



# Front End Development

## Session 7

# Rock, Paper, *Console*



# Learning Goals

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In today's session, we will:

01

Explain how JavaScript can interact with "browser events"

02

Define the purpose of a random number generator

03

Demonstrate how to run a random number generator in Javascript

04

Apply conditional logic in JavaScript to create a short interactive game



Let's review



Q. What kind of code are we learning in this course?

Q. Can you name a role, job, or industry that uses this kind of code?

Q. What three “languages” do we use to create websites?

Q. What does "HTML" stand for?

Q. How can we examine website code on our computers?

Q. In HTML, what's the difference between the <head> and the <body>?

What is the difference between Git and Github?

What does the CLI stand for? What would we use it for?

How do you format a link in HTML?



How do we save our work with Git and Github?

What does a `<div>` tag do?

What does CSS stand for? Why do we use CSS?

What is the difference between *block* and *inline*?

What does “float” do?

What are the five positioning properties?

What is the difference between *block* and *inline*?

What does “float” do?

What are the five positioning properties?

What is a framework?

What does “open-source” mean?

What is responsive design?

What is a variable? How do we declare a variable in JS?

What is a data type? What JS data types have we learned so far?

What does state refer to? Why is this useful?


What's the difference between `alerts`, `console.log`, and `document.write()`?



# Browser Events

The browser  
keeps track of  
*which keys* you  
press and *when*  
you press them.





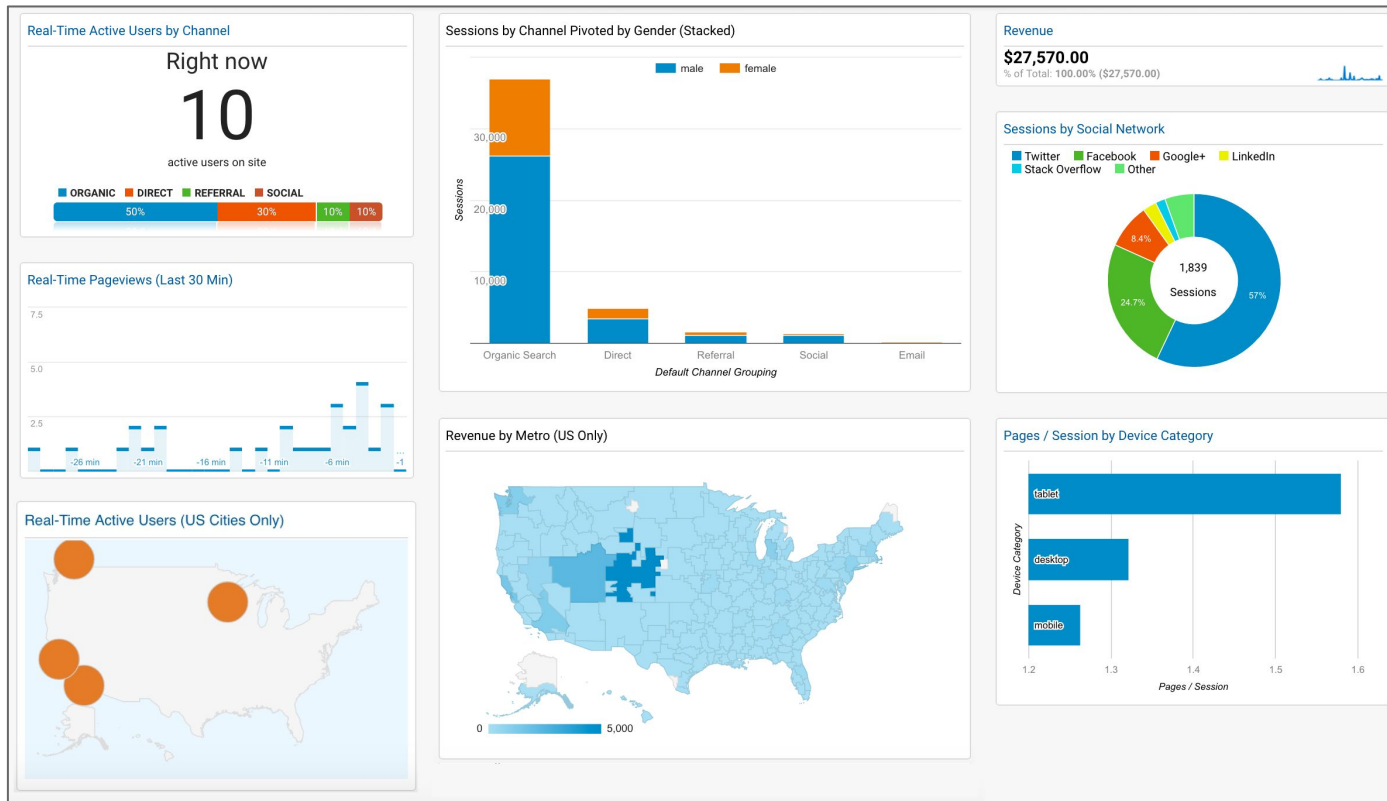
An **event** is a  
signal to the  
web browser  
that something  
has happened!



# Web Tracking

User events  
are *logged* by  
the browser.

We can use JS  
to create  
*actions* based  
on these  
events.

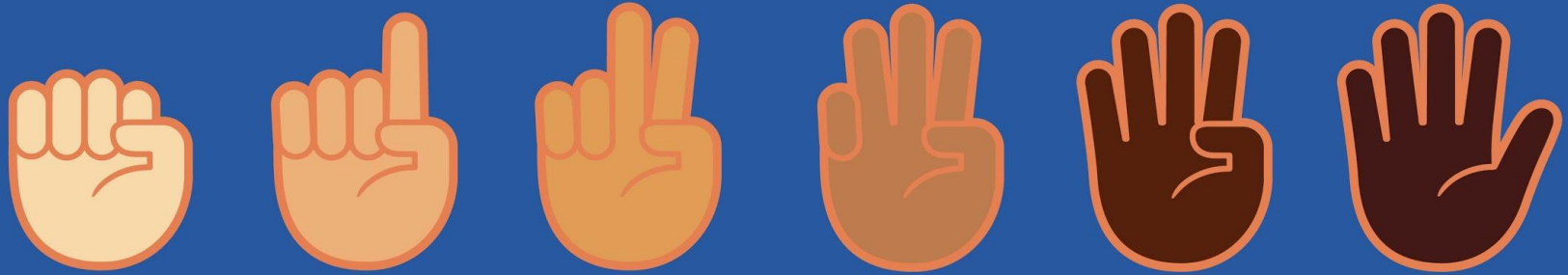




# Instructor Demonstration: Browser Events

**Suggested Time:**  
5 minutes





**Fist to five**

# Let's





## **Activity:** Listening For Specific Keys

1. Open the instructions in Canvas
2. Work on your code
3. Share with a partner

**Suggested Time:**  
20 minutes





Let's review



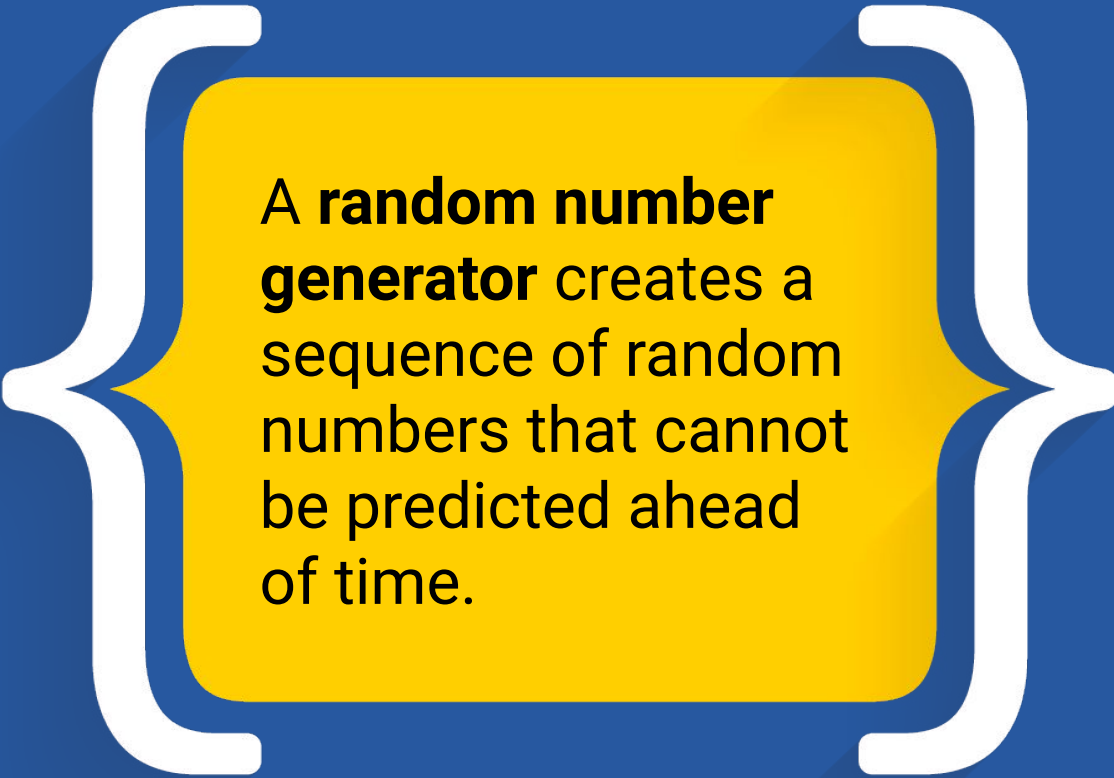
# Questions?






# Random Numbers





A **random number generator** creates a sequence of random numbers that cannot be predicted ahead of time.

A pixel art illustration of a game scene. In the center, a character with brown hair, wearing a red headband, red shirt, and red pants, stands on a green grassy ground. To the right, a green dinosaur with a yellow belly is breathing a fireball. The background features a blue sky with white clouds and three red hearts in the top right corner. Two green trees with brown trunks are on either side of the character. The ground is a mix of green grass and brown dirt.

**Random number generators can  
substitute computer input and  
help foster a sense of competition!**



## Instructor Demonstration:

# `Math.random()`

Suggested Time:  
5 minutes



# Questions?





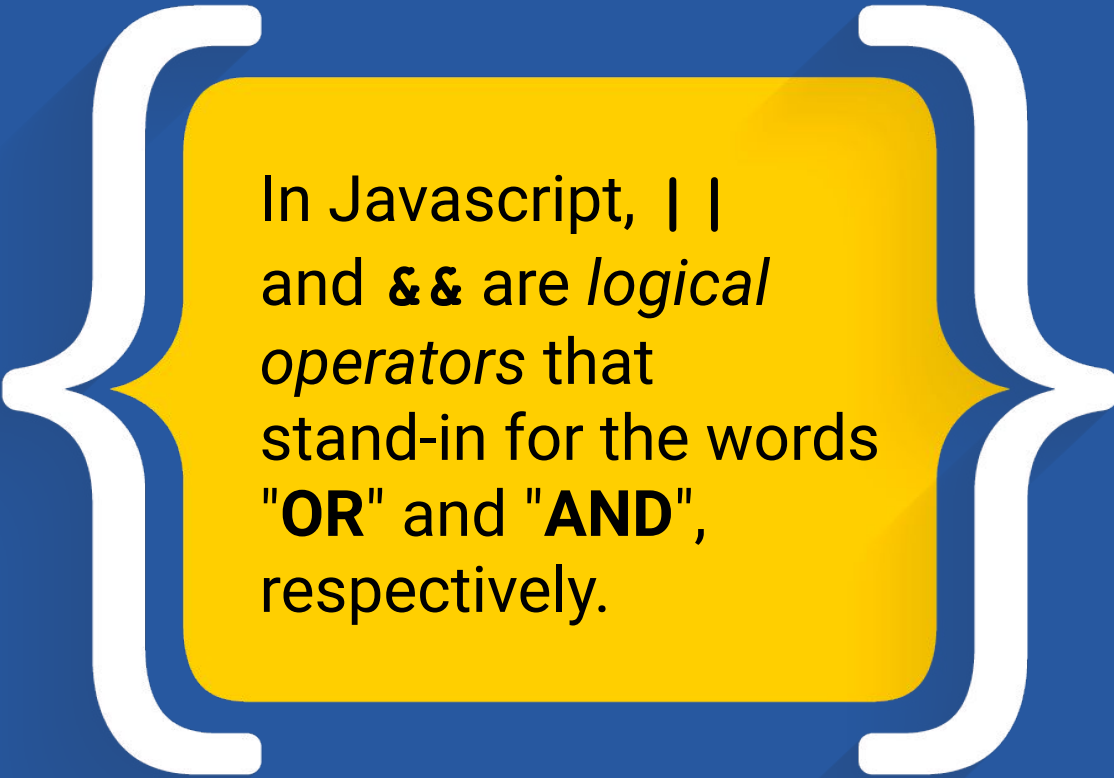
# Activity Intro



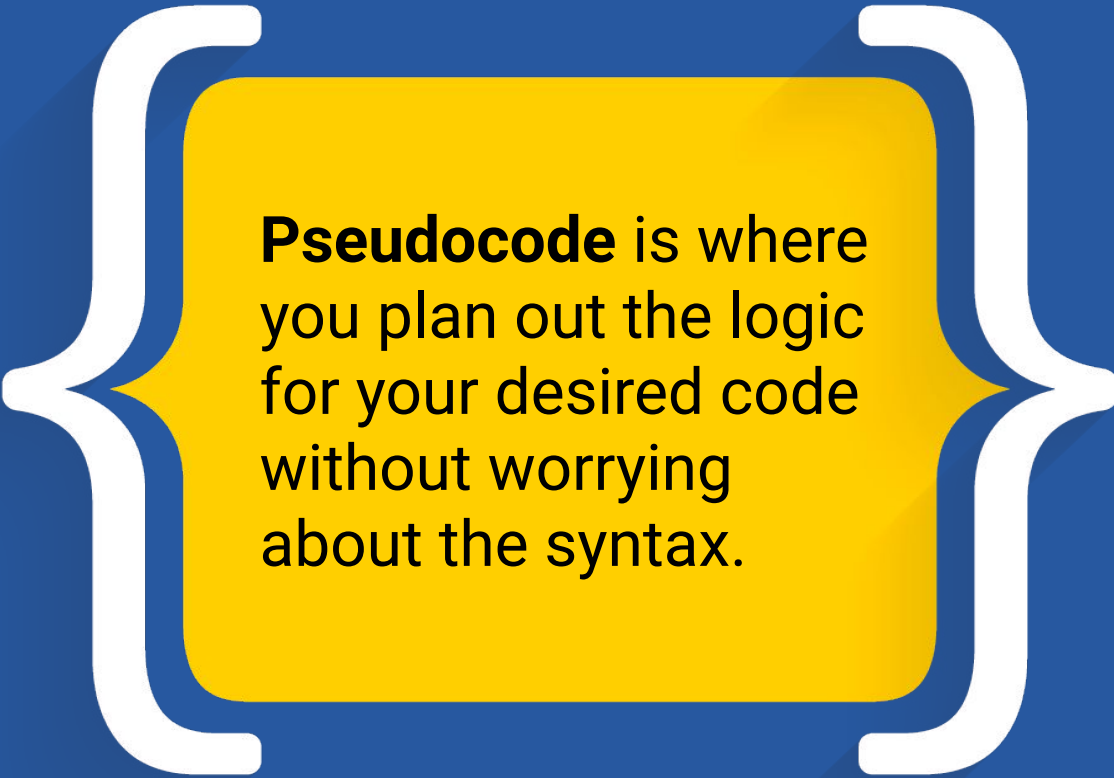
## Instructor Demonstration: Rock, Paper, Scissors

**Suggested Time:**  
5 minutes



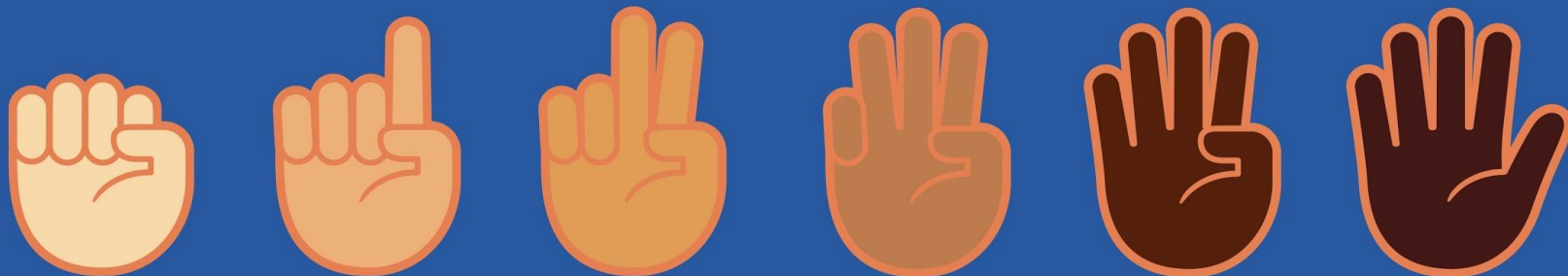


In Javascript, `||`  
and `&&` are *logical operators* that  
stand-in for the words  
"**OR**" and "**AND**",  
respectively.



**Pseudocode** is where you plan out the logic for your desired code without worrying about the syntax.





**Fist to five**

# Let's



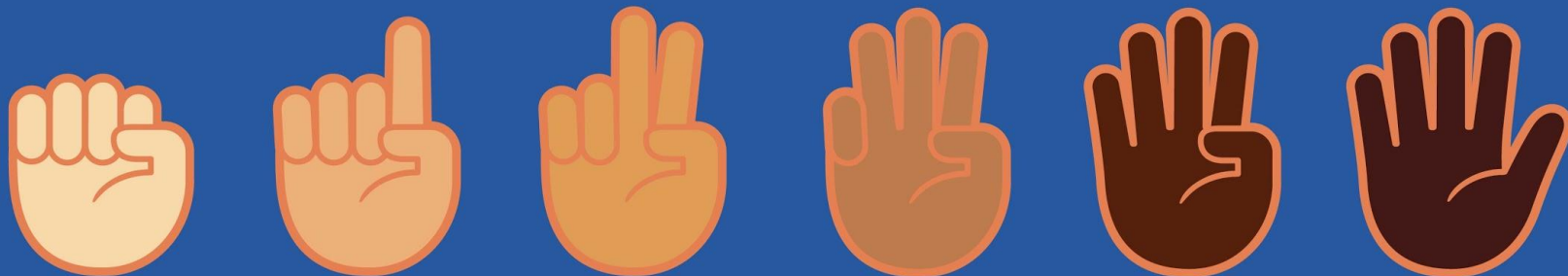


## **Activity:** Thinking About Rock, Paper, Scissors

1. Get into groups
2. Play a few rounds :)
3. Map out a solution using pseudocode!

**Suggested Time:**  
10 minutes





**Fist to five**

# Workshop

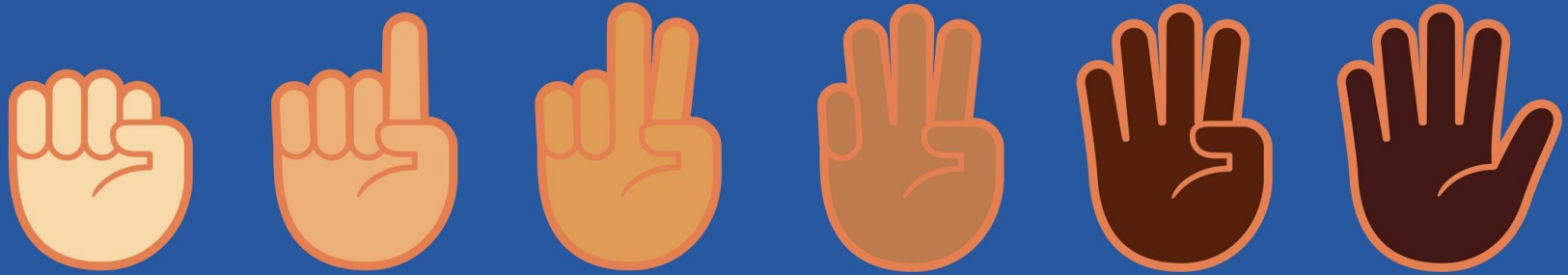


## **Activity:** Making Rock, Paper, Scissors

1. Write out the code in JavaScript
2. Try to get as much working as possible
3. Don't be afraid to ask for help!

**Suggested Time:**  
70 minutes





**Fist to five**



Let's review





# Questions?





Time to  
Recap

# Learning Goals

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Our objectives for today's session:

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Explain how JavaScript can interact with "browser events"

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# Reflection

What was your **favorite part** of today's session?

What was the **most interesting thing** we covered today?

What do you **still have questions** about?





# Sneak Preview

We'll digging a bit deeper into programming with JavaScript, looking at foundational CS principles like loops and buttons. **We'll use these to walk through some additional JavaScript games and look at how JavaScript can be applied to website forms!**

# Questions?



*The  
End*