w/o password	Update existing user
400 (Bad Request)	Error JSON	Email or JSON is invalid
500 (Internal Server Error)	Error JSON	Other Errors

Delete User

Request

Method	URL	Request Body
DELETE	http://host:port/user/:email	-

Response

Status Code	Response Body	Condition
200 (OK)	Success JSON	Delete success
400 (Bad Request)	Error JSON	Email is invalid
404 (Not Found)	Error JSON	User not found
500 (Internal Server Error)	Error JSON	Other Errors

Enroll Course

Request

Method	URL	Request Body
PUT	http://host:port/course/enroll	email=:email&courseid=:courseid

Response

Status Code	Response Body	Condition
200 (Ok)	Success JSON	Success
500 (Internal Server Error)	Error JSON	Other Errors

Drop Course

Request

Method	URL	Request Body
PUT	http://host:port/course/drop	email=:email&courseid=:courseid

Status Code	Response Body	Condition
200 (Ok)	Success JSON	Success

500 (Internal Server Error)	Error JSON	Other Errors

Category

Add Category

Request

Method	URL	Request Body
POST	http://host:port/category	Category JSON w/o ID

Response

Status Code	Response Body	Condition
201 (Created)	Category JSON w/ ID	Success
409 (Conflict)	Error JSON	Name is duplicated
500 (Internal Server Error)	Error JSON	Other Errors

Get Category

Request

Method	URL	Request Body
GET	http://host:port/category/:id	-

<u>Response</u>

Status Code	Response Body	Condition
200 (OK)	Category JSON	Success
400 (Bad Request)	Error JSON	ID is invalid
404 (Not Found)	Error JSON	Category not found
500 (Internal Server Error)	Error JSON	Other Errors

List Category

Request

Method	URL	Request Body
GET	http://host:port/category/list	-

Status Code	Response Body	Condition
200 (OK)	Category Array JSON	Success
500 (Internal Server Error)	Error JSON	Other Errors

Course

Add Course

<u>Request</u>

Method	URL	Request Body
POST	http://host:port/course	Course JSON w/o ID

Response

Status Code	Response Body	Condition
201 (Created)	Course JSON w/ ID	Success
500 (Internal Server Error)	Error JSON	Other Errors

Get Course

Request

Method	URL	Request Body
GET	http://host:port/course/:id	-

Response

Status Code	Response Body	Condition
200 (OK)	Course JSON	Success
400 (Bad Request)	Error JSON	ID is invalid
404 (Not Found)	Error JSON	Course not found
500 (Internal Server Error)	Error JSON	Other Errors

List Course

Method	URL	Request Body
l e		

GET	http://host:port/course/list	-
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It should redirect to the URL of the course list page using 301 (Moved Permanently) with URL in Location Header. If there is any error, display the error page instead.

Update Course

Request

Method	URL	Request Body
PUT	http://host:port/course/ update/:id	Course JSON

Response

Status Code	Response Body	Condition
200 (OK)	Course JSON	Update success
400 (Bad Request)	Error JSON	ID or JSON is invalid
404 (Not Found)	Error JSON	Course not found
500 (Internal Server Error)	Error JSON	Other Errors

Delete Course

Request

Method	URL	Request Body
DELETE	http://host:port/course/:id	-

Response

Status Code	Response Body	Condition
200 (OK)	Success JSON	Delete success
400 (Bad Request)	Error JSON	ID is invalid
404 (Not Found)	Error JSON	User not found
500 (Internal Server Error)	Error JSON	Other Errors

Quiz

Add Quiz

Request

Method	URL	Request Body
POST	http://host:port/quiz zes	Quiz JSON w/o ID

<u>Response</u>

Status Code	Response Body	Condition
201 (Created)	Quiz JSON w/ ID	Success
500 (Internal Server Error)	Error JSON	Other Errors

Get Quiz

Request

Method	URL	Request Body
GET	http://host:port/quiz/:id	-

<u>Response</u>

Status Code	Response Body	Condition
200 (OK)	Quiz JSON	Success
400 (Bad Request)	Error JSON	ID is invalid
404 (Not Found)	Error JSON	Quiz not found
500 (Internal Server Error)	Error JSON	Other Errors

List Quiz

Request

Method	URL	Request Body
GET	http://host:port/quiz/	-

<u>Response</u>

Status Code	Response Body	Condition
200 (OK)	Quiz JSON	Success
500 (Internal Server Error)	Error JSON	Other Errors

Update Quiz

Request

Method	URL	Request Body
PUT	http://host:port/quiz/ update / :id	Quiz JSON

Response

Status Code	Response Body	Condition
200 (OK)	Quiz JSON	Update success
400 (Bad Request)	Error JSON	ID or JSON is invalid
404 (Not Found)	Error JSON	Quiz not found
500 (Internal Server Error)	Error JSON	Other Errors

Delete Quiz

Request

Method	URL	Request Body
DELETE	http://host:port/quiz/:id	-

Response

Status Code	Response Body	Condition
200 (OK)	Success JSON	Delete success
400 (Bad Request)	Error JSON	ID is invalid
404 (Not Found)	Error JSON	User not found
500 (Internal Server Error)	Error JSON	Other Errors

Announcement Add Announcement

Method	URL	Request Body
POST	http://host:port/ announcement s	Announcement JSON w/o ID

Status Code	Response Body	Condition
201 (Created)	Announcement JSON w/ ID	Success
500 (Internal Server Error)	Error JSON	Other Errors

List Announcement

Request

Method	URL	Request Body
	http://host:port/ announcement/list	-

Response

Status Code	Response Body	Condition
200 (OK)	Announcement JSON	Success
500 (Internal Server Error)	Error JSON	Other Errors

Get Announcement

Request

Method	URL	Request Body
GET	http://host:port/ announcement/:id	-

Response

Status Code	Response Body	Condition
200 (OK)	Announcement JSON	Success
400 (Bad Request)	Error JSON	ID is invalid
404 (Not Found)	Error JSON	Announcement not found
500 (Internal Server Error)	Error JSON	Other Errors

Update Announcement

Method	URL	Request Body
PUT	http://host:port/ announcement/update/:id	Announcement JSON

Status Code	Response Body	Condition
200 (OK)	Announcement JSON	Update success
400 (Bad Request)	Error JSON	ID or JSON is invalid
404 (Not Found)	Error JSON	Announcement not found
500 (Internal Server Error)	Error JSON	Other Errors

Delete Announcement

Request

Method	URL	Request Body
DELETE	http://host:port/ announcement/:id	-

<u>Response</u>

Status Code	Response Body	Condition
200 (OK)	Success JSON	Delete success
400 (Bad Request)	Error JSON	ID is invalid
404 (Not Found)	Error JSON	User not found
500 (Internal Server Error)	Error JSON	Other Errors

Discussion

Get Discussion by ID

Request

Method	URL	Request Body
GET	http://host:port/discussion/:id	-

Status Code	Response Body	Condition
200 (OK)	Discussion JSON	Success
400 (Bad Request)	Error JSON	ID is invalid
404 (Not Found)	Error JSON	Discussion not found
500 (Internal Server Error)	Error JSON	Other Errors

Get Discussion by Course ID

Request

Method	URL	Request Body
GET	http://host:port/course/ :course_id/discussion http://host:port/discussion/ course/:course_id	-

Response

Status Code	Response Body	Condition
200 (OK)	Discussion JSON	Success
404 (Not Found)	Error JSON	Discussion not found
500 (Internal Server Error)	Error JSON	Other Errors

Search Discussions (Optional)

Request

Method	URL	Request Body
GET	http://host:port/discussions? param=value& http://host:port/course/ :course_id/discussion	-

Parameters

All parameters are optional, usually are specified by default.

q	A part of title, description, course name (like google search)
course_id	Exactly the course id (to support discussion without course_id, use "none")

title	Exactly the title
created_by	Exactly the creator's email
created_from/to	The time span for created_at property
updated_from/to	The time span for updated_at property, can be used for Sync
offset	For paging, the offset index of entity for this return, default 0
limit	For paging, the numbers of entity for this return, default 20
order_by	For ordering and paging (use fieldname.asc/desc, asc by default, e.g. updated_by.desc), default is order by id

Status Code	Response Body	Condition
200 (OK)	Discussion Array JSON	Success
500 (Internal Server Error)	Error JSON	Other Errors

Add Discussion

<u>Request</u>

Method	URL	Request Body
POST	http://host:port/discussions	Discussion JSON w/o ID

Response

Status Code	Response Body	Condition
201 (Created)	Discussion JSON w/ ID	Success
500 (Internal Server Error)	Error JSON	Other Errors

Update Discussion

Method	URL	Request Body
PUT	http://host:port/discussion/ update/:id	Discussion JSON

Status Code	Response Body	Condition
200 (OK)	Discussion JSON	Update success
400 (Bad Request)	Error JSON	ID or JSON is invalid
404 (Not Found)	Error JSON	Discussion not found
500 (Internal Server Error)	Error JSON	Other Errors

Delete Discussion (Optional)

Request

Method	URL	Request Body
DELETE	http://host:port/discussion/:id	-

Response

Status Code	Response Body	Condition
200 (OK)	Success JSON	Delete success
400 (Bad Request)	Error JSON	ID is invalid
404 (Not Found)	Error JSON	User not found
500 (Internal Server Error)	Error JSON	Other Errors

Get Messages of a Discussion

<u>Usage</u>

Get all messages of a discussion with paging and delta sync support.

Request

Method	URL
GET	http://host:port/discussion/:discussion_id/ messages?params

Parameters

All parameters are optional, usually are specified by default. If no parameter is given, return all.

created_from/to	The time span for created_at property
	The time span for updated_at property, can be used for Sync

offset	For paging, the offset index of entity for this return, default 0
limit	For paging, the numbers of entity for this return, default 20
order_by	For ordering and paging (use fieldname.asc/desc, asc by default, e.g. updated_by.desc), default is order by id.asc or created_at.desc?

Status Code	Response Body	Condition
200 (OK)	Message Array JSON	Success
400 (Bad Request)	Error JSON	ID is invalid
404 (Not Found)	Error JSON	Discussion not found
500 (Internal Server Error)	Error JSON	Other Errors

Get Message from a Discussion by ID

<u>Request</u>

Method	URL	Request Body
GET	http://host:port/discussion/ :discussion_id/message/ :message_id	-

Response

Status Code	Response Body	Condition
200 (OK)	Message JSON	Success
400 (Bad Request)	Error JSON	ID is invalid
404 (Not Found)	Error JSON	Discussion not found
500 (Internal Server Error)	Error JSON	Other Errors

Add Message to a Discussion

Method	URL	Request Body
--------	-----	--------------

POST	http://host:port/discussion/ /add//:discussion_id/ messages	Message JSON w/o ID
Response	•	
Status Code	Response Body	Condition
201 (Created)	Message JSON w/ ID	Success
500 (Internal Server Error)	Error JSON	Other Errors
PUT	http://host:port//message/	Message JSON
PUT	http://host:port//message/ update/:message_id/ discussion/:discussion_id	Message JSON
PUT Response	update/:message_id/	Message JSON
	update/:message_id/	Message JSON Condition
<u>Response</u>	update/:message_id/ discussion/:discussion_id	
Response Status Code	update/:message_id/ discussion/:discussion_id Response Body	Condition
Response Status Code 200 (OK)	update/:message_id/ discussion/:discussion_id Response Body Message JSON	Condition Update success

Request

Method	URL	Request Body
DELETE	http://host:port/message/ :message_id/discussion/ :discussion_id	-

Status Code	Response Body	Condition
200 (OK)	Success JSON	Delete success
400 (Bad Request)	Error JSON	ID is invalid
404 (Not Found)	Error JSON	User not found

500 (Internal Server Error)	Error JSON	Other Errors

Database Collections

```
usercollection
  "email": "test@google.com",
  "own": [
     "course1",
     "course2"
  ],
  "enrolled": [
     "course3",
     "course4"
  ],
  "quizzes": [
       "quiz": "id1",
       "grade": 5,
       "submitDate": "DATE"
    },
       "quiz": "id1",
       "grade": 5,
       "submitDate": "DATE"
catagorycollection
  "name": "NAME",
  "description": "desc",
  "createDate": "DATE",
  "status": 0
}
coursecollection
  "category": "categoryId",
  "title": "introduction to algebra",
```

```
"section": 2,
  "dept": "eng",
  "term": "Spring",
  "year": 2013,
  "instructor": [
     {
       "name": "russel Doe",
       "email": "russel_doe@univ.com"
     }
  ],
  "days": [
     "Monday",
     "Wednesday",
     "Friday"
  ],
  "hours": [
     "8:00AM",
     "9:15:AM"
  ],
  "Description": "My course",
  "attachment": "PATH",
  "version": "1"
}
announcementcollection
  "courseld": "courseld",
  "title": "Title",
  "description": "desc",
  "postDate": "DATE",
  "status": 0
}
quizcollection
  "courseld": "courseld",
  "questions": [
     {
       "question": "Que1",
       "options": [
          "option1",
          "option2"
       "answer": "option1",
```

```
"point": 1
    },
       "question": "Que2",
       "options": [
          "option1",
          "option2"
       "answer": "option1",
       "point": 1
     }
  ]
}
Discussion
course_id(?): // optional, for discussion without course
title: // optional, the topic
created by: // user email
created_at: "2013-04-18T08:56:20.583Z" // ISO format
updated_at: // default is the same as created_at
}
Message
It is separated from Discussion to avoid the size grow too big and concurrency issue.
It depends on your team's decision whether is should be embedded or not, but doubtful for large
discussions.
title: // optional
content: // text
discussion_id:
created_by: // user email
created at: "2013-04-18T08:56:20.583Z" // ISO format
updated_at: // default is the same as created_at
```

To use _id on Django we need to use template tags as filters

}