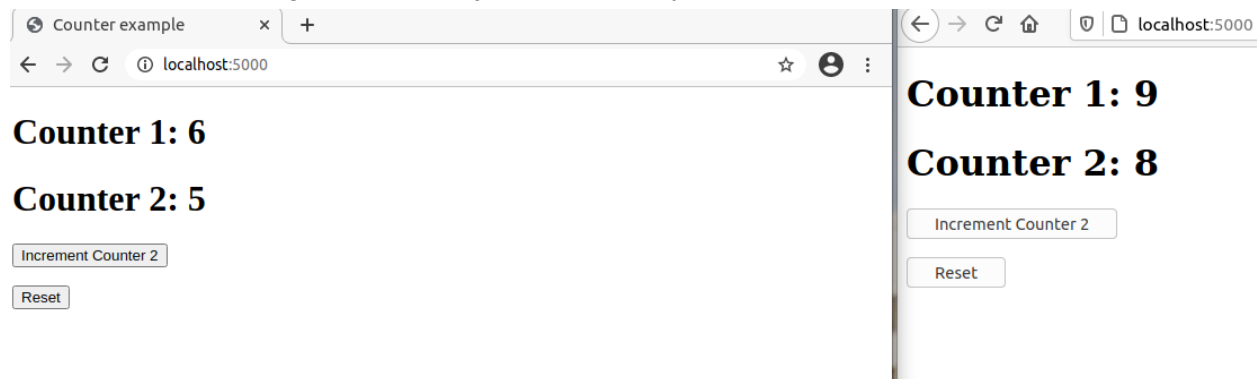


Name: Khalen Stensby  
Class: CPSC 449 Friday 9:00  
Assignment: Project 4 - Server-Side Sessions

## Storing Data in Cookies

### 2. Screenshot showing the initial project functionality



### 3. Screenshot showing the cookie counts

Response Headers (217 B)	Response Headers (217 B)
<ul style="list-style-type: none"><li>Content-Length: 0</li><li>Content-Type: text/html; charset=UTF-8</li><li>Date: Tue, 23 Mar 2021 00:38:55 GMT</li><li>Location: http://localhost:5000/</li><li>Server: WSGIServer/0.2 CPython/3.8.5</li><li>Set-Cookie: count2=11</li></ul>	<ul style="list-style-type: none"><li>Content-Length: 0</li><li>Content-Type: text/html; charset=UTF-8</li><li>Date: Tue, 23 Mar 2021 00:40:12 GMT</li><li>Location: http://localhost:5000/</li><li>Server: WSGIServer/0.2 CPython/3.8.5</li><li>Set-Cookie: count2=12</li></ul>

### 9. Foreman start

```
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter$ foreman start
16:46:22 app.1 | started with pid 6365
16:46:22 kv.1 | started with pid 6366
16:46:22 kv.1 | Bottle v0.12.19 server starting up (using WSGIRefServer())...
16:46:22 kv.1 | Listening on http://localhost:5100/
16:46:22 kv.1 | Hit Ctrl-C to quit.
16:46:22 app.1 | Bottle v0.12.19 server starting up (using WSGIRefServer())...
16:46:22 app.1 | Listening on http://localhost:5000/
16:46:22 app.1 | Hit Ctrl-C to quit.
16:46:22 app.1 |
```

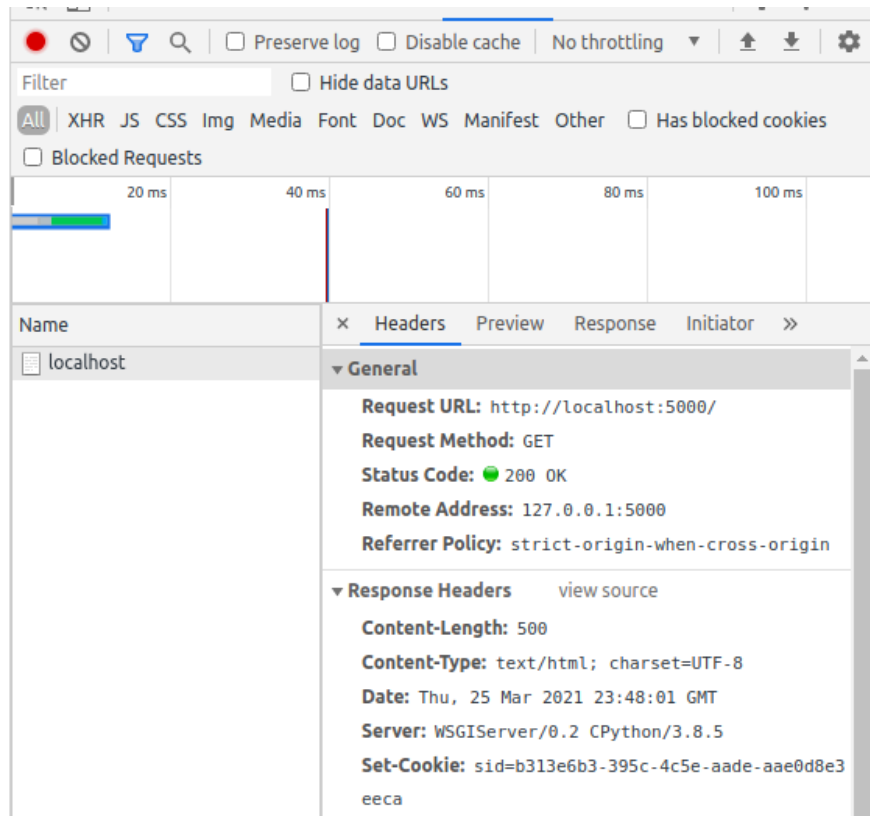
## 11. Showing that the SID persists through increments and refreshes

**Counter 1: 7**

**Counter 2: 5**

Increment Counter 2

Reset

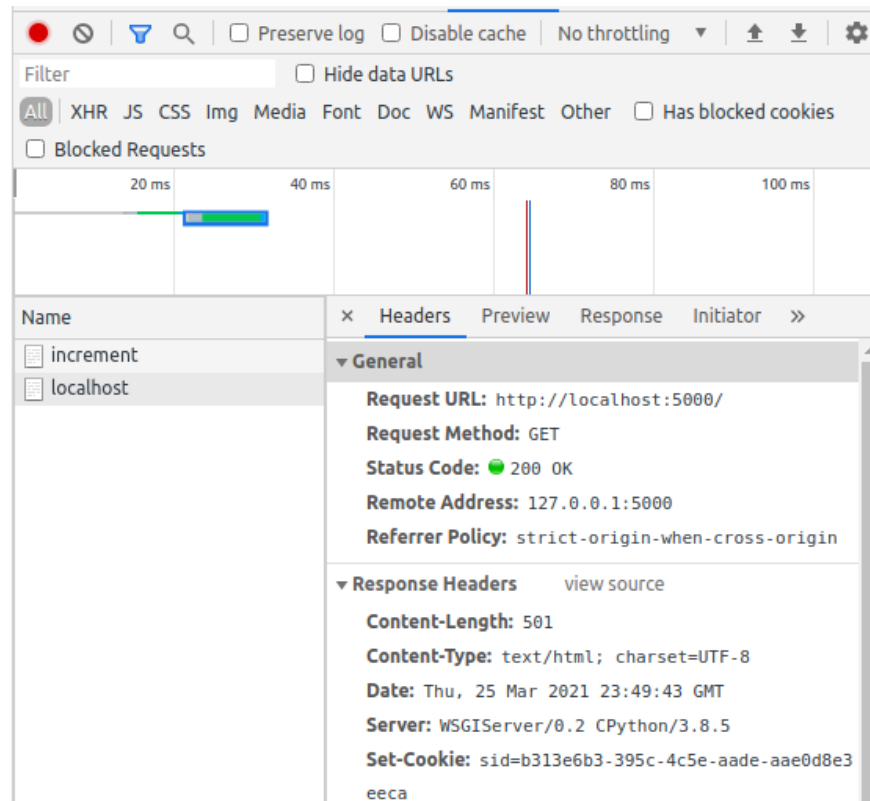


**Counter 1: 11**

**Counter 2: 9**

Increment Counter 2

Reset



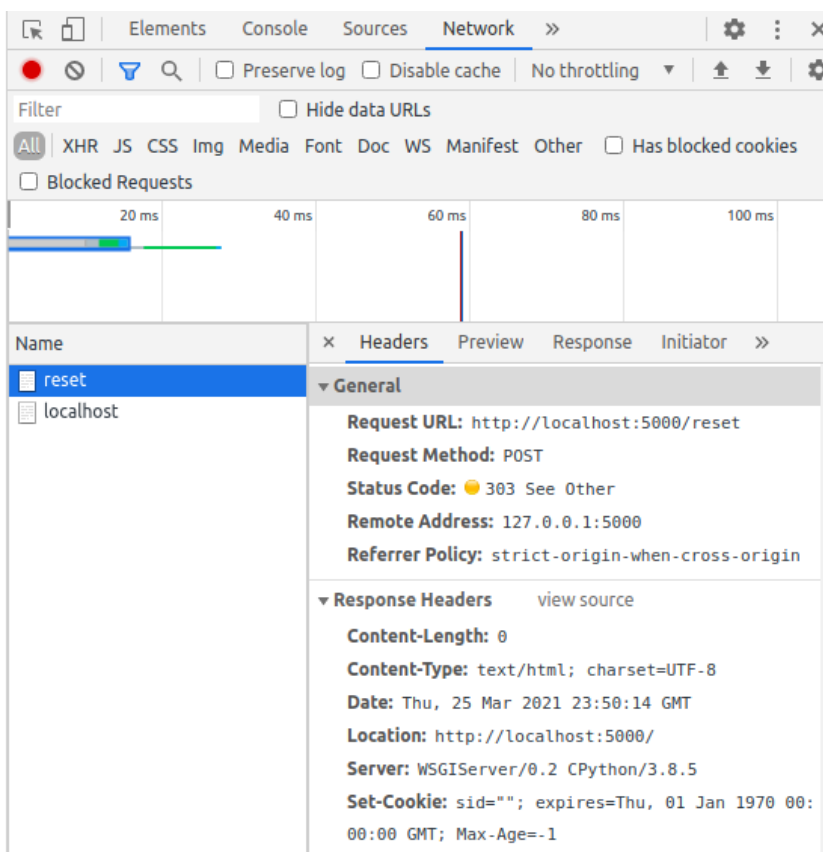
## 12. Showing that RESET and POST redirect clears the cookies and then sets a new id

Counter 1: 1

Counter 2: 0

Increment Counter 2

Reset

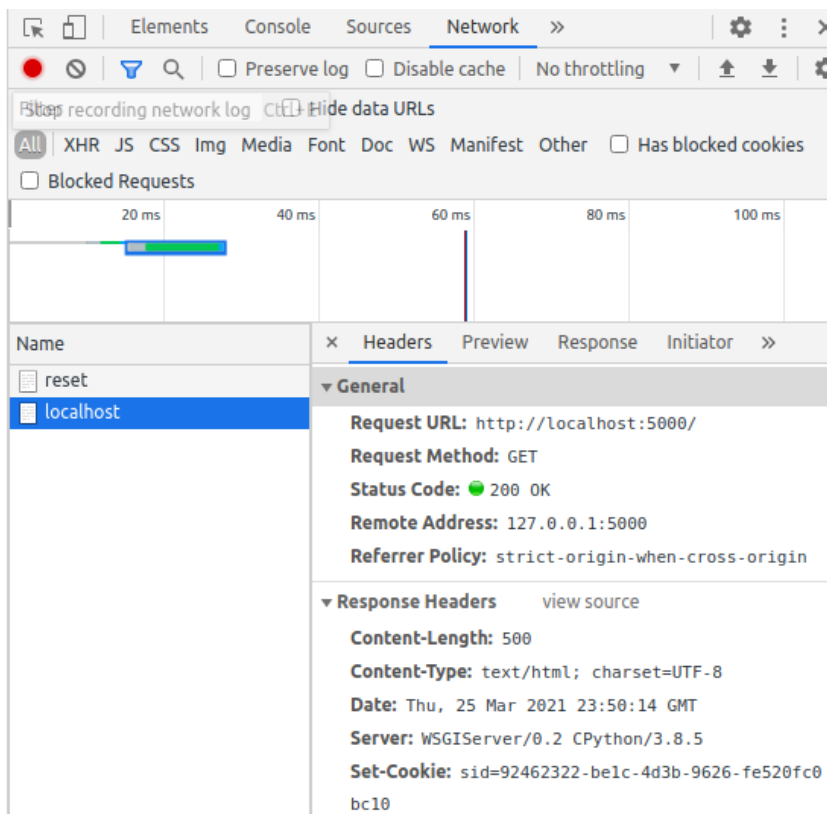


Counter 1: 1

Counter 2: 0

Increment Counter 2

Reset



### 13. Starting with 2 new ids

The screenshot shows a web browser at localhost:5000 with the title "Counter example". The page displays "Counter 1: 1" and "Counter 2: 0". Below these are two buttons: "Increment Counter 2" and "Reset". To the right, a larger version of the same page is shown, but with "Counter 2: 0" and a "Reset" button. Below the browser, a terminal window shows the following commands and output:

```
student@tuffix-vm: ~/Desktop/code/server-side sessions/cpsc449/bottle/counter
{"3237125a-d3e1-4840-945c-ff46a5895660": [1, "0"]}
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter$ vi dump.py
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter$ http DELETE localhost:5100/222
HTTP/1.0 200 OK
Content-Length: 15
Content-Type: application/json
Date: Fri, 26 Mar 2021 00:53:33 GMT
Server: WSGIServer/0.2 CPython/3.8.5

{
  "222": [
    1,
    0
  ]
}

student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter$ python3 dump.py http://localhost:5100
{"2929f4d3-f5f2-463a-9e7d-e71c0cc0bce2": [1, "0"]}
{"3237125a-d3e1-4840-945c-ff46a5895660": [1, "0"]}
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter$ vi app.py
{"3c208547-7264-4830-964e-6d7333674214": [1, 0]}
{"fd3c01f1-cb52-4376-9e45-9e9ab2ca8e40": [1, 0]}
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter$
```

### Incrementing both separately

The screenshot shows the web browser at localhost:5000 with the title "Counter example". The page displays "Counter 1: 12" and "Counter 2: 3". Below these are two buttons: "Increment Counter 2" and "Reset". To the right, a larger version of the same page is shown, but with "Counter 2: 6" and a "Reset" button. Below the browser, a terminal window shows the following commands and output:

```
student@tuffix-vm: ~/Desktop/code/server-side sessions/cpsc449/bottle/counter
HTTP/1.0 200 OK
Content-Length: 15
Content-Type: application/json
Date: Fri, 26 Mar 2021 00:53:33 GMT
Server: WSGIServer/0.2 CPython/3.8.5

{
  "222": [
    1,
    0
  ]
}

student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter$ python3 dump.py http://localhost:5100
{"2929f4d3-f5f2-463a-9e7d-e71c0cc0bce2": [1, "0"]}
{"3237125a-d3e1-4840-945c-ff46a5895660": [1, "0"]}
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter$ vi app.py
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter$ python3 dump.py http://localhost:5100
{"3c208547-7264-4830-964e-6d7333674214": [1, 0]}
{"fd3c01f1-cb52-4376-9e45-9e9ab2ca8e40": [1, 0]}
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter$ python3 dump.py http://localhost:5100
{"3c208547-7264-4830-964e-6d7333674214": [12, 3]}
{"fd3c01f1-cb52-4376-9e45-9e9ab2ca8e40": [7, 6]}
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter$
```

Resetting both browsers deletes the store and remakes 2 new session ids.

← → ↻ ⓘ localhost:5000 ☆ ⓘ ⋮

**Counter 1: 1**

**Counter 2: 0**

Increment Counter 2

Reset

**Counter 1: 1**

**Counter 2: 0**

Increment Counter 2

Reset

student@tuffix-vm: ~/Desktop/code/server-side sessions/cpsc449/bottle/counter

Date: Fri, 26 Mar 2021 00:53:33 GMT  
Server: WSGIServer/0.2 CPython/3.8.5

```
{
  "222": [
    1,
    0
  ]
}
```

student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter\$ python3 dump.py http://localhost:5100  
{ "2929f4d3-f5f2-463a-9e7d-e71c0cc0bce2": [1, "0"] }  
{ "3237125a-d3e1-4840-945c-ff46a5895660": [1, "0"] }  
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter\$ vi app.py  
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter\$ python3 dump.py http://localhost:5100  
{ "3c208547-7264-4830-964e-6d7333674214": [1, 0] }  
{ "fd3c01f1-cb52-4376-9e45-9e9ab2ca8e40": [1, 0] }  
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter\$ python3 dump.py http://localhost:5100  
{ "3c208547-7264-4830-964e-6d7333674214": [12, 3] }  
{ "fd3c01f1-cb52-4376-9e45-9e9ab2ca8e40": [7, 6] }  
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter\$ python3 dump.py http://localhost:5100  
{ "9c4f9cfc-05ef-41a0-a98f-85d03b757a81": [1, 0] }  
{ "09293921-8898-4eee-a7d7-5145ce807a50": [1, 0] }  
student@tuffix-vm:~/Desktop/code/server-side sessions/cpsc449/bottle/counter\$