

## App Development Project

### Week 9, Lesson 1

#### 👁 Looking Forward 👁

At the end of this practical lesson, you will be able to:

- Modify the **retrieveUsers.html** and **retrieveCustomers.html** template to enable the delete button.
- Add an entry into Flask **route()** for **/deleteUser** and **/deleteCustomer**.
- Create a simple confirmation dialog to ask the user to confirm before deleting.
- Create a custom Bootstrap modal dialog.

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## 1. Activity 1: Deleting Stored Data in a Project

### 1.1 Add a Delete User Function for Your SimpleWebApplication

#### 1.1.1 Modify the Retrieve Users Page

Step 1: Modify the **form action** attribute in the **retrieveUsers.html** template to point to **{{url\_for('delete\_user', id=user.get\_user\_id())}}**.

The modified **action** attribute in the **<form>** tag points to the **/deleteUser** route defined in **\_\_init\_\_.py** and provides the **user\_id** that corresponds to the user that is to be deleted.

retrieveUsers.html	
29	<tbody>
30	{% for user in users_list %}
31	<tr>
32	<td>{{ user.get_user_id() }}</td>
33	<td>{{ user.get_first_name() }}</td>
34	<td>{{ user.get_last_name() }}</td>
35	<td>{{ user.get_gender() }}</td>
36	{% if user.get_membership() == 'F' %}
37	<td>Fellow</td>
38	{% elif user.get_membership() == 'S' %}
39	<td>Senior</td>
40	{% elif user.get_membership() == 'P' %}
41	<td>Professional</td>
42	{% endif %}
43	<td>{{ user.get_remarks() }}</td>
44	<td><a href="/updateUser/{{user.get_user_id()}}" class="btn btn-warning">Update</a></td>
45	<td><form action="{{url_for('delete_user', id=user.get_user_id())}}" method="POST">
46	<input type="submit" value="Delete" class="btn btn-danger">
47	</form>
48	</td>
49	</tr>
50	{% endfor %}
51	</tbody>
52	
53	

#### DID YOU KNOW

As the method used for the **form** is **POST**, the **user\_id** will be sent through the **HTTP Request** (not through the **URL**) once the **Delete** button is clicked. It will be received by the **delete\_user(id)** function in **\_\_init\_\_.py** as **id**.

Step 2: Add in a new route for **/deleteUser** to the Flask **route()** in **\_\_init\_\_.py**.

__init__.py	
173	@app.route('/deleteUser/<int:id>', methods=['POST'])
174	def delete_user(id):
175	users_dict = {}

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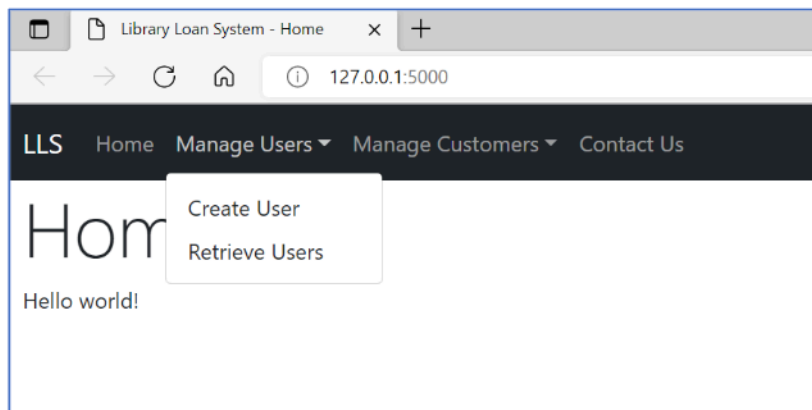
```

176 db = shelve.open('user.db', 'w')
177 users_dict = db['Users']
178
179 users_dict.pop(id)
180
181 db['Users'] = users_dict
182 db.close()
183
184 return redirect(url_for('retrieve_users'))
185

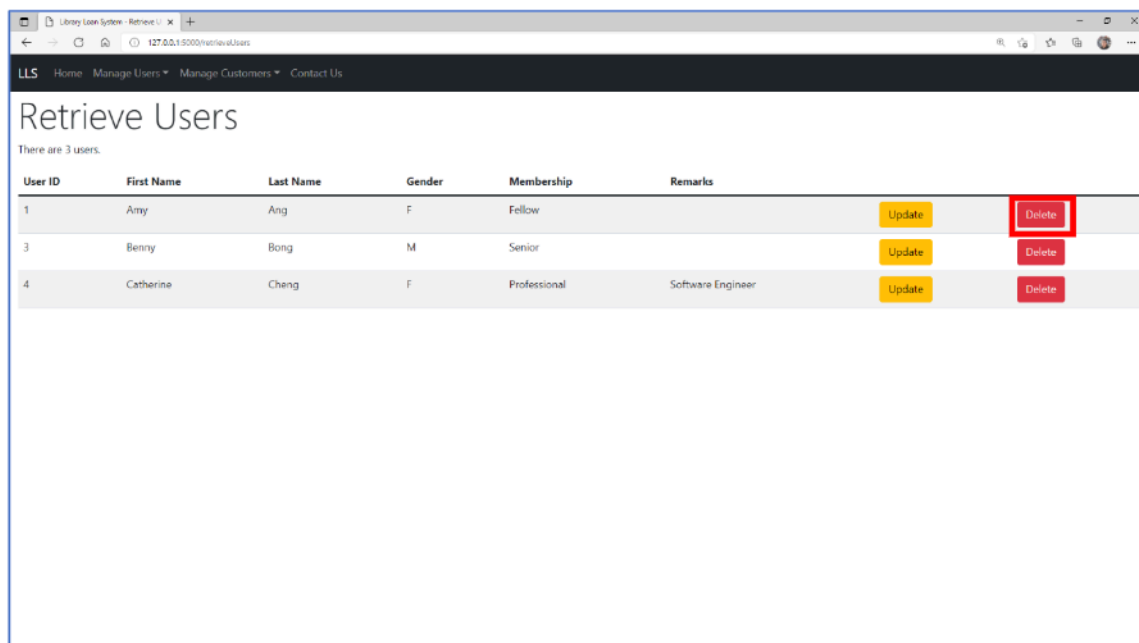
```

### 1.1.2 Run Your SimpleWebApplication

Step 1: Run your **SimpleWebApplication** and click on <http://127.0.0.1:5000/>. Then click on **Manage Users > Retrieve Users** from the navbar.



Step 2: Click on the **Delete** button for **Amy Ang**.



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Step 3: Check to see that **Amy Ang** was removed.

LLS Home Manage Users Manage Customers Contact Us

## Retrieve Users

There are 2 users.

User ID	First Name	Last Name	Gender	Membership	Remarks		
3	Benny	Bong	M	Senior		Update	Delete
4	Catherine	Cheng	F	Professional	Software Engineer	Update	Delete

### 🤔 THINK ABOUT IT 🤔

Is it a good idea to **delete** a user **without** asking for **confirmation** before deleting? Of course not!

### 1.1.3 Add a Simple Confirmation Dialog to Confirm Before Deleting

Step 1: Modify the **Delete** button in **retrieveUsers.html** by adding **onclick="return confirm('Are you sure you want to delete {{user.get\_first\_name()}} {{user.get\_last\_name()}}?');"** to the input tag.

#### retrieveUsers.html

```

29 <tbody>
30 {% for user in users_list %}
31 <tr>
32 <td>{{ user.get_user_id() }}</td>
33 <td>{{ user.get_first_name() }}</td>
34 <td>{{ user.get_last_name() }}</td>
35 <td>{{ user.get_gender() }}</td>
36 {% if user.get_membership() == 'F' %}
37 <td>Fellow</td>
38 {% elif user.get_membership() == 'S' %}
39 <td>Senior</td>
40 {% elif user.get_membership() == 'P' %}
41 <td>Professional</td>
42 {% endif %}
43 <td>{{ user.get_remarks() }}</td>
44 <td><a href="/updateUser/{{user.get_user_id()}}" class="btn btn-warning">Update</a></td>
45 <td><form action="{{url_for('delete_user', id=user.get_user_id())}}" method="POST">
46 <input type="submit" value="Delete" class="btn btn-danger" onclick="return confirm('Are you sure you
want to delete {{user.get_first_name()}} {{user.get_last_name()}}?');">

```


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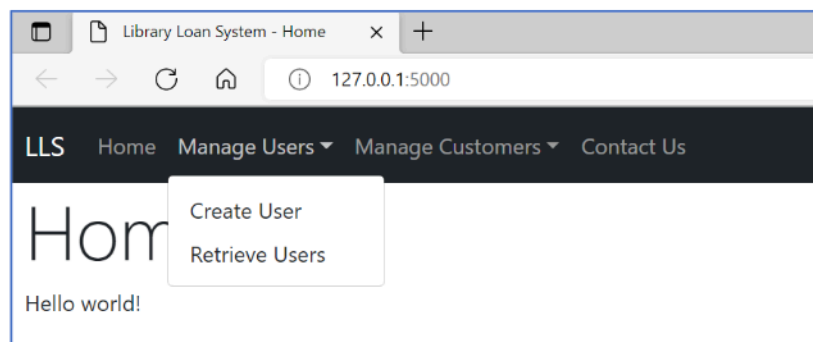
47	</form>
	</td>
	</tr>
48	{% endfor %}
49	</tbody>
50	
51	

## LET IT SINK IN

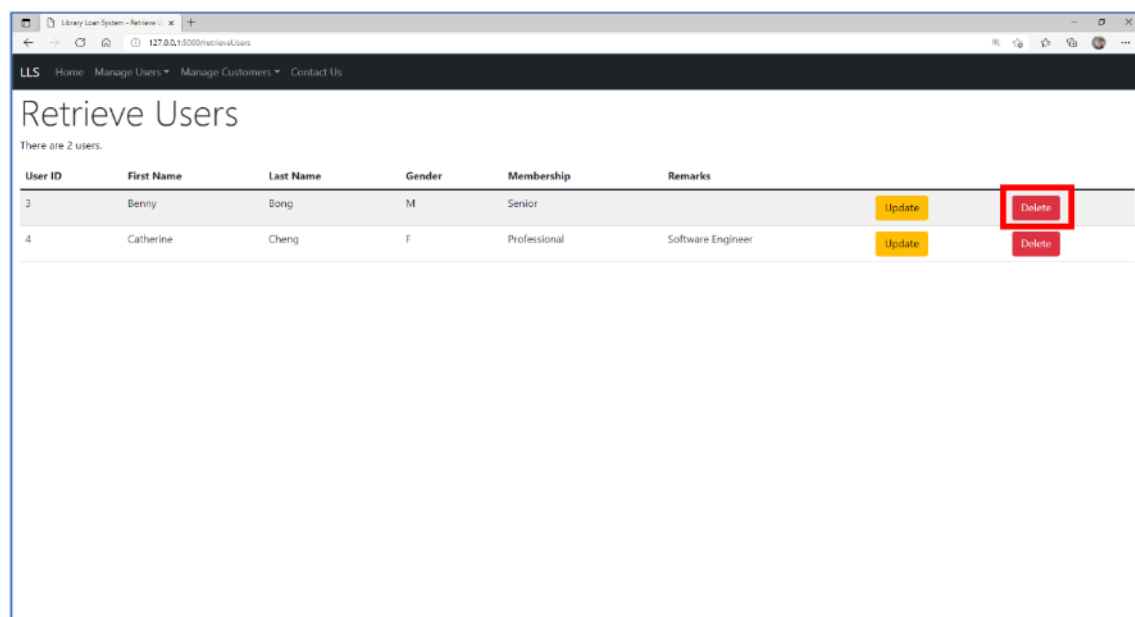
The code you just added is a client-side **JavaScript** code snippet that you have added to the **onclick event** of the **Delete** button. This means that when you click on the **Delete** button, it will run the JavaScript code snippet on the user's **browser**.

### 1.1.4 Run Your SimpleWebApplication

Step 1 Click on the  button in the Run window to **rerun** your **SimpleWebApplication** and click on <http://127.0.0.1:5000/>. Then click on **Manage Users > Retrieve Users** from the **navbar**.

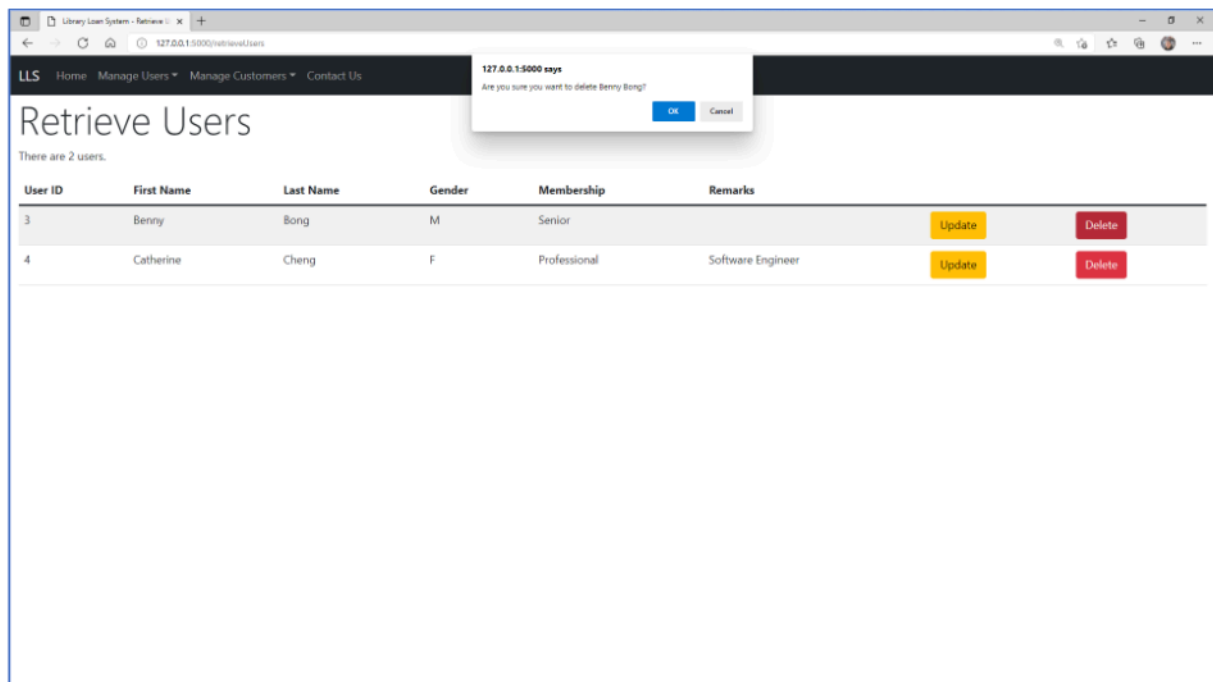


Step 2: Click on the **Delete** button for **Benny Bong**.

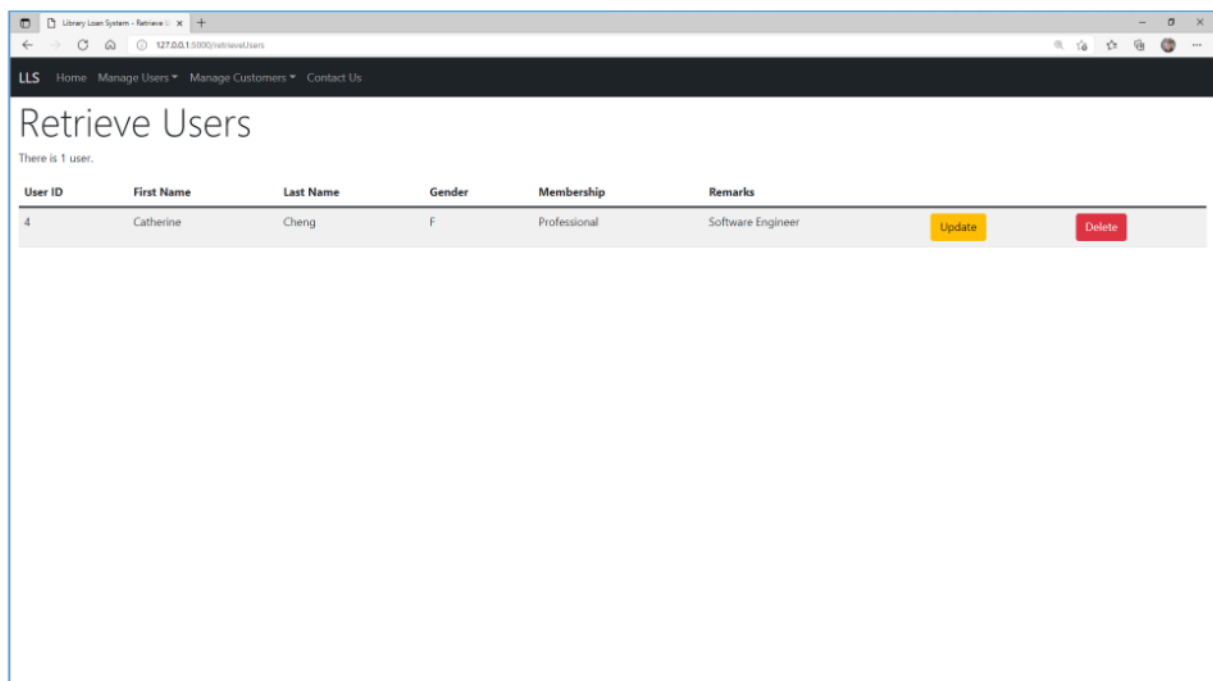


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Step 3: Click the **OK** button to delete **Benny Bong**.



Step 4: Check to see that **Benny Bong** was removed.



### 1.1.5 Create a Custom Bootstrap Modal Dialog

Step 1: Comment out the **Delete** button in your **retrieveUsers.html** template.

## !! IMPORTANT !!

Remember to also comment out the server-side Jinja2 script tags to by converting `{{ }}` to `{# #}`.

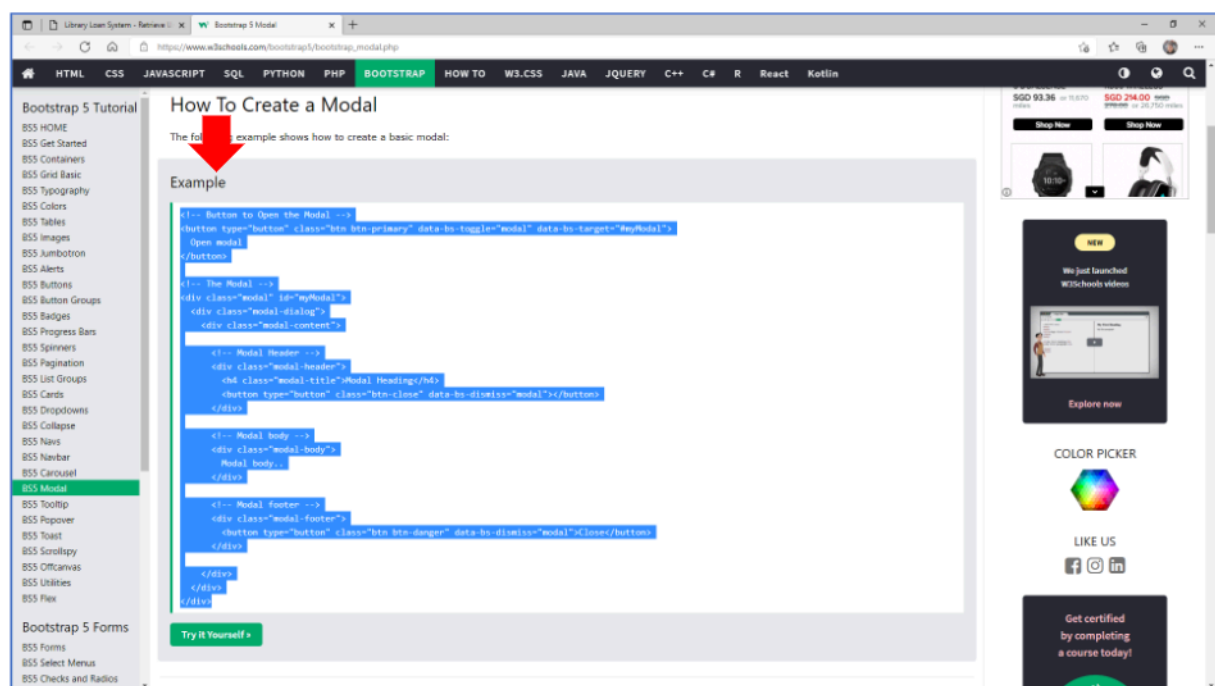
### retrieveUsers.html

```
47 {# <input type="submit" value="Delete" class="btn btn-danger" onclick="return confirm('Are you sure you
    want to delete {#user.get_first_name()} {#user.get_last_name()}?');">#}
```

## 🧐 DID YOU KNOW 🧐

You can quickly **comment** or **uncomment** single or multiple lines of codes by highlighting them and pressing the **CTRL + /** keys. It also works with **partially** highlighted lines of codes or with the line the keyboard **cursor** is currently at without highlighting it. Try it!

Step 2: Go to [https://www.w3schools.com/bootstrap5/bootstrap\\_modal.php](https://www.w3schools.com/bootstrap5/bootstrap_modal.php). Scroll down to the **How To Create a Modal** section and copy all the codes under **Example**.



Step 3: Paste the codes into your **retrieveUsers.html** template below the **Delete** button's `<input>` tag that you have commented out.

### retrieveUsers.html

```
45 <td>
46 <form action="{url_for('delete_user', id=user.get_user_id())}" method="POST">
    <!--<input type="submit" value="Delete" class="btn btn-danger" onclick="return confirm('Are you sure you want
47 to delete {#user.get_first_name()} {#user.get_last_name()}?');">-->
```

	<code>&lt;!-- Button to Open the Modal --&gt;</code>
48	<code>&lt;button type="button" class="btn btn-primary" data-bs-toggle="modal" data-bs-target="#myModal"&gt;</code>
49	<code>Open modal</code>
	<code>&lt;/button&gt;</code>
	<code>&lt;!-- The Modal --&gt;</code>
50	<code>&lt;div class="modal" id="myModal"&gt;</code>
51	<code>&lt;div class="modal-dialog"&gt;</code>
52	<code>&lt;div class="modal-content"&gt;</code>
53	
54	<code>&lt;!-- Modal Header --&gt;</code>
55	<code>&lt;div class="modal-header"&gt;</code>
56	<code>&lt;h4 class="modal-title"&gt;Modal Heading&lt;/h4&gt;</code>
57	<code>&lt;button type="button" class="btn btn-close" data-bs-dismiss="modal"&gt;&lt;/button&gt;</code>
58	<code>&lt;/div&gt;</code>
59	
60	<code>&lt;!-- Modal body --&gt;</code>
61	<code>&lt;div class="modal-body"&gt;</code>
62	<code>Modal body..</code>
63	<code>&lt;/div&gt;</code>
64	
65	<code>&lt;!-- Modal footer --&gt;</code>
66	<code>&lt;div class="modal-footer"&gt;</code>
67	<code>&lt;button type="button" class="btn btn-danger" data-bs-dismiss="modal"&gt;Close&lt;/button&gt;</code>
68	<code>&lt;/div&gt;</code>
69	
70	<code>&lt;/div&gt;</code>
71	<code>&lt;/div&gt;</code>
	<code>&lt;/div&gt;</code>
72	<code>&lt;/form&gt;</code>
73	<code>&lt;/td&gt;</code>
74	
75	
76	
77	
78	
79	


Step 4: Modify your **retrieveUsers.html** template with the following changes:

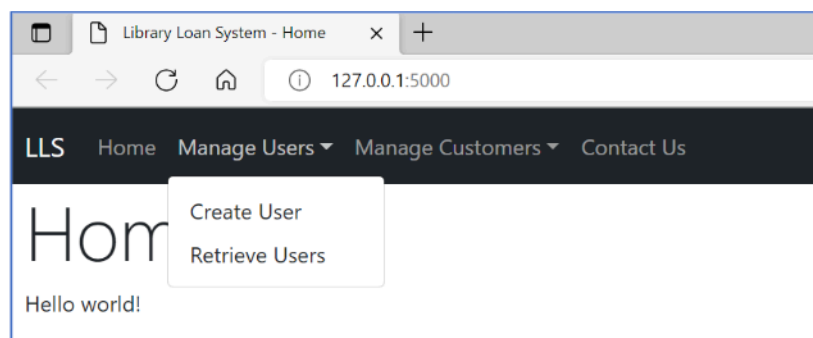
retrieveUsers.html	
45	<code>&lt;td&gt;</code>
46	<code>&lt;form action="{url_for('delete_user', id=user.get_user_id())}" method="POST"&gt;</code>
	<code>&lt;!--input type="submit" value="Delete" class="btn btn-danger" onclick="return confirm('Are you sure you want</code>
47	<code>to delete {{user.get_first_name()}} {{user.get_last_name()}}?');"&gt;--&gt;</code>
	<code>&lt;!-- Button to Open the Modal --&gt;</code>
	<code>&lt;button type="button" class="btn btn-danger" data-bs-toggle="modal" data-bs-</code>
48	<code>target="#myModal_{{user.get_user_id()}}"&gt;</code>
49	<code>Delete</code>
	<code>&lt;/button&gt;</code>
50	<code>&lt;!-- The Modal --&gt;</code>
51	<code>&lt;div class="modal" id="myModal_{{user.get_user_id()}}"&gt;</code>
52	<code>&lt;div class="modal-dialog"&gt;</code>
53	<code>&lt;div class="modal-content"&gt;</code>
54	
55	<code>&lt;!-- Modal Header --&gt;</code>
56	<code>&lt;div class="modal-header"&gt;</code>



57	<h4 class="modal-title">Delete Confirmation</h4>
58	<button type="button" class="btn-close" data-bs-dismiss="modal"></button>
59	</div>
60	
61	<!-- Modal body -->
62	<div class="modal-body">
63	Are you sure you want to delete {{user.get_first_name()}} {{user.get_last_name()}}?
64	</div>
65	
66	<!-- Modal footer -->
67	<div class="modal-footer">
68	<input type="submit" value="Delete" class="btn btn-danger">
69	<button type="button" class="btn btn-secondary" data-bs-dismiss="modal">Cancel</button>
70	</div>
71	</div>
72	</div>
73	</form>
74	</td>

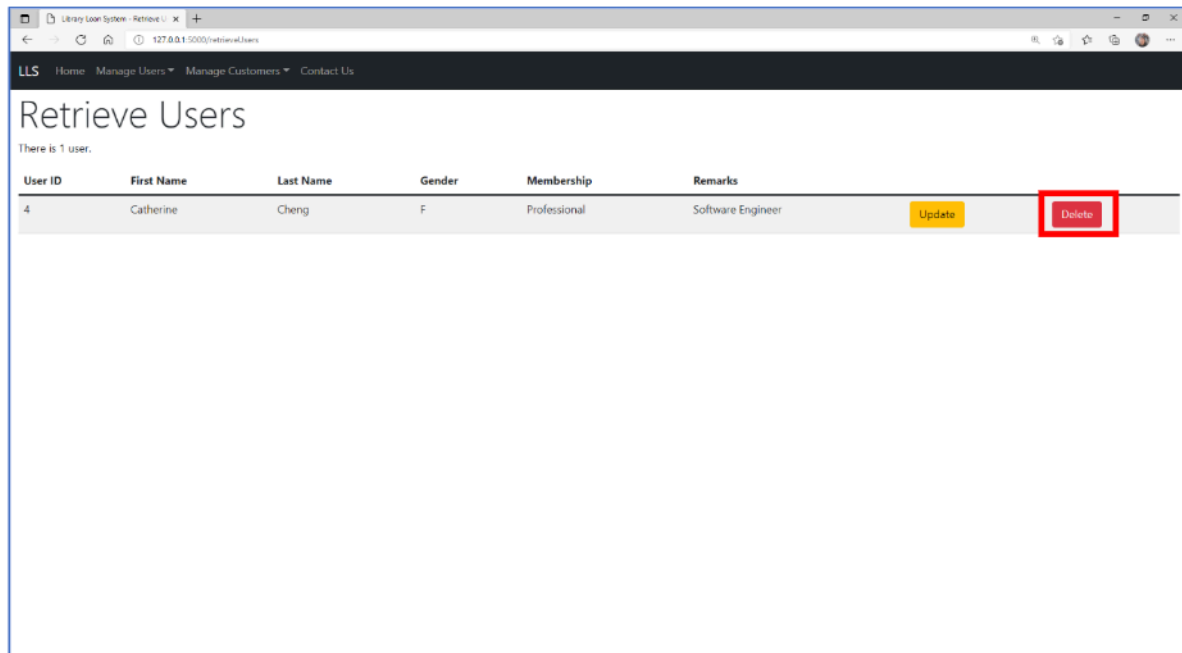
### 1.1.6 Run Your SimpleWebApplication

Step 1 Click on the  button in the Run window to **rerun** your **SimpleWebApplication** and click on <http://127.0.0.1:5000/>. Then click on **Manage Users > Retrieve Users** from the **navbar**.

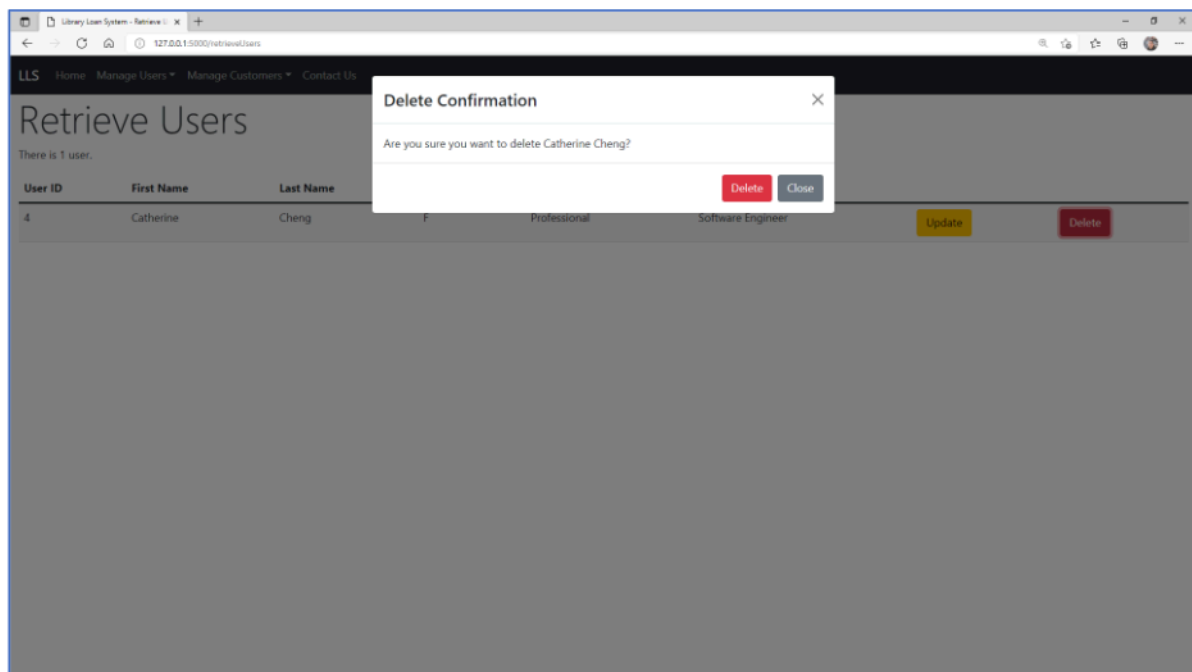


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Step 2: Click on the **Delete** button for **Catherine Cheng**.

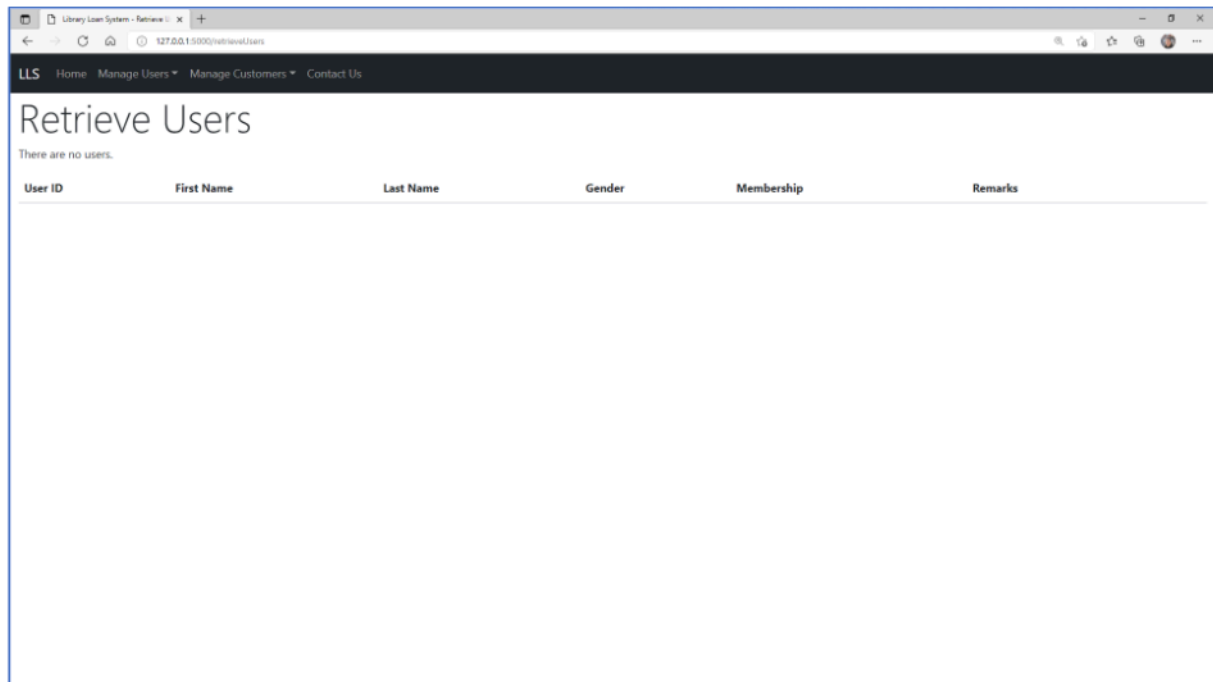


Step 3: Click the **Delete** button in the Bootstrap modal dialog to delete **Catherine Cheng**.



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Step 4: Check to see that **Catherine Cheng** was removed.



## 1.2 Add a Delete Customer Function to Your SimpleWebApplication

Repeat steps defined in section 1.1 for Customer.

## 2. Activity 2: Project Idea

Continue to work on your project idea (group and individual) for your Project Proposal Presentation.

~ End ~