Curriculum

SE Foundations

Average: **158.95%**

We're moving to Discord!

In a few days, we will be leaving Slack in favor of Discord 🎉

👆 **Click here for more information (/concepts/100033)**

0x06. AirBnB clone - Web dynamic

Python **Front-end** **JavaScript**

By: Guillaume, CTO at Holberton School

Weight: 2

Project to be done in teams of 2 people (your team: John Muriithi, DELMUS OGORA)

Project over - took place from May 4, 2023 6:00 AM to May 8, 2023 6:00 AM

☑ Manual QA review was done by Tumuti WAMUGI on May 5, 2023 1:01 PM

☑ An auto review will be launched at the deadline

In a nutshell…

- **Manual QA review:** 109.0/117 mandatory & 63.0/63 optional
- **Auto QA review:** 6.0/6 mandatory
- **Altogether: 187.0%**
  - Mandatory: 93.5%
  - Optional: 100.0%
  - Calculation: 93.5% + (93.5% * 100.0%) == **187.0%**

Concepts

For this project, we expect you to look at this concept:

- AirBnB clone (/concepts/74)

Resources

Read or watch:

- Selector (/rltoken/Bl2mJVVG07XCP6E8qtsQMg)
- Get and set content (/rltoken/oM3b0a0FGTy6AQ_UJ201Yw)
- Manipulate CSS classes (/rltoken/LL2uScQvjWnj2ZEx2CzxXw)
- Manipulate DOM elements (/rltoken/6JtTz9SaNX3AyVXht4tMYA)
- Document ready (/rltoken/1AbzN1nEfBKoSjB-9kjmrA)
- Introduction (/rltoken/OGDoIOd0cdmwDJFJy4aw5w)
- GET & POST request (/rltoken/kmBzs_QPD72Oz--Yk80JHw)
- HTTP access control (CORS) (/rltoken/tzqJx5SS5cF1BW_lAnXqqg)

Learning Objectives

At the end of this project, you are expected to be able to explain to anyone (/rltoken/_ii906pZ1sg8gkAF1dvsNQ), **without the help of Google**:

General

- How cool it is to request your own API
- How to modify an HTML element style
- How to get and update an HTML element content
- How to modify the DOM
- How to make a `GET` request with JQuery Ajax
- How to make a `POST` request with JQuery Ajax
- How to listen/bind to DOM events
- How to listen/bind to user events

Copyright - Plagiarism

- You are tasked to come up with solutions for the tasks below yourself to meet with the above learning objectives.
- You will not be able to meet the objectives of this or any following project by copying and pasting someone else’s work.
- You are not allowed to publish any content of this project.
- Any form of plagiarism is strictly forbidden and will result in removal from the program.

Requirements

General

- Allowed editors: `vi` , `vim` , `emacs`
- All your files will be interpreted on Chrome (version 57.0)
- All your files should end with a new line
- A `README.md` file, at the root of the folder of the project, is mandatory

- Your code should be `semistandard` compliant with the flag `--global $`: `semistandard *.js --global $`
- All your JavaScript must be in the folder `scripts`
- You must use JQuery version 3.x
- You are not allowed to use `var`
- HTML should not reload for each action: DOM manipulation, update values, fetch data…

GitHub

There should be one project repository per group. If you clone/fork/whatever a project repository with the same name before the second deadline, you risk a 0% score.

More Info

Import JQuery

```
<head>
    <script src="https://code.jquery.com/jquery-3.2.1.min.js"></script>
</head>
```

Before starting the project…

You will work on a codebase using Flasgger (/rltoken/VmGDpw_DCN16OJt_UoqsDQ), you will need to install it locally first before starting the RestAPI:

```
$ sudo apt-get install -y python3-lxml
$ sudo pip3 install flask_cors # if it was not installed yet
$ sudo pip3 install flasgger
```

If the RestAPI is not starting, please read the error message. Based on the(ses) error message(s), you will have to troubleshoot potential dependencies issues.

Here some solutions:

`jsonschema` exception

```
$ sudo pip3 uninstall -y jsonschema
$ sudo pip3 install jsonschema==3.0.1
```

`No module named 'pathlib2'`

```
$ sudo pip3 install pathlib2
```

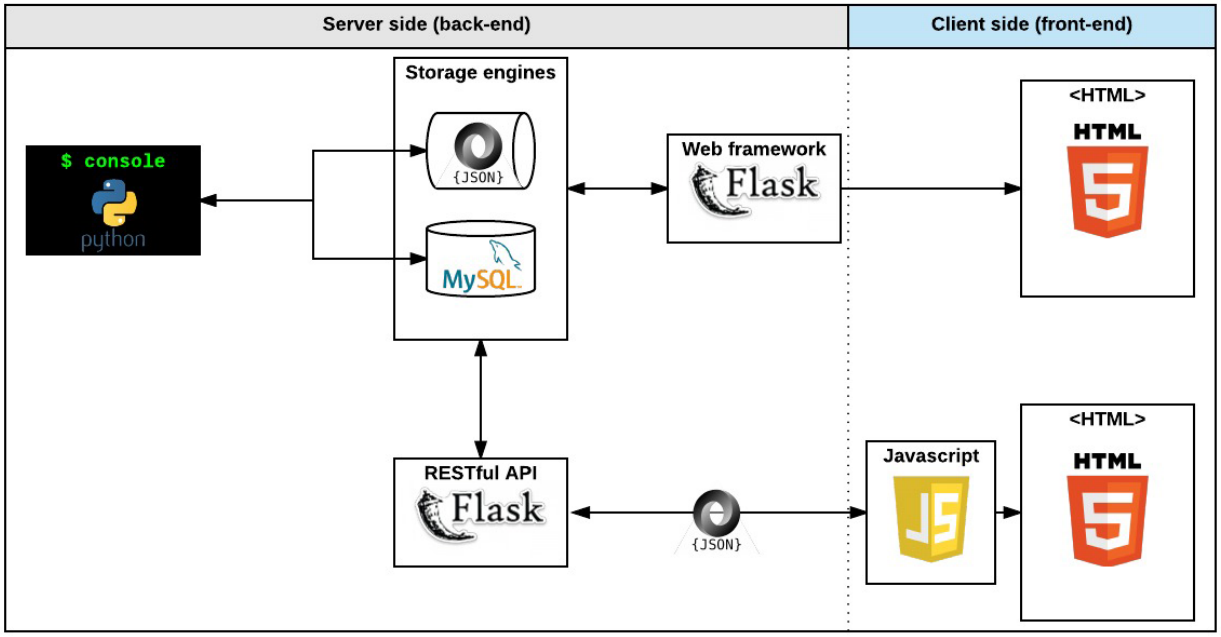
Expose ports from your Vagrant

In your `Vagrantfile`, add this line for each port forwarded

```
# I expose the port 5001 of my vm to the port 5001 on my computer
config.vm.network :forwarded_port, guest: 5001, host: 5001
```

if you need to expose other ports, same line but you will need to replace the “guest port” (inside your vagrant) and your “host port” (outside your vagrant, used from your browser for example)

It’s important in your project, to use the AirBnB API with the port `5001`



Manual QA Review

It is your responsibility to request a review for this project from a peer before the project’s deadline. If no peers have been reviewed, you should request a review from a TA or staff member.

Tasks

0. Last clone!

mandatory

Score: 100.0% (*Checks completed: 100.0%*)

A new codebase again? Yes!

For this project you will fork this codebase (/rltoken/18CpThAKqBP5uviO1DSSGw):

- Update the repository name to `AirBnB_clone_v4`
- Update the `README.md`:

  - Add yourself as an author of the project
  - Add new information about your new contribution
  - Make it better!
- If you’re the owner of this codebase, create a new repository called `AirBnB_clone_v4` and copy over all files from `AirBnB_clone_v3`
- If you didn’t install Flasgger from the previous project, it’s time! `sudo pip3 install flasgger`

Repo:

- GitHub repository: `AirBnB_clone_v4`

☑ Done! | Help | Check your code | >_ Get a sandbox | QA Review

1. Cash only

mandatory

Score: 100.0% (*Checks completed: 100.0%*)

Write a script that starts a Flask web application:

- Based on `web_flask`, copy: `web_flask/static`, `web_flask/templates/100-hbnb.html`, `web_flask/__init__.py` and `web_flask/100-hbnb.py` into the `web_dynamic` folder
- Rename `100-hbnb.py` to `0-hbnb.py`
- Rename `100-hbnb.html` to `0-hbnb.html`
- Update `0-hbnb.py` to replace the existing route to `/0-hbnb/`

If `100-hbnb.html` is not present, use `8-hbnb.html` instead

```
guillaume@ubuntu:~/AirBnB_v4$ HBNB_MYSQL_USER=hbnb_dev HBNB_MYSQL_PWD=hbnb_dev_pwd HBNB_MYSQL_HOST=localhost HBNB_MYSQL_DB=hbnb_dev_db HBNB_TYPE_STORAGE=db python3 -m web_dynamic.0-hbnb
* Running on http://0.0.0.0:5000/ (Press CTRL+C to quit)
....
```

One problem now is the asset caching done by Flask.

To avoid that, you will add a query string to each asset:

In `0-hbnb.py`, add a variable `cache_id` to the `render_template`. The value of this variable must be an UUID (`uuid.uuid4()`)

In `0-hbnb.html`, add this variable `cache_id` as query string to each `<link>` tag URL

```
guillaume@ubuntu:~/AirBnB_v4$ curl -s -XGET http://0.0.0.0:5000/0-hbnb/ | head -6
<!DOCTYPE HTML>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <link rel="stylesheet" type="text/css" href="../static/styles/4-common.css?e211c
9eb-7d17-4f12-85eb-4d50fa50cb1d" />
    <link rel="stylesheet" type="text/css" href="../static/styles/3-header.css?e211c
9eb-7d17-4f12-85eb-4d50fa50cb1d" />
guillaume@ubuntu:~/AirBnB_v4$ curl -s -XGET http://0.0.0.0:5000/0-hbnb/ | head -6
<!DOCTYPE HTML>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <link rel="stylesheet" type="text/css" href="../static/styles/4-common.css?f8344
13e-0aa9-4767-b64a-c92db9cb1f82" />
    <link rel="stylesheet" type="text/css" href="../static/styles/3-header.css?f8344
13e-0aa9-4767-b64a-c92db9cb1f82" />
guillaume@ubuntu:~/AirBnB_v4$
```

Repo:

- GitHub repository: `AirBnB_clone_v4`
- Directory: `web_dynamic`
- File: `0-hbnb.py, templates/0-hbnb.html`

☑ Done! | Help | >_ Get a sandbox | QA Review

2. Select some Amenities to be comfortable!

mandatory

Score: 100.0% (*Checks completed: 100.0%*)

For the moment the filters section is static, let's make it dynamic!

Replace the route `0-hbnb` with `1-hbnb` in the file `1-hbnb.py` (based on `0-hbnb.py`)

Create a new template `1-hbnb.html` (based on `0-hbnb.html`) and update it:

- Import JQuery in the `<head>` tag
- Import the JavaScript `static/scripts/1-hbnb.js` in the `<head>` tag
  - In 1-hbnb.html and the following HTML files, add this variable cache_id as query string to the above `<script>` tag
- Add a `<input type="checkbox">` tag to the `li` tag of each amenity
- The new checkbox must be at 10px on the left of the Amenity name
- Add to the `input` tags of each amenity (`<li>` tag) the attribute `data-id=":amenity_id"` => this will allow us to retrieve the Amenity ID from the DOM
- Add to the `input` tags of each amenity (`<li>` tag) the attribute `data-name=":amenity_name"` => this will allow us to retrieve the Amenity name from the DOM

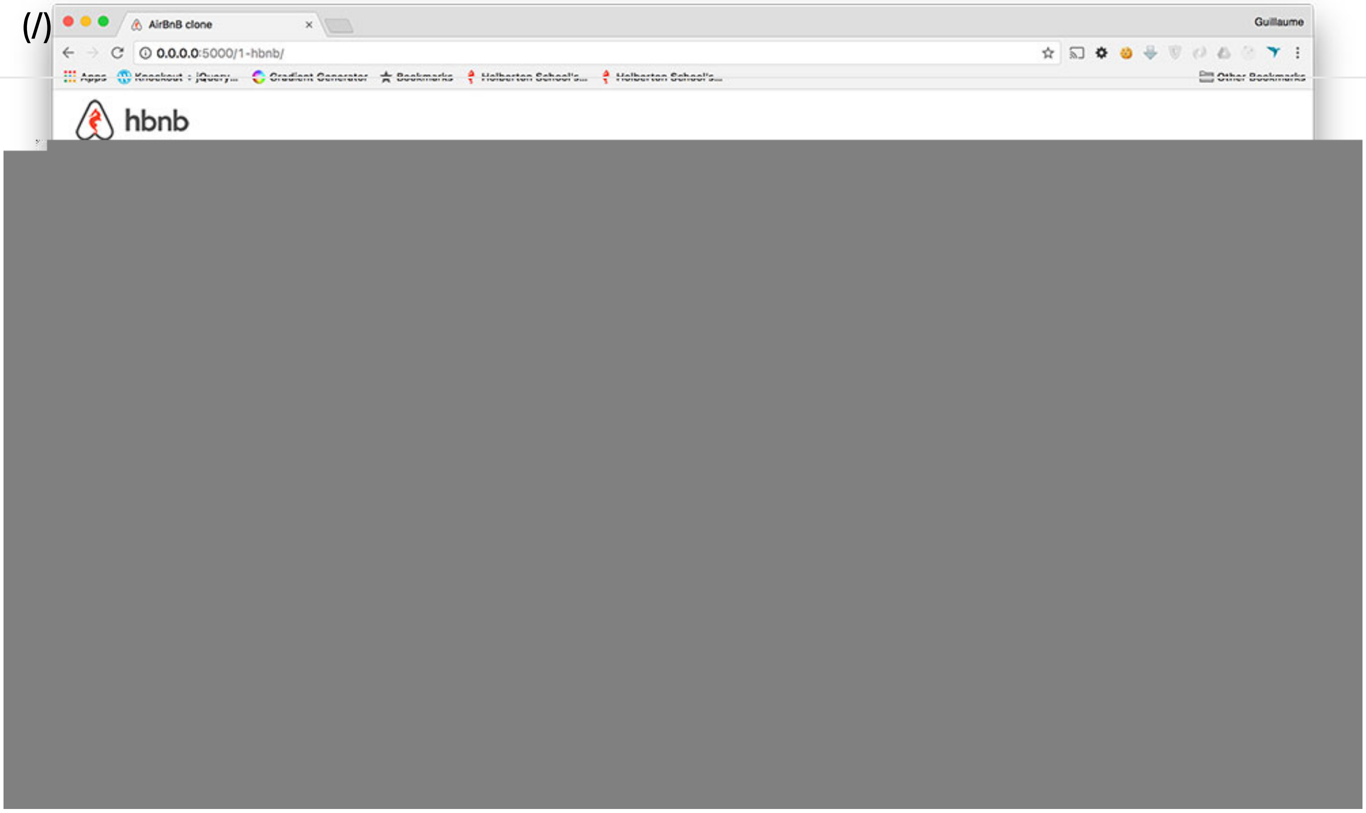
Write a JavaScript script (`static/scripts/1-hbnb.js`):

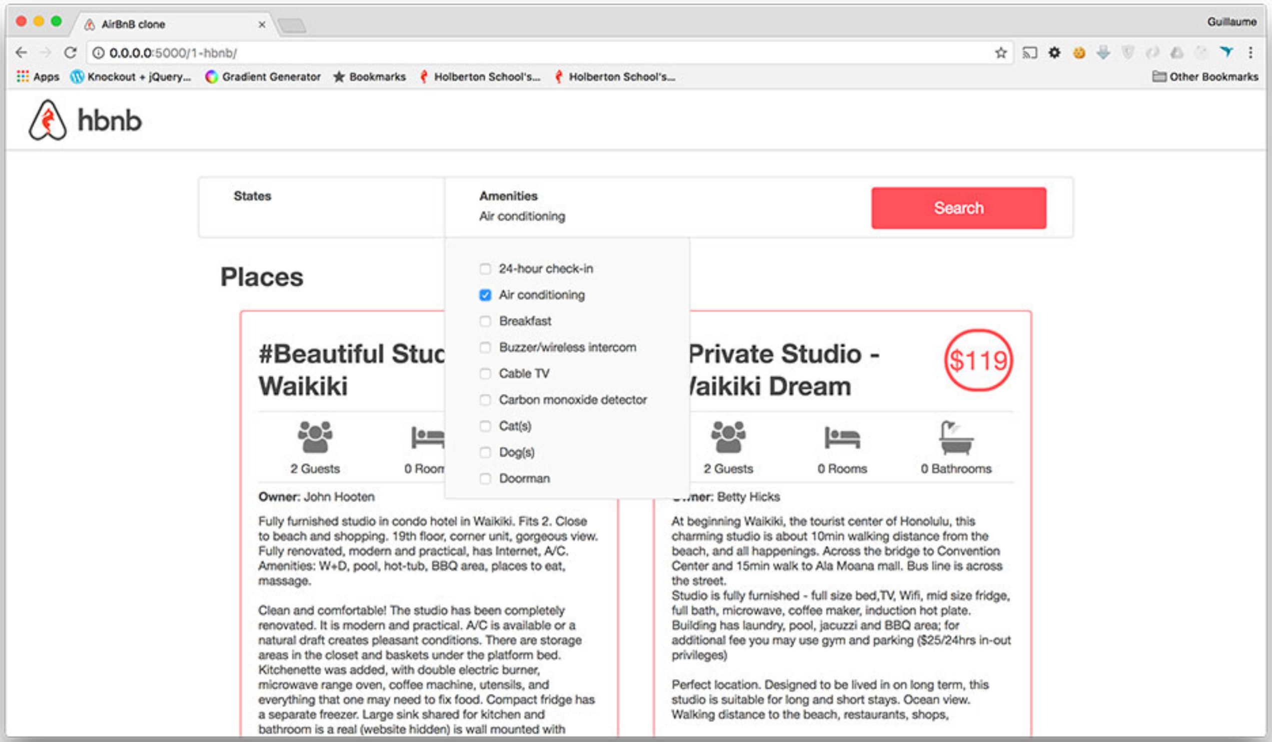
(/)

- Your script must be executed only when DOM is loaded
- You must use JQuery
- Listen for changes on each `input` checkbox tag:
    - if the checkbox is checked, you must store the Amenity ID in a variable (dictionary or list)
    - if the checkbox is unchecked, you must remove the Amenity ID from the variable
    - update the `h4` tag inside the `div` Amenities with the list of Amenities checked

As example:

(/)





States

Amenities
Air conditioning

□ 24-hour check-in
☑ Air conditioning
□ Breakfast
□ Buzzer/wireless intercom
□ Cable TV
□ Carbon monoxide detector
□ Cat(s)
□ Dog(s)
□ Doorman

Places

#Beautiful Stuc Waikiki

2 Guests
0 Room

Owner: John Hooten

Fully furnished studio in condo hotel in Waikiki. Fits 2. Close to beach and shopping. 19th floor, corner unit, gorgeous view. Fully renovated, modern and practical, has Internet, A/C. Amenities: W+D, pool, hot-tub, BBQ area, places to eat, massage.

Clean and comfortable! The studio has been completely renovated. It is modern and practical. A/C is available or a natural draft creates pleasant conditions. There are storage areas in the closet and baskets under the platform bed. Kitchenette was added, with double electric burner, microwave range oven, coffee machine, utensils, and everything that one may need to fix food. Compact fridge has a separate freezer. Large sink shared for kitchen and bathroom is a real (website hidden) is wall mounted with

Private Studio - /aikiki Dream

$119

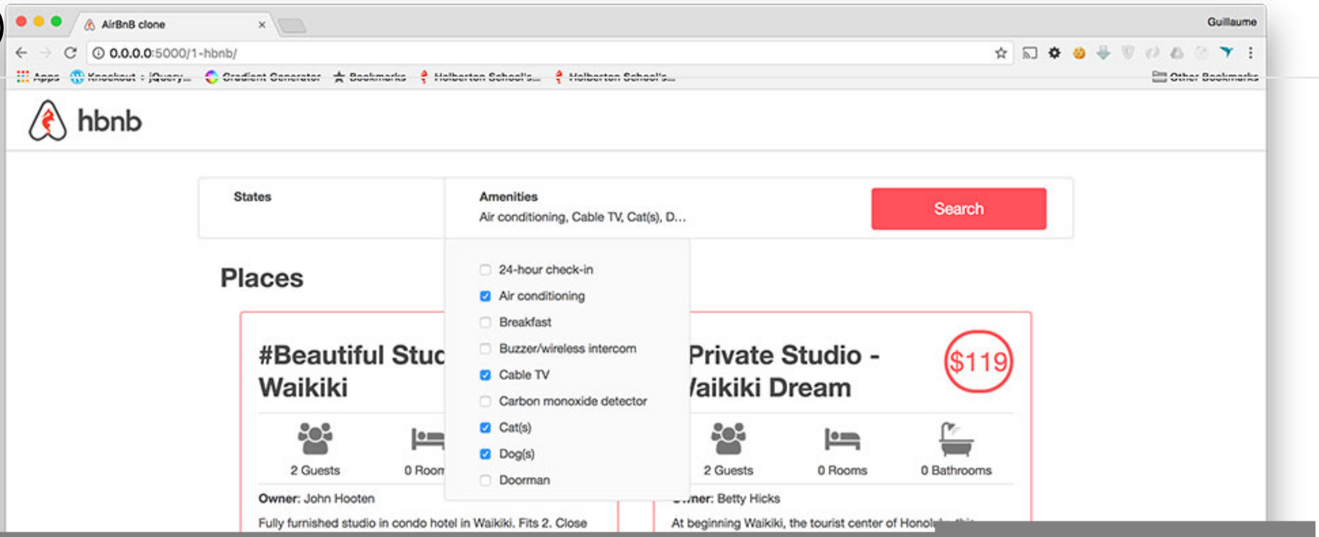
2 Guests
0 Rooms
0 Bathrooms

ner: Betty Hicks

At beginning Waikiki, the tourist center of Honolulu, this charming studio is about 10min walking distance from the beach, and all happenings. Across the bridge to Convention Center and 15min walk to Ala Moana mall. Bus line is across the street.
Studio is fully furnished - full size bed,TV, Wifi, mid size fridge, full bath, microwave, coffee maker, induction hot plate. Building has laundry, pool, jacuzzi and BBQ area; for additional fee you may use gym and parking ($25/24hrs in-out privileges)

Perfect location. Designed to be lived in on long term, this studio is suitable for long and short stays. Ocean view. Walking distance to the beach, restaurants, shops,

(/)



Repo:

- GitHub repository: `AirBnB_clone_v4`
- Directory: `web_dynamic`
- File: `1-hbnb.py, templates/1-hbnb.html, static/scripts/1-hbnb.js`

☑ Done! Help >_ Get a sandbox QA Review

3. API status

mandatory

Score: 100.0% (*Checks completed: 100.0%*)

Before requesting the HBNB API, it's better to know the status of this one.

Update the API entry point (`api/v1/app.py`) by replacing the current CORS `CORS(app, origins="0.0.0.0")` by `CORS(app, resources={r"/api/v1/*": {"origins": "*"}})` .

Change the route `1-hbnb` to `2-hbnb` in the file `2-hbnb.py` (based on `1-hbnb.py`)

Create a new template `2-hbnb.html` (based on `1-hbnb.html`) and update it:

- Import the JavaScript `static/scripts/2-hbnb.js` in the `<head>` tag (instead of `1-hbnb.js`)
- Add a new `div` element in the `header` tag:
  - Attribute ID should be `api_status`
  - Align to the right
  - Circle of 40px diameter

    - Center vertically
    - At 30px of the right border
    - Background color #cccccc
- Also add a class `available` for this new element in `web_dynamic/static/styles/3-header.css`:
    - Background color #ff545f

Write a JavaScript script (`static/scripts/2-hbnb.js`):

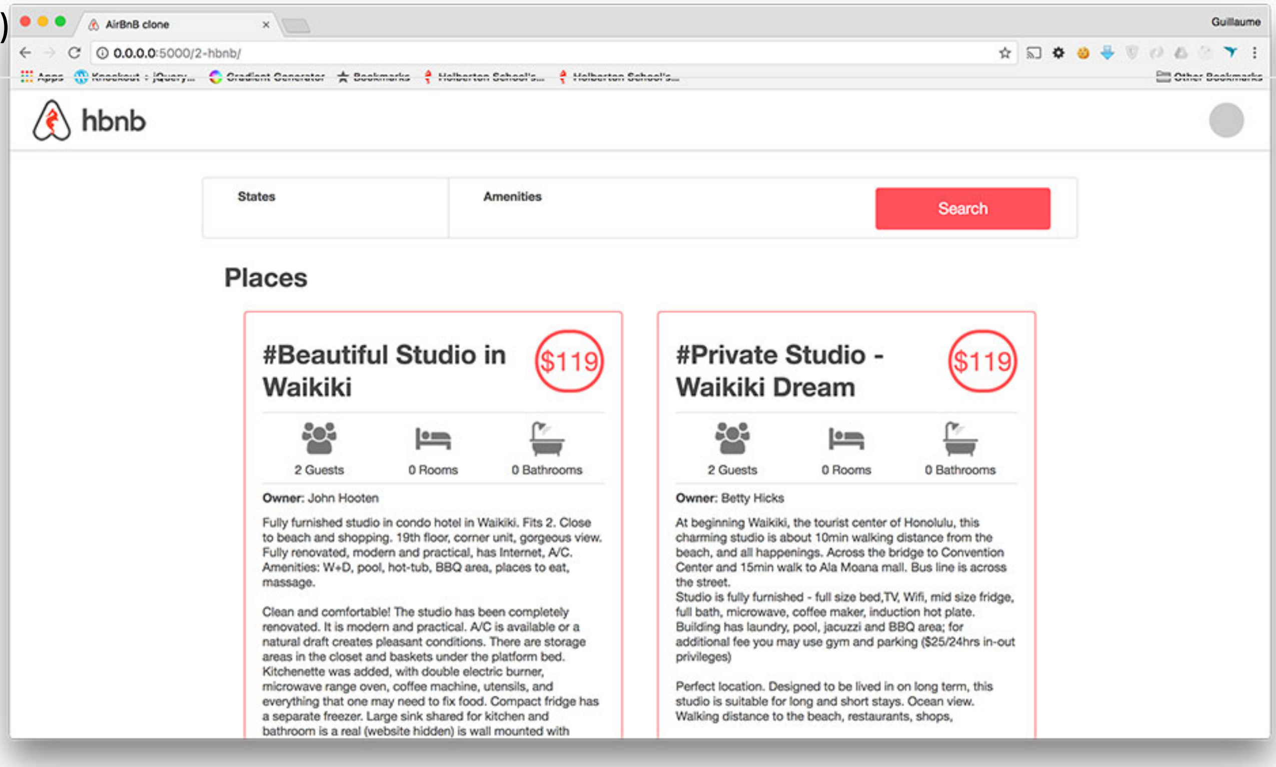
- Based on `1-hbnb.js`
- Request `http://0.0.0.0:5001/api/v1/status/` :
    - If in the status is “OK”, add the class `available` to the `div#api_status`
    - Otherwise, remove the class `available` to the `div#api_status`

To start the API in the port 5001:

```
guillaume@ubuntu:~/AirBnB_v4$ HBNB_MYSQL_USER=hbnb_dev HBNB_MYSQL_PWD=hbnb_dev_pwd HBNB_MYSQL_HOST=localhost HBNB_MYSQL_DB=hbnb_dev_db HBNB_TYPE_STORAGE=db HBNB_API_PORT=5001 python3 -m api.v1.app
...
```

For example:

(/)



Places

#Beautiful Studio in Waikiki $119

2 Guests 0 Rooms 0 Bathrooms

Owner: John Hooten

Fully furnished studio in condo hotel in Waikiki. Fits 2. Close to beach and shopping. 19th floor, corner unit, gorgeous view. Fully renovated, modern and practical, has Internet, A/C. Amenities: W+D, pool, hot-tub, BBQ area, places to eat, massage.

Clean and comfortable! The studio has been completely renovated. It is modern and practical. A/C is available or a natural draft creates pleasant conditions. There are storage areas in the closet and baskets under the platform bed. Kitchenette was added, with double electric burner, microwave range oven, coffee machine, utensils, and everything that one may need to fix food. Compact fridge has a separate freezer. Large sink shared for kitchen and bathroom is a real (website hidden) is wall mounted with

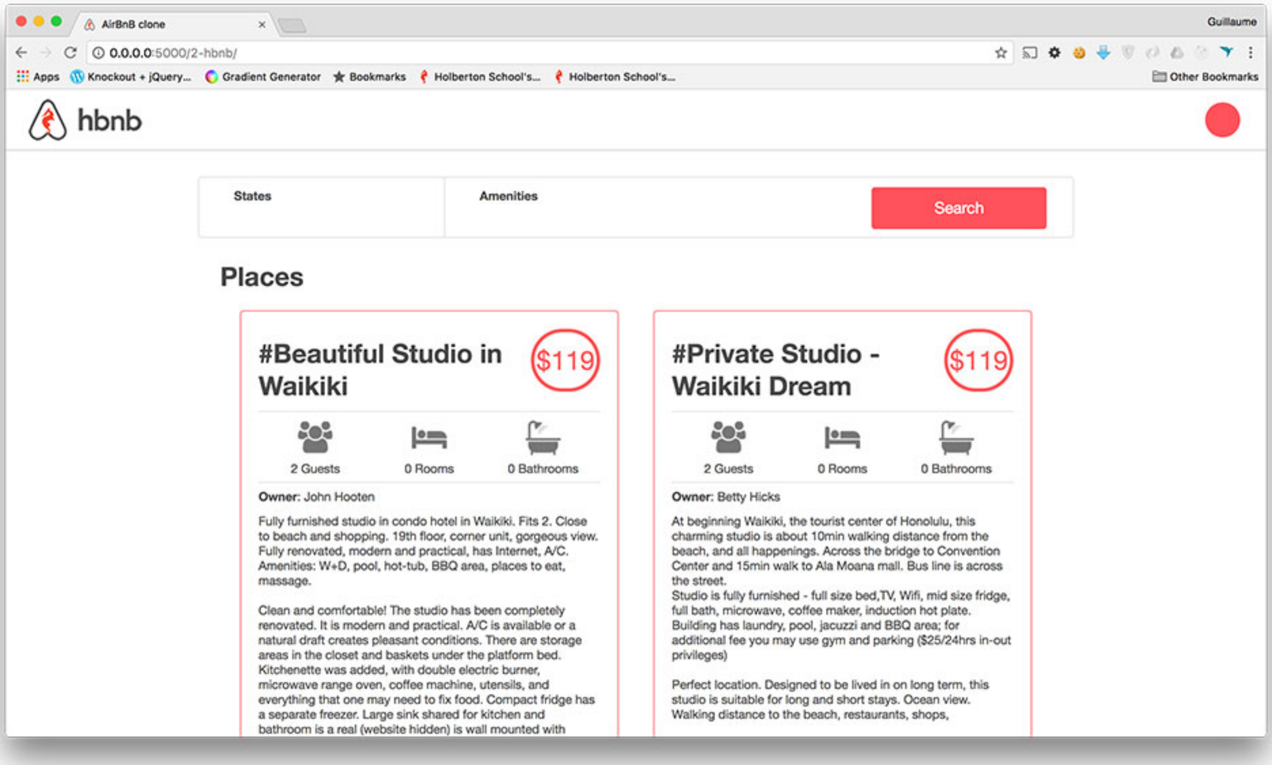
#Private Studio - Waikiki Dream $119

2 Guests 0 Rooms 0 Bathrooms

Owner: Betty Hicks

At beginning Waikiki, the tourist center of Honolulu, this charming studio is about 10min walking distance from the beach, and all happenings. Across the bridge to Convention Center and 15min walk to Ala Moana mall. Bus line is across the street.
Studio is fully furnished - full size bed,TV, Wifi, mid size fridge, full bath, microwave, coffee maker, induction hot plate. Building has laundry, pool, jacuzzi and BBQ area; for additional fee you may use gym and parking ($25/24hrs in-out privileges)

Perfect location. Designed to be lived in on long term, this studio is suitable for long and short stays. Ocean view. Walking distance to the beach, restaurants, shops,



Places

#Beautiful Studio in Waikiki $119

2 Guests 0 Rooms 0 Bathrooms

Owner: John Hooten

Fully furnished studio in condo hotel in Waikiki. Fits 2. Close to beach and shopping. 19th floor, corner unit, gorgeous view. Fully renovated, modern and practical, has Internet, A/C. Amenities: W+D, pool, hot-tub, BBQ area, places to eat, massage.

Clean and comfortable! The studio has been completely renovated. It is modern and practical. A/C is available or a natural draft creates pleasant conditions. There are storage areas in the closet and baskets under the platform bed. Kitchenette was added, with double electric burner, microwave range oven, coffee machine, utensils, and everything that one may need to fix food. Compact fridge has a separate freezer. Large sink shared for kitchen and bathroom is a real (website hidden) is wall mounted with

#Private Studio - Waikiki Dream $119

2 Guests 0 Rooms 0 Bathrooms

Owner: Betty Hicks

At beginning Waikiki, the tourist center of Honolulu, this charming studio is about 10min walking distance from the beach, and all happenings. Across the bridge to Convention Center and 15min walk to Ala Moana mall. Bus line is across the street.
Studio is fully furnished - full size bed,TV, Wifi, mid size fridge, full bath, microwave, coffee maker, induction hot plate. Building has laundry, pool, jacuzzi and BBQ area; for additional fee you may use gym and parking ($25/24hrs in-out privileges)

Perfect location. Designed to be lived in on long term, this studio is suitable for long and short stays. Ocean view. Walking distance to the beach, restaurants, shops,

Repo:

- GitHub repository: `AirBnB_clone_v4`

(/)

- File: `api/v1/app.py, web_dynamic/2-hbnb.py, web_dynamic/templates/2-hbnb.html, web_dynamic/static/styles/3-header.css, web_dynamic/static/scripts/2-hbnb.js`

☑ Done! Help >_ Get a sandbox QA Review

4. Fetch places

mandatory

Score: 100.0% (*Checks completed: 100.0%*)

Replace the route `2-hbnb` with `3-hbnb` in the file `3-hbnb.py` (based on `2-hbnb.py`)

Create a new template `3-hbnb.html` (based on `2-hbnb.html`) and update it:

- Import the JavaScript `static/scripts/3-hbnb.js` in the `<head>` tag (instead of `2-hbnb.js`)
- Remove the entire Jinja section of displaying all places (all `article` tags)

Write a JavaScript script (`static/scripts/3-hbnb.js`):

- Based on `2-hbnb.js`
- Request `http://0.0.0.0:5001/api/v1/places_search/` :
    - Description of this endpoint here (/rltoken/EkC2rNKurYIznWBiJYPtgA). **If this endpoint is not available, you will have to add it to the API** (you can work all together for creating this endpoint)
    - Send a `POST` request with `Content-Type: application/json` and an empty dictionary in the body - cURL version: `curl "http://0.0.0.0:5001/api/v1/places_search" -XPOST -H "Content-Type: application/json" -d '{}'`
    - Loop into the result of the request and create an `article` tag representing a `Place` in the `section.places` . (you can remove the Owner tag in the place description)

The final result must be the same as previously, but now, places are loaded from the front-end, not from the back-end!

Repo:

- GitHub repository: `AirBnB_clone_v4`
- File: `web_dynamic/3-hbnb.py, web_dynamic/templates/3-hbnb.html, web_dynamic/static/scripts/3-hbnb.js`

☑ Done! Help >_ Get a sandbox QA Review

5. Filter places by Amenity

mandatory

Score: 72.41% (*Checks completed: 72.41%*)

Replace the route `3-hbnb` with `4-hbnb` in the file `4-hbnb.py` (based on `3-hbnb.py`)
(/)
Create a new template `4-hbnb.html` (based on `3-hbnb.html`) and update it:

- Import the JavaScript `static/scripts/4-hbnb.js` in the `<head>` tag (instead of `3-hbnb.js`)

Write a JavaScript script (`static/scripts/4-hbnb.js`):

- Based on `3-hbnb.js`
- When the `button` tag is clicked, a new POST request to `places_search` should be made with the list of Amenities checked

Now you have the first filter implemented, enjoy!

Repo:

- GitHub repository: `AirBnB_clone_v4`
- File: `web_dynamic/4-hbnb.py, web_dynamic/templates/4-hbnb.html, web_dynamic/static/scripts/4-hbnb.js`

☑ Done! Help >_ Get a sandbox QA Review

6. States and Cities

#advanced

Score: 100.0% (*Checks completed: 100.0%*)

Now, reproduce the same steps with the State and City filter:

Replace the route `4-hbnb` to `100-hbnb` in the file `100-hbnb.py` (based on `4-hbnb.py`)

Create a new template `100-hbnb.html` (based on `4-hbnb.html`) and update it:

- Import the JavaScript `static/scripts/100-hbnb.js` in the `<head>` tag (instead of `4-hbnb.js`)
- Add to all `li` tags of each state a new tag: `<input type="checkbox">`
- Add to all `li` tags of each cities a new tag: `<input type="checkbox">`
- The new checkbox must be at 10px on the left of the State or City name
- Add to all `input` tags of each states (`<li>` tag) the attribute `data-id=":state_id"`
- Add to all `input` tags of each states (`<li>` tag) the attribute `data-name=":state_name"`
- Add to all `input` tags of each cities (`<li>` tag) the attribute `data-id=":city_id"`
- Add to all `input` tags of each cities (`<li>` tag) the attribute `data-name=":city_name"`

Write a JavaScript script (`static/scripts/100-hbnb.js`):

- Based on `4-hbnb.js`
- Listen to changes on each `input` checkbox tag:
  - if the checkbox is checked, you must store the State or City ID in a variable (dictionary or list)
  - if the checkbox is unchecked, you must remove the State or City ID from the variable
  - update the `h4` tag inside the `div` Locations with the list of States or Cities checked
- When the `button` tag is clicked, a new POST request to `places_search` should be made with the list of Amenities, Cities and States checked

(/)

Repo:

- GitHub repository: `AirBnB_clone_v4`
- File: `web_dynamic/100-hbnb.py`, `web_dynamic/templates/100-hbnb.html`, `web_dynamic/static/scripts/100-hbnb.js`

☑ Done! | Help | >_ Get a sandbox | QA Review

7. Reviews

#advanced

Score: 100.0% (*Checks completed: 100.0%*)

Let’s add a new feature: show and hide reviews!

Replace the route `100-hbnb` to `101-hbnb` in the file `101-hbnb.py` (based on `100-hbnb.py`)

Create a new template `101-hbnb.html` (based on `100-hbnb.html`) and update it:

- Import the JavaScript `static/scripts/101-hbnb.js` in the `<head>` tag (instead of `101-hbnb.js`)
- Design the list of reviews from this task (/rltoken/6QUObzD76iV79Sc0rFcAQQ)
- Add a `span` element at the right of the `H2` “Reviews” with value “show” (add all necessary attributes to do this feature)

Write a JavaScript script (`static/scripts/101-hbnb.js`):

- Based on `100-hbnb.js`
- When the `span` next to the Reviews `h2` is clicked by the user:
  - Fetch, parse, display reviews and change the text to “hide”
  - If the text is “hide”: remove all Review elements from the DOM
  - This button should work like a toggle to fetch/display and hide reviews

Repo:

- GitHub repository: `AirBnB_clone_v4`
- File: `web_dynamic/101-hbnb.py`, `web_dynamic/templates/101-hbnb.html`, `web_dynamic/static/scripts/101-hbnb.js`

☑ Done! | Help | >_ Get a sandbox | QA Review

Ready for a new manual review