

Lab 7: Session Data in Flask

GW CS 2541W: Database Systems and Team Projects - 2024

Prof. Gabe Parmer, Sameen Ahmad, Kate Halushka, and Dania Abdalla



Session Refresher

- Session data allows us to temporarily store data that we want to preserve across different pages (i.e. a logged in user or a shopping cart of products)

Setting session variables:

```
session['username'] = "admin"
```

Checking if a session variable is set:

```
if 'username' in session:
```

Clearing session variables:

```
session.pop('username')  
session.clear()
```

Using session variables in templates:

```
<p> Hello, {{ session['username'] }} <p>
```

1. Common Mistakes & Tips!

When storing a list in a session, you can't just append to it!

Store the session value in a variable, append to it locally, then replace it in the session

```
session['names'].append("Ethan")
```

```
...
```

```
names = session['names']
```

```
names.append("Ethan")
```

```
session['names'] = names
```

This does NOT work!

Do this instead!

2. Common Mistakes & More Tips!

Accessing flask template variables is just like in python!

Traditional for loop (using an index) in Flask templates

Breaking a string into a list of characters

```
session['intro'] = ['hello', 'i', 'am', 'tim']

...

<b>{% session['intro'][0] %}</b> {% session['intro'][3][0] %}
{% for i in range(0, session['intro']|length) %}
    {% session['intro'][i] %}
{% endfor %}

...

word = "hello"
letters = list(word)
print(letters)
```



What will these print?

Activity : GWordle!!

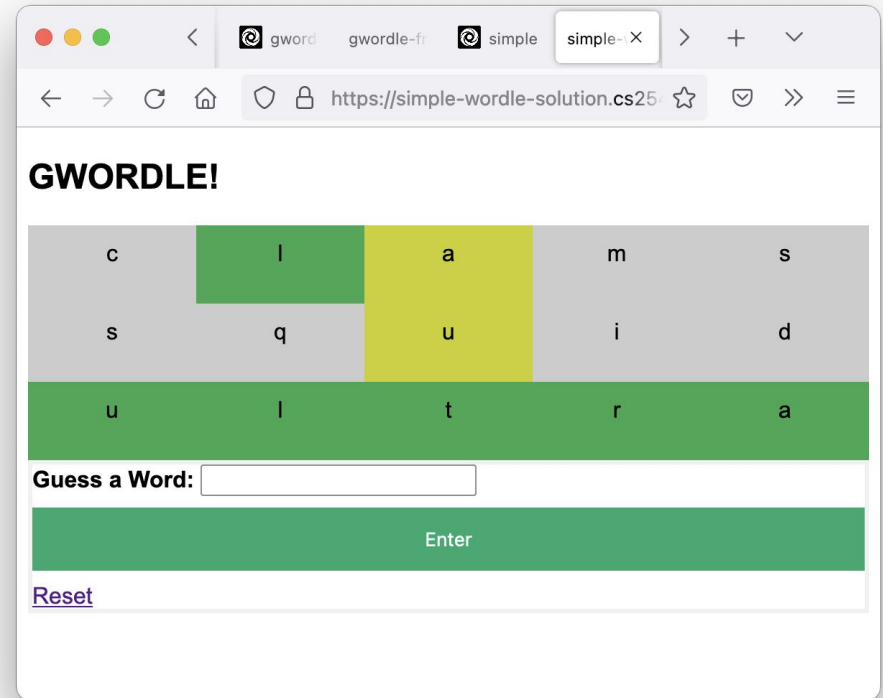
Make your own version of everyone's favorite word game

Two parts:

- Frontend
- Backend

Then integrate!

MAX 3 students per part!



GWordle Frontend

Design the HTML/CSS needed for GWordle

You are given a python flask app that has some guesses and results already calculated

You must display them

Start simple... try to get all the data you need into the template, then worry about trying to make it pretty

Don't write any python!

GWordle Backend

Design the python "business" logic to process a wordle clue and track a user's guesses

I give you the basic game logic in wordle.py - you need to translate that into your flask app

Start simple... make sure you can take form input, add it to a session and output it to the template

Don't write any HTML/CSS!

Guesses and Results

Both frontend and backend need a common data format!

Guesses[]: a list of strings. Each string was a guess by the user

Results[][]: a list of lists

- Each inner list is a series of HIT/MISS/CLOSE results corresponding to each letter from the guess

```
>>> guesses
['clams', 'squid', 'ultra']
>>> results
[('MISS', 'HIT', 'CLOSE', 'MISS', 'MISS'), ('MISS', 'MISS',
'CLOSE', 'MISS', 'MISS'), ('HIT', 'HIT', 'HIT', 'HIT', 'HIT')]
```