$\mathbf{\hat{o}}_{\mathbf{x}}$ 0 $\mathbf{\hat{z}}$. Session authentication

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Weight: 1

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Projects(/projects/current)

Project over - took place from Aug 7, 2024 6:00 AM to Aug 9, 2024 6:00 AM

An auto **QaA** i **Rewild hed aluga he chat kee (deard line tions/ to review)**

Evaluation quizzes(/dashboards/my current evaluation quizzes) In a nutshell...

Auto QA review: 96.4/135 mandatory & 0.0/46 optional

Altogether: 71.41%

Curriculums(/dashboards/my_curriculums)

o Optional: 0.0%

Calculation: 71.41% + (71.41% * 0.0%) == 71.41%
 Concepts(/concepts)

Conference rooms(/dashboards/video_rooms)

Background Context

In this project, you will implement a Session Authentication. You are not allowed to install any other module.
Sandboxes(/user_containers/current)

In the industry, you should **not** implement your own Session authentication system and use a module or

Itoken/ToZoTQ/TahMKpc1&chexlbAs). Here, for the learning purpose, we will walk through each step of this mechanism to understand it by doing.

Resources

Read or watch:

REST API Authentication Mechanisms - Only the session auth part Peers(/users/peers) (/rltoken/oofk0VhuS0ZFZTNTVrQeaQ)

framework that doing it for you (like in Python-Flask: Flask-HTTPAuth

- HTTP Cookie (/rltoken/peLV8xuJ4PDJMOVFqk-d2g)
- Flask (/rltoken/yr/ageZxNcpagQLh-0SVhwA)
 - Flask Cookie (/rltoken/QYfl5oW6OHUmHDzwKV1Qsw)

Learning Objectives

At the end of this project, you are expected to be able to explain to anyone (/rltoken/MWRip4NeW99869/02/tte99Nije)A), without the help of Google:







General

- What authentication means
 - What session authentication means
 - What Cookies are
- Howotoes and Cookies
- How to parse Cookies

Requirements

PythoneScripts/current)

- All your files will be interpreted/compiled on Ubuntu 18.04 LTS using python3 (version 3.7)
- A I ClyAnd References of the control o
 - The first line of all your files should be exactly #!/usr/bin/env python3
 - A README.md file, at the root of the folder of the project, is mandatory
 - Evaluation quizzes (/dashboards/my_current_evaluation, quizzes)
 Your code should use the pycodest vie style (version 2.5)
 - All your files must be executable
 - The length of your files will be tested using wc
- All your modules should have a documentation (python3 -c Curriculums(/dashboards/my_curriculums) 'print(__import__("my_modute").__doc__)')
 - All your classes should have a documentation (python3 -c
 - 'PCintepti(MeOntep(s)my_module").MyClass.__doc__)')
 - All your functions (inside and outside a class) should have a documentation (python3 -c
 - 'print(__import__("my_module").my_function.__doc__)' and python3 -c
 'pଦନferencepreems(/dashboards/yideoligosmay_function.__doc__)')
 - A documentation is not a simple word, it's a real sentence explaining what's the purpose of the
 module, class or method (the length of it will be verified)
 Servers(/servers)

_ Sandboxes(/user_containers/current)

Tasks

Ħ

Tools(/dashboards/my_tools)

0. Et moi et moi et moi!

mandatory

Video on demand(/dashboards/videos)

Score: 90.67% (Checks completed: 100.0%)

Copy all your work of the **0x06**. **Basic authentication** project in this new folder.

this version, you implemented a **Basic authentication** for giving you access to all User endpoints:

- GET /api/v1/users
- Postcørd(https://sliscord.com/app)
- GET /api/v1/users/<user_id>
- PUT /api/v1/users/<user_id>
- DELETE /api/v1/users/<user_id>

Now, you will add a new endpoint: GET /users/me to retrieve the authenticated User object. My Profile(/users/my_profile)

• Copy folders models and api from the previous project 0x06. Basic authentication



 Please make sure all mandatory tasks of this previous project are done at 100% because this project (and the rest of this track) will be based on it. •/) Update @app.before_request in api/v1/app.py: Assign the result of auth.current_user(request) to request.current_user Update method for the route GET /api/v1/users/<user_id> in api/v1/views/users.py: Home(/) o If <user_id> is equal to me and request.current_user is None: abort(404) o If <user_id> is equal to me and request.current_user is not None:return the My คือเกิดกรู้เหลือเลาค่าเปลดกล่า a JSON response (like a normal case of GET /api/v1/users/<user_id> where <user_id> is a valid User ID) Otherwise, keep the same behavior Projects/current) In the first terminal: bob@dyJan;~\$cat main 0 py OA Reviews I can make (/corrections/to_review) #!/usr/bin/env python3 """ Main 0 Evaluation quizzes(/dashboards/my current evaluation quizzes) from api.v1.auth.basic_auth import BasicAuth from models.user import User Cr@coartriecualumsse//datsehshtoa/tdis/my_curriculums) user_email = "bob@hbtn.io" user_clear_pwd = "HOlbertonSchool98!" Concepts(/concepts) user = User() user.email = user_email __user . roogameredcē rubans (rdashbands/video_rooms) print("New user: {}".format(user.id)) user.save() Servers(/servers) basic_clear = "{}:{}".format(user_email, user_clear_pwd) print("Basic Base64: {}".format(base64.b64encode(basic_clear.encode('utf-8')).dec > ode("usafn@bdxes(/user_containers/current) bob@dylan:~\$ bob@dylan: \$ API_HOST=0.0.0 API_PORT=5000 AUTH_TYPE=basic_auth ./main_0.py New user: 9375973a-68c7-46aa-b135-29f79e837495 Basic Base64: Ym9iQGhidG4uaW86SDBsYmVydG9uU2Nob29s0Tgh bob@dylan:~\$ demand(/dashboards/videos) bob@dylan:~\$ API_HOST=0.0.0.0 API_PORT=5000 AUTH_TYPE=basic_auth python3 -m api.v * Running on http://0.0.0.0:5000/ (Press CTRL+C to quit) Peers(/users/peers) In a second terminal: \Box Discord(https://discord.com/app)

```
bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/status"
     (//)status": "OK"
   bob@dylan:~$
  bob@dytame4 curl "http://0.0.0.0:5000/api/v1/users"
      "error": "Unauthorized"
         My Planning(/planning/me)
   bob@dylan:~$
   bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/users" -H "Authorization: Basic Ym9
ឃុំiQGhid៊េសុi@សុខសុខ្លាច់ទូ១៧១/៤៤៤៤៧ប៉ុNob29s0Tgh"
   {
        "COLA READEWS | cahamake (100 a feotions of to 17 eview)
        "email": "bob@hbtn.io",
        "first_name": null,
        "EValua 1937 5 20722 es ( Reast About de 1475 - 29 frent 8 2 Valua 1 10 n quizzes)
        "last_name": null,
        "updated_at": "2017-09-25 01:55:17"
     }
Fob@dyGurriculums(/dashboards/my_curriculums)
   bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/users/me" -H "Authorization: Basic
   Ym9iQGhidG4uaW86SDBsYmVydG9uU2Nob29s0Tgh"
Concepts(/concepts)
      "created_at": "2017-09-25 01:55:17",
     "email": "bob@hbtn.io",
 🚵 "firGenfaraece raoms/(/dashboards/video_rooms)
     "id": "9375973a-68c7-46aa-b135-29f79e837495",
     "last_name": null,
     "update/era(/servezo)17-09-25 01:55:17"
   bob@dylan:~$
         Sandboxes(/user_containers/current)
         Tools(/dashboards/my tools)

    GitHub repository: alx-backend-user-data

       Directory: 0x02-Session_authentication
_Video on demand(/dashboards/videos)
File: api/v1/app.py, api/v1/views/users.py
                      >_ Get a sandbox
   Check submission
                                         View results
         Peers(/users/peers)
  1. Empty session
                                                                                            mandatory
6
          Discord(https://discord.com/app)
   Score: 100.0% (Checks completed: 100.0%)
 Create a class SessionAuth that inherits from Auth . For the moment this class will be empty. It's the
```

first step for creating a new authentication mechanism:

validate if everything inherits correctly without any overloading

validate the "switch" by using environment variables

Update api/v1/app.py for using SessionAuth instance for the variable auth depending of the value of the environment variable AUTH_TYPE, If AUTH_TYPE is equal to session_auth:



- import SessionAuth from api.v1.auth.session_auth
- Home(/). create an instance of SessionAuth and assign it to the variable auth

Otherwise, keep the previous mechanism.

My Planning(/planning/me)

In the first terminal:

```
$\phi$bob@dylan:\(\alpha\) \hosT=0.0.0 \API_PORT=5000 AUTH_TYPE=session_auth python3 -m ap
  i.v1.app
```

- * Running on http://0.0.0.0:5000/ (Press CTRL+C to quit)
- QA Reviews I can make(/corrections/to_review)

In a second terminal:

```
Evaluation quizzes(/dashboards/my current evaluation quizzes)
   bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/status"
     "status": "OK"
🎜 pop@d Gurriculums(/dashboards/my_curriculums)
   bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/status/"
     "st & Pagoepte (Concepts)
   }
   bob@dylan:~$
 Loob@d√Qanfersneerooms(tobashbooords/victeooorpapis)v1/users"
     "error": "Unauthorized"
         Servers(/servers)
   bob@dylan:~$
   bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/users" -H "Authorization: Test"
         Sandboxes(/user containers/current)
     "error": "Forbidden"
  ∮bob@dyTbadis(/ଔashboards/my tools)
```

Video on demand(/dashboards/videos)

- GitHub repository: alx-backend-user-data
- Directory: 0x02-Session_authentication
- File ensi//nsb/s/theersession_auth.py, api/v1/app.py
- Check spinonios to that to suffice to satisfy an appliew results

2. Create a session



Score: 50.0% (Checks completed: 50.0%) My Profile(/users/my_profile)

Update SessionAuth class: Create a class attribute user_id_by_session_id initialized by an empty dictionary Create an instance method def create_session(self, user_id: str = None) -> str: that creates a Session ID for a user_id: HomRedurn None if user_id is None • Return None if user_id is not a string o Otherwise: My Planning(/planning/me)

Generate a Session ID using uuid module and uuid4() like id in Base Use this Session ID as key of the dictionary user_id_by_session_id - the value for Projects(/phiskey/must he user_id Return the Session ID • The same user_id can have multiple Session ID - indeed, the user_id is the value in the QA Reviewal cansoakel/corrections/toi review) Now you an "in-memory" Session ID storing. You will be able to retrieve an User id based on a Session PD. Evaluation quizzes(/dashboards/my current evaluation quizzes) Curriculums(/dashboards/my_curriculums) 旨 Concepts(/concepts) Conference rooms(/dashboards/video_rooms) Servers(/servers) >_ Sandboxes(/user_containers/current) Tools(/dashboards/my tools) 冊 Video on demand(/dashboards/videos) Peers(/users/peers) Ø Discord(https://discord.com/app) My Profile(/users/my_profile)

```
bob@dylan:~$ cat main_1.py
  =#!/usr/bin/env python3
  ""("/) Main 1
   from api.v1.auth.session_auth import SessionAuth
        Home(/)
   sa = SessionAuth()
 print(My Planningtholaming/pe(sa.user_id_by_session_id), sa.user_id_by_session_id))
  user_id = None
____sessionrojects(/prejects_kourcion)(user_id)
  print("{} => {}: {}".format(user_id, session, sa.user_id_by_session_id))
✓ user_iQA Reseas I can make(/corrections/to review)
   session = sa.create_session(user_id)
  print("{} => {}: {}".format(user_id, session, sa.user_id_by_session_id))
        Evaluation quizzes(/dashboards/my current evaluation quizzes)
  user_id = "abcde"
  session = sa.create_session(user_id)
  print("{} => {}: {}".format(user_id, session, sa.user_id_by_session_id))
Luser Curriculums (/dashboards/my_curriculums)
   session = sa.create_session(user_id)
print("{} => {}: {}".format(user_id, session, sa.user_id_by_session_id))
Concepts(/concepts)
  user_id = "abcde"
   session = sa.create_session(user_id)
 aprint (Ognference roppis (Holasharqarslar/video_session, sa.user_id_by_session_id))
  bob@dylan:~$
 bob@dy<mark>3@iY&F$(/%PIY_418)</mark>sT=0.0.0.0 API_PORT=5000 AUTH_TYPE=session_auth ./main_1.py
  <class 'dict'>: {}
  None => None: {}
2_89 => Shanneboxes(/user_containers/current)
  abcde => 61997a1b-3f8a-4b0f-87f6-19d5cafee63f: {'61997a1b-3f8a-4b0f-87f6-19d5cafe
   e63f': 'abcde'}
🏓 fghij 下ools(%dashd25ands/Any4563k3)6ab-bc192dcc3b4f: {'61997a1b-3f8a-4b0f-87f6-19d5cafe
  e63f': 'abcde', '69e45c25-ec89-4563-86ab-bc192dcc3b4f': 'fghij'}
  abcde => 02079cb4-6847-48aa-924e-0514d82a43f4: \ \{'61997a1b-3f8a-4b0f-87f6-19d5cafe\}
563-86ab-bc192dcc3b4f': 'fghij'}
  bob@dylan:~$
        Peers(/users/peers)
 Repo:
```

GitHub repository: alx-backend-user-data Discord(https://discord.com/app)

Directory: 0x02-Session_authentication

• File: api/v1/auth/session_auth.py

View results

Check submission Mark submission >_ Get a sandbox My Profile(/users/my_profile)

3. User ID for Session ID mandatory Score: 100.0% (Checks completed: 100.0%) Topdate SessionAuth class: Create an instance method def user_id_for_session_id(self, session_id: str = None) -> tr: that yetlangiag (planning a sel) on a Session ID: Return None if session_id is None Retrojects//prijects/dwirent) is not a string Return the value (the User ID) for the key session_id in the dictionary user_id_by_session_id. You must use .get() built-in for accessing in a dictionary a value based on key QA Reviews I can make(/corrections/to_review) Now you have 2 methods (create_session and user_id_for_session_id) for storing and retrieving a link between a User ID and a Session ID. Property In a Session ID. Property In a Session ID. Evaluation quizzes(/dashboards/my current evaluation quizzes) Curriculums(/dashboards/my_curriculums) 首 Concepts(/concepts) Conference rooms(/dashboards/video_rooms) Servers(/servers) Sandboxes(/user_containers/current) Tools(/dashboards/my_tools) 冊 Video on demand(/dashboards/videos) Peers(/users/peers)

_

Œ

Discord(https://discord.com/app)

Q

```
bob@dylan:~$ cat main_2.py
     #!/usr/bin/env python3
      ""("/) Main 2
      from api.v1.auth.session_auth import SessionAuth
                 Home(/)
      sa = SessionAuth()
   user_<u>My</u>Planniang(/mplanning/me)
      session_1 = sa.create_session(user_id_1)
      print("{} => {}: {}".format(user_id_1, session_1, sa.user_id_by_session_id))
                  Projects(/projects/current)
      user_id_2 = "fghij"
      session_2 = sa.create_session(user_id_2)
 🍑 print (CIA Reviews I cah'makewa (neotionis/L2, review) ion_2, sa.user_id_by_session_id))
      print("---")
                  Evaluation quizzes(/dashboards/my current evaluation quizzes)
      tmp_session_id = None
      tmp_user_id = sa.user_id_for_session_id(tmp_session_id)
      print("{} => {}".format(tmp_session_id, tmp_user_id))
tmp session in stage to the session of the session 
      tmp_user_id = sa.user_id_for_session_id(tmp_session_id)
 print("{} => {}".format(tmp_session_id, tmp_user_id))
Concepts(/concepts)
      tmp_session_id = "doesntexist"
      tmp_user_id = sa.user_id_for_session_id(tmp_session_id)
  ₹print (Odulterence roboral@aaliboards/Aideordootha user_id))
     print("---")
                  Servers(/servers)
      tmp_session_id = session_1
      tmp_user_id = sa.user_id_for_session_id(tmp_session_id)
__print(Sandboxes(/user<u>r</u>containe<u>rs</u>/essucent)id, tmp_user_id))
      tmp_session_id = session_2
 ##tmp_usTeools(ddashstaoanster/mixd_toots)session_id(tmp_session_id)
      print("{} => {}".format(tmp_session_id, tmp_user_id))
print (Video"on demand(/dashboards/videos)
      session_1_bis = sa.create_session(user_id_1)
      print("{} => {}: {}".format(user_id_1, session_1_bis, sa.user_id_by_session_id))
Peers(/users/peers)
id_for_session_id(session_1_bis)
      print("{} => {}".format(session_1_bis, tmp_user_id))
mp usercord(https://discord.com/app)sion_id(session_1)
      print("{} => {}".format(session_1, tmp_user_id))
      bob@dylan:~$
      bob@dylan:-$ API_HOST=0.0.0.0 API_PORT=5000 AUTH_TYPE=session_auth ./main_2.py
      abcde => 8647f981-f503-4638-af23-7bb4a9e4b53f: {'8647f981-f503-4638-af23-7bb4a9e4
      b53f · My Arefile (lusers/my_profile)
```

fghij => a159ee3f-214e-4e91-9546-ca3ce873e975: {'a159ee3f-214e-4e91-9546-ca3ce873 e975': 'fghij', '8647f981-f503-4638-af23-7bb4a9e4b53f': 'abcde'} None => None 89 => None doesntexist/=> None 8647f981-f503-4638-af23-7bb4a9e4b53f => abcdea159ee3f_214e-4e91-9546-ca3ce873e975 => fghij My Planning(/planning/me) abcde => 5d2930ba-f6d6-4a23-83d2-4f0abc8b8eee: { a159ee3f-214e-4e91-9546-ca3ce873 e975': 'fghij', '8647f981-f503-4638-af23-7bb4a9e4b53f': 'abcde', '5d2930ba-f6d6-4 Projects/projects/current) a23-83d2-4f0abc8b8eee': 'abcde'} 5d2930ba-f6d6-4a23-83d2-4f0abc8b8eee => abcde ,8647f981-f503-4638-af23-7bb4a9e4b53f => abcde bob@dytan:~\$ abcde/corrections/to_review) Evaluation quizzes(/dashboards/my current evaluation quizzes) Repo: • GitHub repository: alx-backend-user-data • Directory: 0x02-Session_authentication File: ap1/v1/auth/session auth.pv Concepts(/concepts) View results Session cookie rooms(/dashboards/video_rooms) mandatory Score: 100.0% (Checks completed: 100.0%) Update api/v1/auth/auth.py by adding the method def session_cookie(self, request=None): **>**that retu**8aand looxeksi∮wadure of contraineer gloest**ent) • Return None if request is None • Returnsthe value of the cookie named _my_session_id from request - the name of the cookie must be defined by the environment variable SESSION_NAME You must use .get() built-in for accessing the cookie in the request cookies dictionary • YoVi পিয়ে ২০০১ ধিকা বিভাগ বিশ্ব পির্মাণ প্রতিষ্ঠানি স্কর্ম স্কর্ম প্রতিষ্ঠানি স্কর্ম স্কর্ম প্রতিষ্ঠানি স্কর্ম স্রেম স্কর্ম স্ব the Session ID In the first terminal: Peers(/users/peers) Œ Discord(https://discord.com/app)

```
bob@dylan:~$ cat main_3.py
 \pm#!/usr/bin/env python3
   ""(//) Cookie server
   from flask import Flask, request
from abance()auth.auth import Auth
   auth = Auth()
         My Planning(/planning/me)
   app = Flask(__name__)
ழ@app.rProjec(ts//projecta/our=ோtet"], strict_slashes=False)
   def root_path():
       """ Root path
       "'QA Reviews I can make(/corrections/to review)
       return "Cookie value: {}\n".format(auth.session_cookie(request))
 ?if __reveruation quizzes//das/hboards/my_current_evaluation_quizzes)
       app.run(host="0.0.0.0", port="5000")
   bob@dylan:~$ API_HOST=0.0.0.0 API_PORT=5000 AUTH_TYPE=session_auth SESSION_NAME=_
   _my_session_id ./main_3.py
* Ruming on http://dashboards/my<sub>5</sub>gyriculyms) CTRL+C to quit)
  Concepts(/concepts)
n a second terminal:
   bob@dylan;~$ curl "http://0.0.0.0:5000"
Conference rooms(/dashboards/video_rooms)
cookie value: None
   bob@dylan:~$
 bob@dylan:~$,curl "http://0.0.0.0:5000" --cookie "_my_session_id=Hello"
 Servers(/servers)
   bob@dylan:~$ curl "http://0.0.0.0:5000" --cookie "_my_session_id=C is fun"
>_cookieSandboxes(/user_containers/current)
   bob@dylan:~$
  bob@dylan:~$ curl "http://0.0.0.0:5000" --cookie "_my_session_id_fake,
Cookie Tools (/dashboards/my_tools)
   bob@dylan:~$
田
         Video on demand(/dashboards/videos)
 Repo:

    GitHub repository: alx-backend-user-data

• DiRection(/usexo/peers)ion_authentication
     • File: api/v1/auth/auth.py
6
         Discord(https://discord.com/app)
   Check submission
                     >_ Get a sandbox
                                       View results
 5. Before request
                                                                                        mandatory
```

My Profile(/users/my profile) Score: 91.92% (Checks completed: 100.0%)

Update the @app.before_request method in api/v1/app.py: • Add the URL path /api/v1/auth_session/login/ in the list of excluded paths of the method require_auth - this route doesn't exist yet but it should be accessible outside authentication • If auth.authorization_header(request) and auth.session_cookie(request) return None, abborne401) In the first terminal: My Planning(/planning/me) bob@dylan:~\$ API_HOST=0.0.0.0 API_PORT=5000 AUTH_TYPE=session_auth SESSION_NAME=_ my_session_id python3 -m api.v1.app ❤️ * Running on http://o.o.o.o.o:5000/ (Press CTRL+C to quit) ✓ a second tremewal: I can make(/corrections/to_review) bob@dylan:~\$ curl "http://0.0.0.0:5000/api/v1/status" **?** { Evaluation quizzes(/dashboards/my current evaluation quizzes) "status": "OK" bob@dylan:~\$ bob@dylan:~\$ curl "http://0.0.0.0:5000/api/v1/auth_session/login" # not found but Finot "Gurricellums/dashapards/myaeurriculums/m "error": "Not found" **i**} Concepts(/concepts) bob@dylan:~\$ bob@dylan:~\$ curl "http://0.0.0.0:5000/api/v1/users/me" Conference rooms(/dashboards/video_rooms) "error": "Unauthorized" Bob@dySlænver\$(/senvershttp://0.0.0.0:5000/api/v1/users/me" -H "Authorization: Basic Ym9iQGhidG4uaW86SDBsYmVydG9uU2Nob29sOTgh" # Won't work because the environment va riable AUTH TYPE is equal to "session auth" Sandboxes(/user_containers/current) "error": "Forbidden" } 🎜 bob@d সাঠিকীs (frefashboards/my tools) bob@dylan:~\$ curl "http://0.0.0.0:5000/api/v1/users/me" --cookie "_my_session_id= 5535d4d7-3d77-4d06-8281-495dc3acfe76" # Won't work because no user is linked to t Hhis Sevale or bridge mand (/dashboards/videos) "error": "Forbidden" bob@dylan:~\$ Peers(/users/peers) Discord(https://discord.com/app) GitHub repository: alx-backend-user-data • Directory: 0x02-Session_authentication • File: api/v1/app.py

```
bob@dylan:~$ cat main_4.py
 ±#!/usr/bin/env python3
   ""(%) Main 4
   from flask import Flask, request
ffrom apame√auth.session_auth import SessionAuth
   from models.user import User
  ■''''' crNextelagningsel/plagagingvlme)
   user_email = "bobsession@hbtn.io"
   user_clear_pwd = "fake pwd"
        Projects(/projects/current)
   user = User()
   user.email = user_email
 ∕user.pQAsRewielwslocsenmakeelcoprections/to review)
   user.save()
?""" Createateon carizzes(起ashbbards/my_current_evaluation_quizzes)
   sa = SessionAuth()
   session_id = sa.create_session(user.id)
   print("User with ID: {} has a Session ID: {}".format(user.id, session_id))
Creariculums/dashboards/my_curriculums)
   app = Flask(__name__)
@app.roneepts(/concepts)=['GET'], strict_slashes=False)
   def root_path():
       """ Root path
       ""Conference rooms(/dashboards/video_rooms)
       request_user = sa.current_user(request)
       if request_user is None:
        Serwersuser found\n"
       return "User found: {}\n".format(request_user.id)
_if __n&anedboxes(/usena_containers/current)
       app.run(host="0.0.0.0", port="5000")
bob@dylbads(%sashboards/my tools)
   bob@dylan:~$ API_HOST=0.0.0.0 API_PORT=5000 AUTH_TYPE=session_auth SESSION_NAME=_
   my_session_id ./main_4.py
🚝 User Wulder ប្រាក្ស de្រីស្រៀង(ស្រឹង្សីអ៊ែរ៉ូអែង អ៊ែរ៉ូអេស្រី) -2540333fe992 has a Session ID: 9d1648aa-da7
   9-4692-8236-5f9d7f9e9485
    * Running on http://0.0.0.0:5000/ (Press CTRL+C to quit)
 Peers(/users/peers) n a second terminal:
6
        Discord(https://discord.com/app)
```

bob@dylan:~\$ curl "http://0.0.0.0:5000/" ➡No user found bo(b)@dylan:~\$ bob@dylan:~\$ curl "http://0.0.0.0:5000/" --cookie "_my_session_id=Holberton" No user found mbob@dyHame(4) bob@dylan:~\$ curl "http://0.0.0.0:5000/" --cookie "_my_session_id=9d1648aa-da79-4 692-8236-5f9d7f9e9485" user Multangirg///weanning/me/9e4-a40b-2540333fe992 bob@dylan:~\$ Projects(/projects/current) Repo: GiPA Begievstleren makel/corrections/touregiew) • Directory: 0x02-Session_authentication File: api/v1/auth/session auth.py
Evaluation guizzes(/dashboards/my current evaluation guizzes) Check submission Mark submission >_ Get a sandbox View results Curriculums(/dashboards/my_curriculums)

New view for Session Authentication mandatory Score: 69.5890 to Septs leted: 94.74%) Create a new Flask view that handles all routes for the Session authentication. Conference rooms(/dashboards/video rooms) In the file api/v1/views/session_auth.py, create a route POST /auth_session/login (= POST /api/v1/auth_session/login): Servers(/servers) Slash tolerant (/auth_session/login == /auth_session/login/) • You must use request.form.get() to retrieve email and password parameters > If Sangle of Sangle of the Septainty, refulfield JSON { "error": "email missing" } with the status code 400 If password is missing or empty, return the JSON { "error": "password missing" } with the lools dashboards my tools? status code 400 Retrieve the User instance based on the email - you must use the class method search of 田 Usede (sam dant the block this lesses) icauth) o If no User found, return the JSON { "error": "no user found for this email" } with the status code 404 o If the password is not the one of the User found, return the JSON { "error": "wrong Peers with the status code 401 - you must use is_valid_password from the User instance o Otherwise create a Session ID for the User ID: Discord(https://discord.com/app) You must use from api.v1.app import auth - WARNING: please import it only where you need it - not on top of the file (can generate circular import - and break first tasks of this project) You must use auth.create_session(..) for creating a Session ID Return the dictionary representation of the User - you must use to_json() My Profile(/users/my profile)

You must set the cookie to the response - you must use the value of the environment variable SESSION_NAME as cookie name - tip (/rltoken/3WDlzYbVvdJJAf70ljWK6g)

In the file api/v1/views/__init__.py , you must add this new view at the end of the file.

In the first terminal:
Home(/)

bob@dvlan:~\$ API_HOST=0.0.0.0 API_PORT=5000_AUTH_TYPE=session_auth_SESSION_NAME=

bob@dylan:~\$ API_HOST=0.0.0.0 API_PORT=5000 AUTH_TYPE=session_auth SESSION_NAME=_ my_session_id python3 -m api.v1.app * Runny Planning (/planning) (me) 0:5000/ (Press CTRL+C to quit) Projects//projects/current) QA Reviews I can make(/corrections/to_review) ? Evaluation quizzes(/dashboards/my current evaluation quizzes) Curriculums(/dashboards/my_curriculums) 胄 Concepts(/concepts) Conference rooms(/dashboards/video_rooms) Servers(/servers) Sandboxes(/user_containers/current) Tools(/dashboards/my_tools) Video on demand(/dashboards/videos) Peers(/users/peers)

Discord(https://discord.com/app)

Q

```
bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/auth_session/login" -XGET
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN">
  <t(1)tle>405 Method Not Allowed</title>
  <h1>Method Not Allowed</h1>
   The method is not allowed for the requested URL.
mbob@dyHame()
  bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/auth_session/login" -XPOST
    "er My Plameinad/plangison/me)
  bob@dylan:~$
မှာ bob@dyPramets(ကျော်စုငြေးရာကြေးများကျော်).0.0.0:5000/api/v1/auth_session/login" -XPOST -d "emai
   l=guillaume@hbtn.io"
     "errQA'Reviews swandmake stopp ections to review)
  }
  bob@dylan:~$
 🧖 bob@dyElvanuatsorwoolzzebst/kaashkooardo/nay500Aranoiévalkawith_spaszics)/login" -XPOST -d "emai
   l=guillaume@hbtn.io" -d "password=test"
     "error": "no user found for this email"
Fob@dyGurriculums(/dashboards/my_curriculums)
  bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/auth_session/login" -XPOST -d "emai
   l=bobsession@hbtn.io" -d "password=test"
Concepts(/concepts)
     "error": "wrong password"
 ∠pob@dyQanfergnce rooms(/dashboards/video_rooms)
  bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/auth_session/login" -XPOST -d "emai
  l=bobsession@hbtn.io" -d "password=fake pwd"
Servers(/servers)
     "created_at": "2017-10-16 04:23:04",
     "email": "bobsession@hbtn.io",
    "firSandlagoxes(/userlcontainers/current)
     "id": "cf3ddee1-ff24-49e4-a40b-2540333fe992",
     "last_name": null,
     "updatots/(/dats/hbd/anots/myo_to6/s)4:23:04"
  bob@dylan:~$
| Bob@dyNialeorsh clerkan'dottashdoards violatos) 0/api/v1/auth_session/login" -XPOST -d "emai
   l=bobsession@hbtn.io" -d "password=fake pwd" -vvv
  Note: Unnecessary use of -X or --request, POST is already inferred.
       Trying 0.0.0.0...
   TCP NODELAY set
Connected to 5.0.0 (127.0.0.1) port 5000 (#0)
  > POST /api/v1/auth_session/login HTTP/1.1
   > Host: 0.0.0.0:5000
User Discord (https://discord.com/app)
   > Accept: */*
  > Content-Length: 42
  > Content-Type: application/x-www-form-urlencoded
   * upload completely sent off: 42 out of 42 bytes
   * HTTPMY Profiled y sprafile or body
```

```
< HTTP/1.0 200 OK
   < Content-Type: application/json
   '< Set-Cookie: _my_session_id=df05b4e1-d117-444c-a0cc-ba0d167889c4; Path=/</pre>
   < 🖟 Ccess-Control-Allow-Origin: *
   < Content-Length: 210
   < Server: Werkzeug/0.12.1 Python/3.4.3</pre>
   < Date: Mon, 16 Oct 2017 04:57:08 GMT
     My Planning(/planning/me) "created_at": "2017-10-16 04:23:04",
      "email": "bobsession@hbtn.io",
     "first_name": null,
Projects/projects/current)
"id": "cf3ddee1-ff24-49e4-a40b-2540333fe992",
      "last_name": null,
      "updated_at": "2017-10-16 04:23:04"
QA Reviews I can make(/corrections/to_review)
   * Closing connection 0
bob@dylan:~$
 bob@dv.tanuation.gutzzes(/dashboards/my_6urrent_evaluation_quizzes)cookie " my session id=
   df05b4e1-d117-444c-a0cc-ba0d167889c4"
      "created_at": "2017-10-16 04:23:04",
     "emaciliriculums) "emaciliriculums) "emaciliriculums)
      "first_name": null,
     "id": "cf3ddee1-ff24-49e4-a40b-2540333fe992",
     "last name" (/concepts)
     "updated_at": "2017-10-16 04:23:04"
 bob@dylan;~$
Conference rooms(/dashboards/video_rooms)
 Now you have an authentication based on a Session ID stored in cookie, perfect for a website (browsers
=;;ve coo∖si⊜s)ers(/servers)
Repo: Sandboxes(/user_containers/current)
     • GitHub repository: alx-backend-user-data

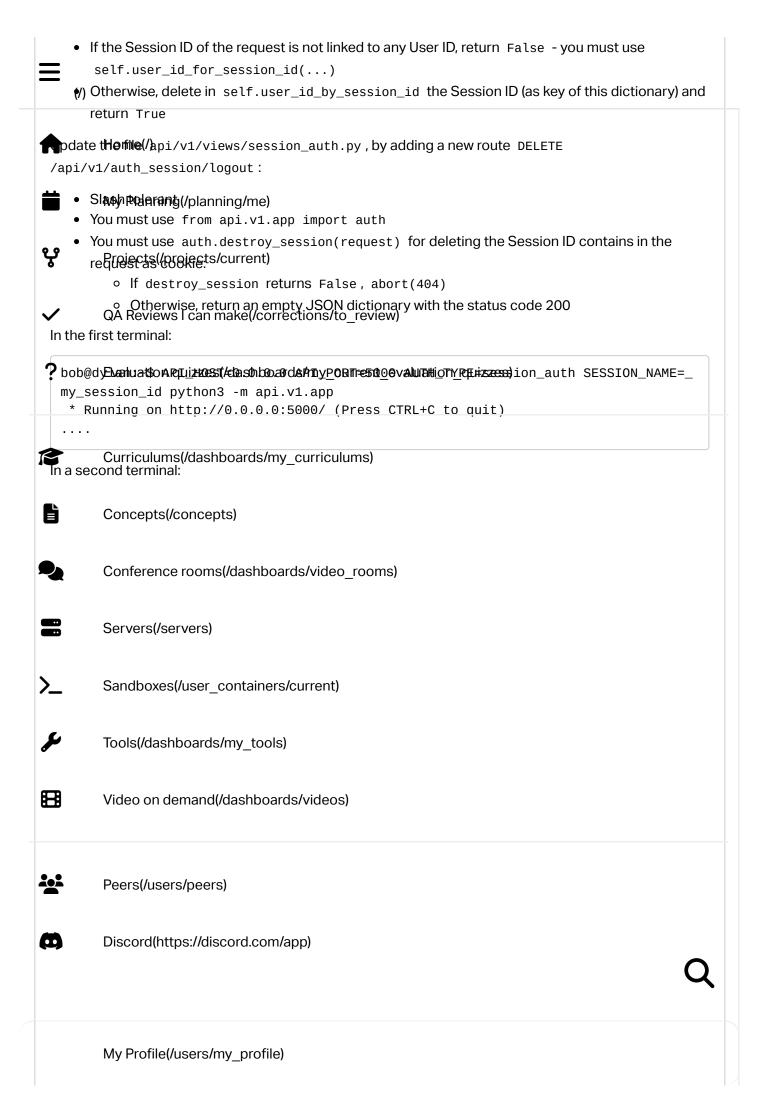
    Directory: 0x02-Session authentication
Tools(/dashboards/my tools)

       File: api/v1/views/session_auth.py, api/v1/views/__init__.py
         Video on demand(/dashboards/videos)
   Check submission
                       Mark submission
                                         >_ Get a sandbox
                                                            View results
 8. Logout
                                                                                                mandatory
         Peers(/users/peers)
   Score: 39.72% (Checks completed: 61.11%)
          Discord(https://discord.com/app)
 Update the class SessionAuth by adding a new method def destroy_session(self,
 request=None): that deletes the user session / logout:

    If the request is equal to None, return False

    If the request doesn't contain the Session ID cookie, return False - you must use

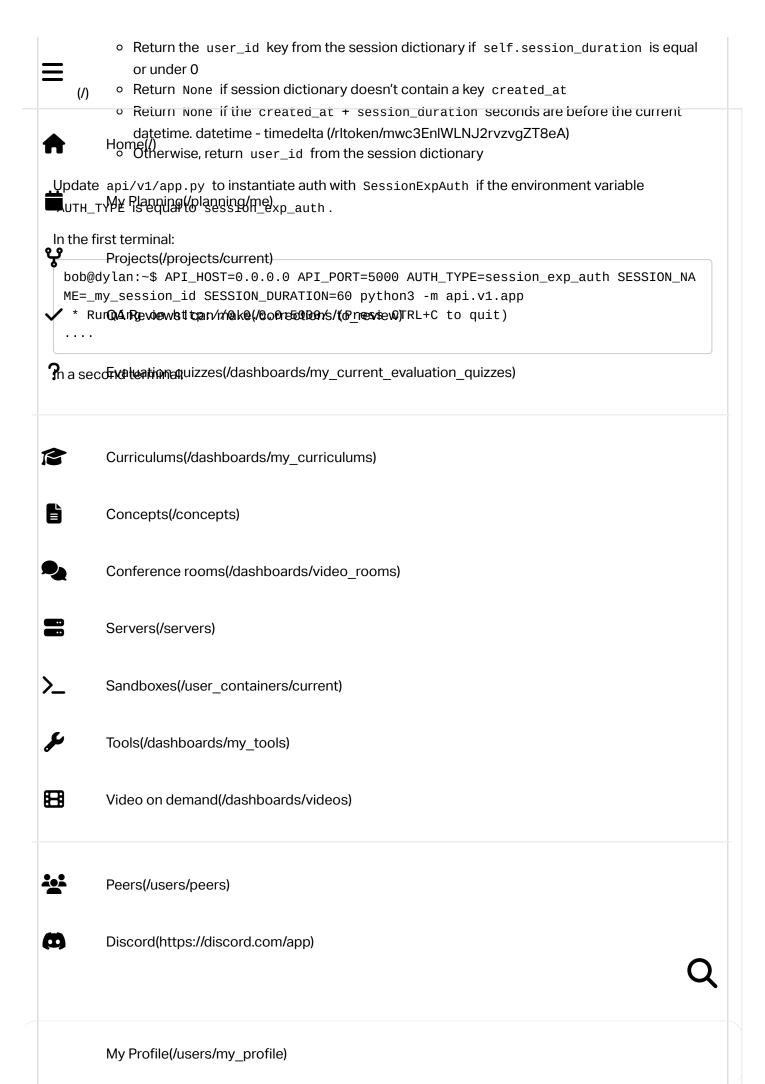
        selly Profibei(Ausensolmiye (orrofilee)st)
```



```
bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/auth_session/login" -XPOST -d "emai
 ===l=bobsession@hbtn.io" -d "password=fake pwd" -vvv
     No(t)e: Unnecessary use of -X or --request, POST is already inferred.
              Trying 0.0.0.0...
      * TCP_NODELAY set
 m^* Connected to 0.0.0.0 (127.0.0.1) port 5000 (#0)
     > POST /api/v1/auth_session/login HTTP/1.1
     > Host: 0.0.0.0:5000
   > UserMxdelanening//planning/me)
     > Accept: */*
     > Content-Length: 42
 S contempjeats/projects/curtemin/x-www-form-urlencoded
      * upload completely sent off: 42 out of 42 bytes
    /* HTTPQAReviews.urcanchase(/e.fotrectbons/to review)
     < HTTP/1.0 200 OK
     < Content-Type: application/json
 ? < Set ക്രോസിഷ്യാറെ പുസ്മുള്ള വ്യാതിസ്ക്കാരി പ്രീഷ്ട്രം Set ക്രോഗി പ്രിവാഗ്രാവ് വിശ്യാവി വിധാന വിധാന
     < Access-Control-Allow-Origin: *
     < Content-Length: 210
      < Server: Werkzeug/0.12.1 Python/3.4.3</pre>
      < Date: Mon, 16 Oct 2017 04:57:08 GMT
Curriculums(/dashboards/my_curriculums)
          "created_at": "2017-10-16 04:23:04",
 Ħ
         "emalencepts (sees entage that io",
          "first_name": null,
          "id": "cf3ddee1-ff24-49e4-a40b-2540333fe992",
  🔼 ուլա Քօրեթերբուբերը բան (/dashboards/video_rooms)։
          "updated at": "2017-10-16 04:23:04"
  = to signiyetal/aperverah o
     bob@dylan:~$
     bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/users/me" --cookie "_my_session_id=
_e173cbSzendbzoxes(Asser9containess/shurenzt)"
          "created_at": "2017-10-16 04:23:04",
          "ematiobils(/dashbsearstis/n@hbtools)o",
          "first_name": null,
          "id": "cf3ddee1-ff24-49e4-a40b-2540333fe992",
田
          "โลงนี่deaman demand (/dashboards/videos)
          "updated at": "2017-10-16 04:23:04"
     }
     bob@dylan:~$
bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/auth_session/logout" --cookie "_my_
. Peers(/users/peers)
     session id=e1/3cb79-d3fc-4e3a-9e6f-bcd345b24721"
     <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN">
      <title>405 Method Not Allowed</title>
h1>MePinsord(https://discord.com/app)
      The method is not allowed for the requested URL.
     bob@dylan:~$
     bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/auth_session/logout" --cookie "_my_
     session_id=e173cb79-d3fc-4e3a-9e6f-bcd345b24721" -XDELETE
     bob@dvMxnProfile(/users/my_profile)
```

bob@dylan:~\$ curl "http://0.0.0.0:5000/api/v1/users/me" --cookie "_my_session_id= e173cb79-d3fc-4e3a-9e6f-bcd345b24721" (/)error": "Forbidden" bob@dylan:(/) Login, logout... what's else? My Planning(/planning/me) Now, after getting a Session IB, you can request all protected API routes by using this Session ID, no need anymore to send User email and password every time. ဗှ Projects(/projects/current) Repo: Gi@AuBereierousithocom artaket/accorrectionsen/todaneoview) Directory: 0x02-Session_authentication File: api/v1/auth/session_auth.py, api/v1/views/session_auth.py Evaluation quizzes(/dashboards/my_current_evaluation_quizzes) Check submission >_ Get a sandbox View results Mark submission Expiration lums (/dashboards/my_curriculums) #advanced Score: **Oal%odptæ/despromptex**ed: 0.0%) Actually you have 2 authentication systems:

Conference rooms(/dashboards/video_rooms) Basic authentication Session authentication Servers(/servers) Now you will add an expiration date to a Session ID. Create a class SessionExpAuth that inherits from SessionAuth in the file >=pi/v1/Sandboxes(/user_containers/current) Overload def __init__(self): method: Toolakkaahlanankaamvetanalabute session_duration: ■ To the environment variable SESSION DURATION casts to an integer If this environment variable doesn't exist or can't be parse to an integer, assign to 0 Video on.demand(/dashboards/videos)
Overload def create_session(self, user_id=None): Create a Session ID by calling super() - super() will call the create_session() method of SessionAuth Return None if super() can't create a Session ID
 Peers(/users/peers)
 Use this Session ID as key of the dictionary user_id_by_session_id - the value for this key must be a dictionary (called "session dictionary"): Discord https://mycuse.coid/apust be set to the variable user_id Œ ■ The key created_at must be set to the current datetime - you must use datetime.now() Return the Session ID created Overload def user_id_for_session_id(self, session_id=None): o Return, None if session id is None My Profile (Jusers/my profile) Return None if user_id_by_session_id doesn't contain any key equals to session_id



```
bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/auth_session/login" -XPOST -d "emai
🛨 l=bobsession@hbtn.io" -d "password=fake pwd" -vvv
  No(t)e: Unnecessary use of -X or --request, POST is already inferred.
       Trying 0.0.0.0...
   * TCP_NODELAY set
\mathbf{m}^* Condected to 0.0.0.0 (127.0.0.1) port 5000 (#0)
  > POST /api/v1/auth_session/login HTTP/1.1
  > Host: 0.0.0.0:5000
 > userMxdelantning(//plantning/me)
  > Accept: */*
  > Content-Length: 42
S contempjeats/projects/curtemin/x-www-form-urlencoded
   * upload completely sent off: 42 out of 42 bytes
  /* HTTPQAReviews.urcanchase(/e.fotrectbons/to review)
  < HTTP/1.0 200 OK
  < Content-Type: application/json
? < Set ക്രോസിഷ്യാറെ സുമ്മുള്ളിയിൽ സ്വാധി വിശ്യാഗ്യ Path=/
  < Access-Control-Allow-Origin: *
  < Content-Length: 210
   < Server: Werkzeug/0.12.1 Python/3.4.3</pre>
   < Date: Mon, 16 Oct 2017 04:57:08 GMT
Curriculums(/dashboards/my_curriculums)
     "created_at": "2017-10-16 04:23:04",
Ė
    "emalencepts/sensents hbtn.io",
     "first_name": null,
     "id": "cf3ddee1-ff24-49e4-a40b-2540333fe992",
 "updated_at": "2017-10-16 04:23:04"
 o osterberskaldservers ± ±
  bob@dylan:~$
  bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/users/me" --cookie "_my_session_id=
Leea5d96andboloxes(Afsærgeonstationess/zoureentf"
     "created_at": "2017-10-16 04:23:04",
     "ematiobils(/dashbsearstis/n@hbtools)o",
     "first_name": null,
     "id": "cf3ddee1-ff24-49e4-a40b-2540333fe992",
田
     "โลงนี่deaman demand (/dashboards/videos)
     "updated_at": "2017-10-16 04:23:04"
  }
  bob@dylan:~$
bob@dylan:~$ sleep 10
bob@dylan:/\u00e4sers/peers)
  bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/users/me" --cookie "_my_session_id=
   eea5d963-8dd2-46f0-9e43-fd05029ae63f"
(D)(
        Discord(https://discord.com/app)
     "created_at": "2017-10-16 04:23:04",
     "email": "bobsession@hbtn.io",
     "first_name": null,
     "id": "cf3ddee1-ff24-49e4-a40b-2540333fe992",
     "last_name": null,
     "updMy&rofile(/users/my_18r9file)4:23:04"
```

```
·bob@dylan:~$
   bob@dylan:\sim$ sleep 51 # 10 + 51 > 60
   bob@dylan:~$
   bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/users/me" --cookie "_my_session_id=
   eea5d963-8dd2-46f0-9e43-fd05029ae63f"
      "error": "Forbidden"
   <sup>√</sup> My Planning(/planning/me)
bob@dylan:~$
         Projects(/projects/current)
 Repo:

    Git-hub repository, alax-hackend filese/forataview)

     • Directory: 0x02-Session_authentication
     • File: api/v1/auth/session_exp_auth.py, api/v1/app.py
         Evaluation quizzes(/dashboards/my current evaluation quizzes)
   Check submission
                      Mark submission
                                        > Get a sandhox
                                                          View results
60. Sessionsuin rda(tabasse ards/my_curriculums)
                                                                                            #advanced
Score: 20% ( Shepks normaleted: 0.0%)
 Since the beginning, all Session IDs are stored in memory. It means, if your application stops, all Session
s are longinference rooms(/dashboards/video_rooms)
 For avoid that, you will create a new authentication system, based on Session ID stored in database (for
s, it will be in a file like user ).
 Create a new model UserSession in models/user_session.py that inherits from Base:
__ • Impatendlenkentuser_contain<u>ers</u>/sentrent)args: list, **kwargs: dict): like in User but for
        these 2 attributes:
           o user_id:string
         Tools(/dashboards/my tools)
 Create a new authentication class SessionDBAuth in api/v1/auth/session_db_auth.py that inherits
om Seviden en demand (/dashboards/videos)

    Overload_def_create_session(self,_user_id=None): that creates and stores new instance of

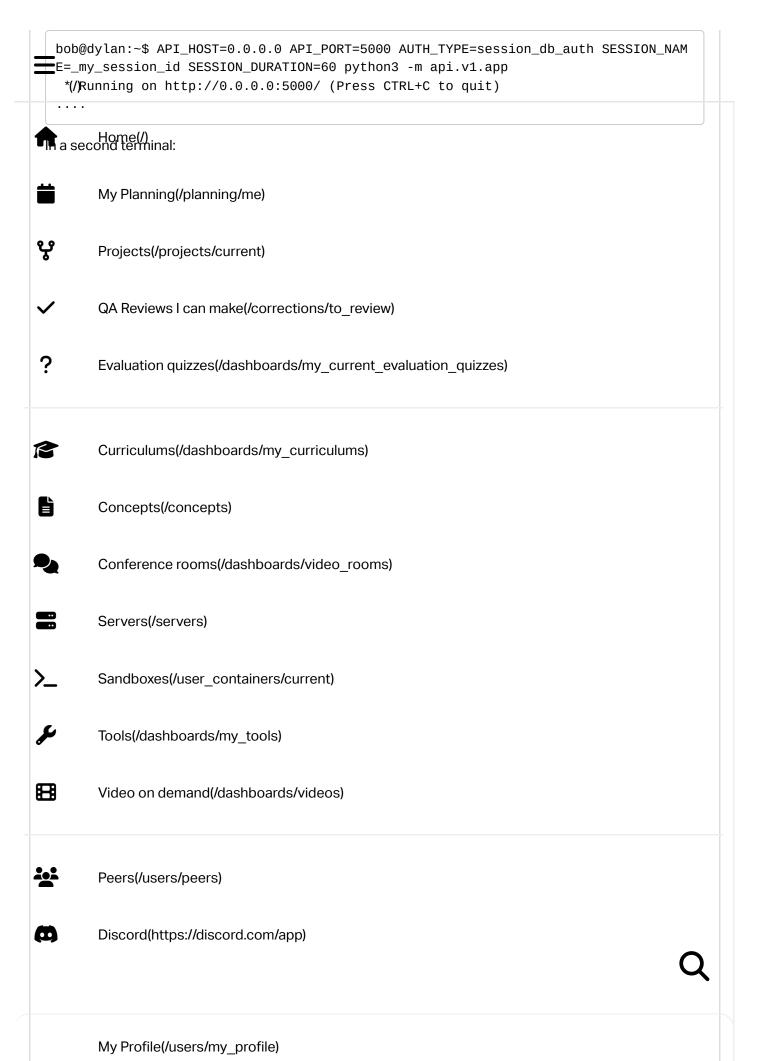
        UserSession and returns the Session ID
    • Overload users beers id_for_session_id(self, session_id=None): that returns the User ID by
        requesting UserSession in the database based on session_id
```

• Overload def destroy_session(self, request=None): that destroys the UserSession basis ord (https://disnord/neppequest cookie

Update api/v1/app.py to instantiate auth with SessionDBAuth if the environment variable AUTH_TYPE is equal to session_db_auth.



In the first terminal:



```
bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/auth_session/login" -XPOST -d "emai
 🛨 l=bobsession@hbtn.io" -d "password=fake pwd" -vvv
      No(t)e: Unnecessary use of -X or --request, POST is already inferred.
              Trying 0.0.0.0...
      * TCP_NODELAY set
 \mathbf{m}^* Condected to 0.0.0.0 (127.0.0.1) port 5000 (#0)
      > POST /api/v1/auth_session/login HTTP/1.1
      > Host: 0.0.0.0:5000
   > userMxdelantning(//plantning/me)
      > Accept: */*
      > Content-Length: 42
 S contempjeats/projects/curtemin/x-www-form-urlencoded
      * upload completely sent off: 42 out of 42 bytes
    /* HTTPQAReviews.urcanchase(/e.fotrectbons/to review)
      < HTTP/1.0 200 OK
      < Content-Type: application/json
 ? < Set ക്രോസിഷ്ക്രവ സുമ്മുള്ളിയിൽ ക്രിക്ക് ക്രിക്ക് ക്രിക്ക് ക്രിക്ക് പ്രാവാഗിക്ക് വിധാന വിധാന
      < Access-Control-Allow-Origin: *
      < Content-Length: 210
      < Server: Werkzeug/0.12.1 Python/3.4.3</pre>
      < Date: Mon, 16 Oct 2017 04:57:08 GMT
Curriculums(/dashboards/my_curriculums)
          "created_at": "2017-10-16 04:23:04",
 Ė
         "emalencepts/sensents hbtn.io",
          "first_name": null,
          "id": "cf3ddee1-ff24-49e4-a40b-2540333fe992",
   "updated_at": "2017-10-16 04:23:04"
  o osterberskaldservers ± ±
      bob@dylan:~$
      bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/users/me" --cookie "_my_session_id=
Lbacad San-chockes (8.880 rb.chootsiners/chockent)"
          "created_at": "2017-10-16 04:23:04",
          "ematiobils(/dashbsearstis/n@hbtools)o",
          "first_name": null,
          "id": "cf3ddee1-ff24-49e4-a40b-2540333fe992",
田
          "โลงนี่deaman demand (/dashboards/videos)
           "updated_at": "2017-10-16 04:23:04"
      }
      bob@dylan:~$
bob@dylan:~$ sleep 10
bob@dylan:/\u00e4sers/peers)
      bob@dylan:~$ curl "http://0.0.0.0:5000/api/v1/users/me" --cookie "_my_session_id=
      bacadfad-3c3b-4830-b1b2-3d77dfb9ad13"
(D)(
                 Discord(https://discord.com/app)
           "created_at": "2017-10-16 04:23:04",
           "email": "bobsession@hbtn.io",
           "first_name": null,
           "id": "cf3ddee1-ff24-49e4-a40b-2540333fe992",
           "last_name": null,
           "updMy&rofile(/users/my_18r9file)4:23:04"
```

