JavaScript Logic

CISC-2350-R01 | Fall 2017 | Week 13-1

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Today’s Agenda

- Attendance
- Web review presentations
- Final Project Concept Presentations
- JavaScript logic:
    - Conditional statements
    - For & while loops
- Homework Assignment

Web Review Presentations (Sayed, Md)

Final Project Concept Presentations

JavaScript logic

JavaScript logic

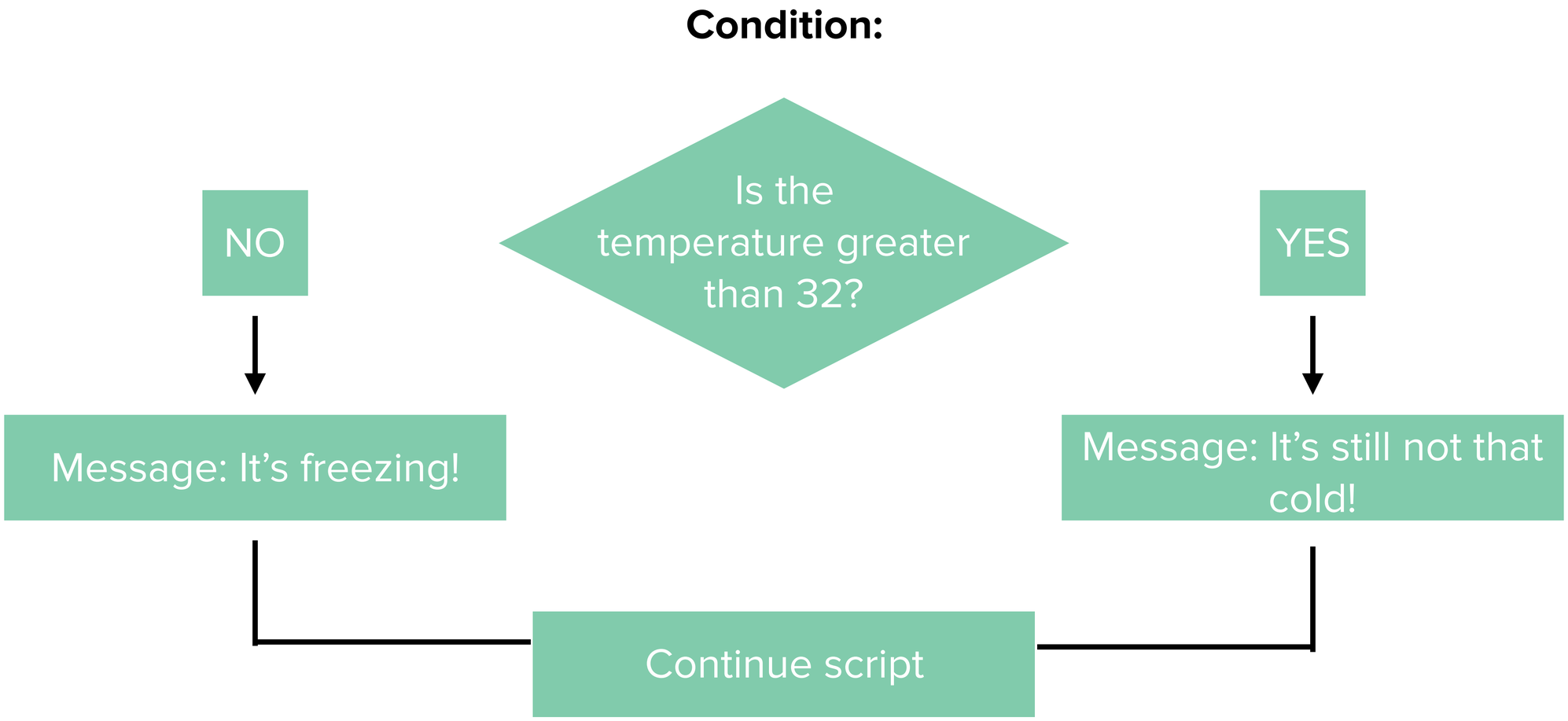
Evaluations. Analysing values in scripts to determine whether or not they match expected results.

Decisions. Using results of evaluations deciding which path script should take.

Loops. When we want to perform the same set of steps repeatedly.

1. Conditional statements

Decision making



Decision making

```
if(temperature > 32) {
  document.write(“It’s freezing!”);
} else {
  document.write(“It’s still not that cold!”);
}
 //continue with the script
```

There are two components to a decision:

1. An expression is evaluated, which returns a value (checking the current status and returning *true* or *false*)
2. A conditional statement says what to do in a given situation (which path to take)

Comparison operators

`==` (is equal to)
Compares two values to see if they are the same

`!=` (is not equal to)
Compares two values to see if they are not the same

`===` (strict equal to)
Compares two values to check that both the data and value are the same

`!==` (strict not equal to)
Compares two values to check that both the data and value are not the same

Comparison operators 2

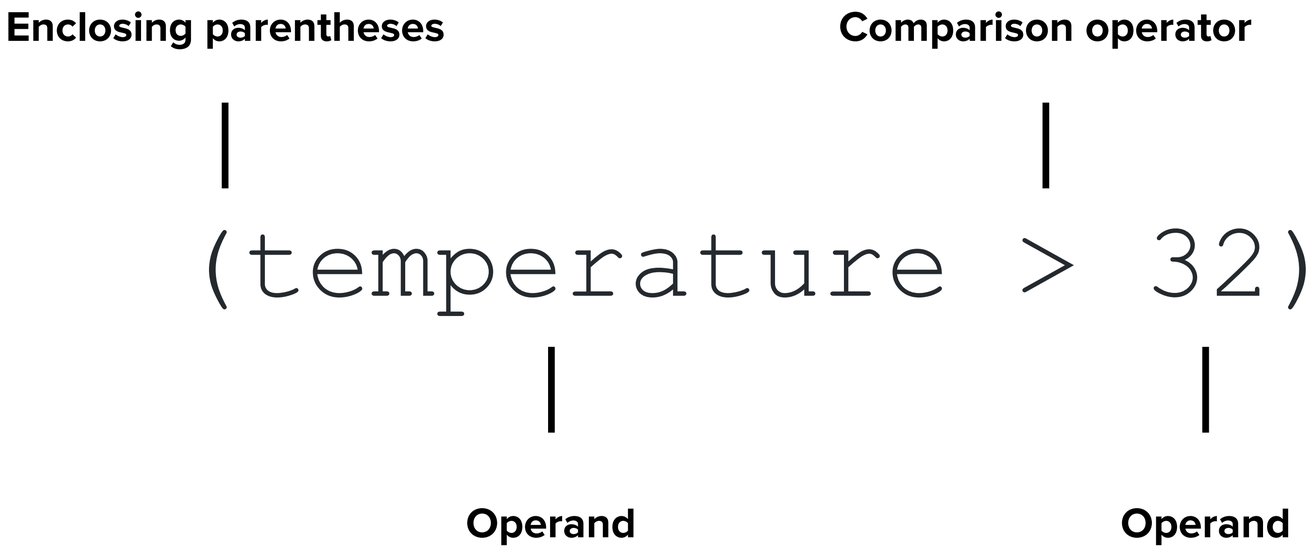
`> (greater than)`
Checks if number on the left is greater than the number on the right

`< (less than)`
Checks if number on the left is less than the number on the right

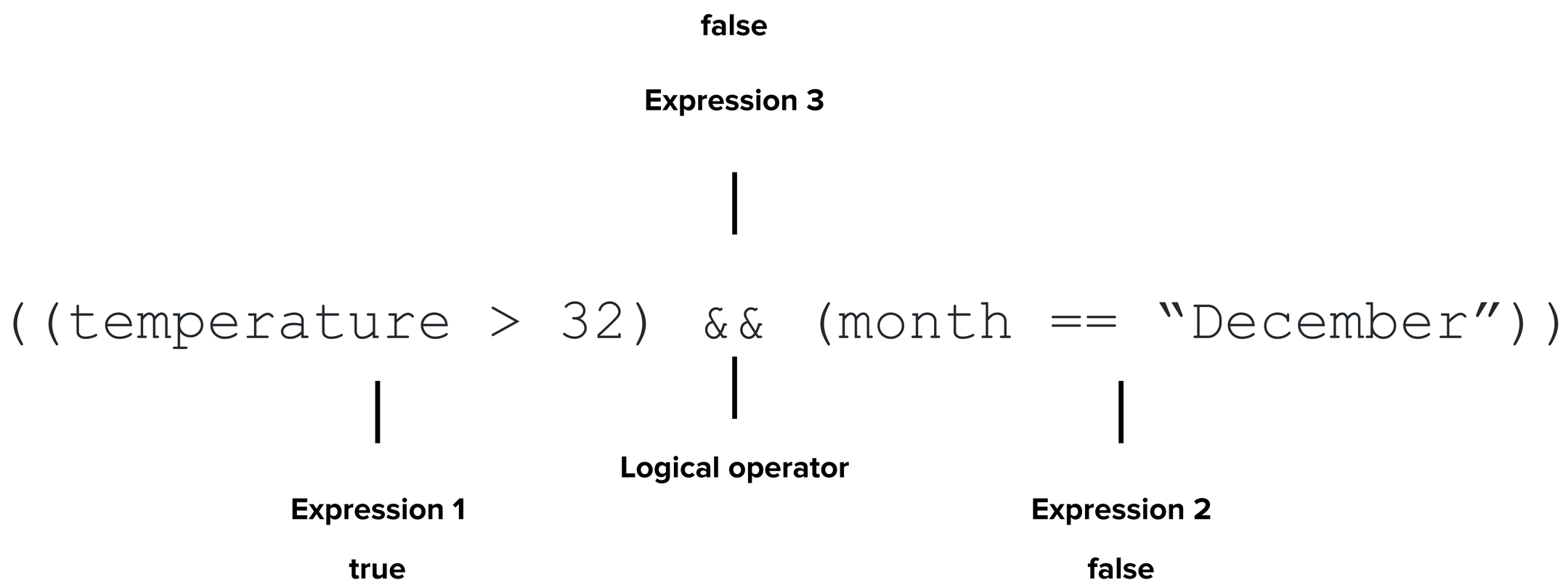
`>= (greater than or equal to)`
Checks if number on the left is greater than or equal to the number on the right

`<= (less than or equal to)`
Checks if number on the left is less than or equal to the number on the right

Structure of comparison operator



Logical operators



Logical and

&&

Tests more than one condition

```
((temperature > 32) && (month == “December”))
```

If both expressions return true, then the full expression returns true

```
true && true returns true
true && false returns false
false && true returns false
false && false return false
```

Logical or

||

Tests at least one condition

```
((temperature > 32) || (month == “December”))
```

If either expression return true, then the full expression returns true

```
true && true returns true
true && false returns true
false && true returns true
false && false return false
```

Logical not

!

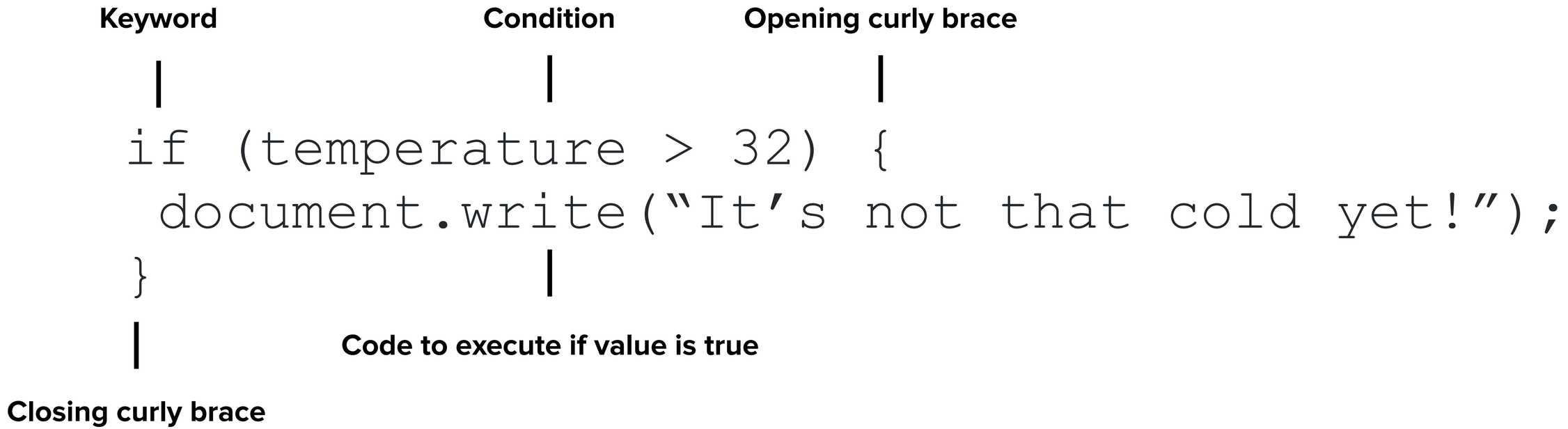
Takes a single boolean value and inverts it

```
!(temperature > 32)

!true returns false
!false true
```

if statements

If statement evaluates a condition. If it evaluates to true, statements inside the code block will be executed.



if...else statements

if...else statement checks a condition. If it evaluates to true, statements inside the first code block will be executed. If it evaluates to false, the second code block is run.

Code to execute if value is true

```
if (temperature > 32) {
 document.write("It's not that cold yet!");
}else {
  document.write("It's freaking cold!");
}
```

Code to execute if value is false

Example: if...else statement

switch statements

```
var temperature = 32;
var message;

switch (temperature){
  case -10:
   message = “It’s freezing! Stay inside.”;
   break;

  case 0:
   message = “It’s a bit warmer but still really cold!”;
   break;

  case 32:
   message = “I think it’s about to snow!”;
   break;

  default:
   message = “Check the temperature again.”;
   break;
}
```

Example: switch statement

2. Loops

Loops

For loop. If you need to run a code a specific number of times. The condition is usually a counter how many times the loop should run.

While loop. If you do not know how many times the code should run. The code will continue to loop for as long as the given condition is true.

Do while loop. Similar to while loop but it will always run the statements inside the curly braces at least once, even if the condition evaluates to false.

For loop

```
var months = [“January”, “February”, “March”, “April”,
“May”, “June”, “July”, “August”, “September”,
“October”, “November”, “December”];
```

Keyword

Condition (counter)

Opening curly brace

```
for (var i=0; i < months.length; i++){
   console.log(month[i]);
}
```

Code to execute during loop

Closing curly brace

For loop

For loop uses a counter as a condition.
It instructs code to run a specified number of times.
Good to use when the number of repetitions is known, or can be supplied by the user.

Initialization. Creates a variable and sets it to 0. Commonly called i.

```
var i = 0;
```

Condition. The loop should continue to run until the counter reaches a specified number.

```
i < months.length;
```

Update. Every time the loop has run, the counter should increment by 1.

```
i++;
```

Example: for loop

While loop

The loop repeats until a certain “condition” is met.
If the condition is false at the beginning of the loop, the loop is never executed.
Good to use in applications with numeric situations.

```
var i=1;

while (i < number){
     console.log(i);
     i++;
}
```

Example: while loop

Do while loop

Same concept as the while loop.
Except that this loop will always execute the loop at least one time (even if the condition is not met).
Good to use when you are asking a question, whose answer will determine if the loop is repeated.

```
var i=1;

do {
  console.log(i);
  i++;
} while (i < number);
```

Example: do...while loop

Final Project Assignment

Final Project Assignment (due December 7)

Task: to create a personal website for your creative work.
Final projects will be presented in class on Thursday, December 7th.
Final project is worth 30% of the final grade in the course.

Final Project Assignment (due December 7)

You can make a website about your creative project or a hobby that you really love such as cooking or traveling.
The subject matter of your site is open ended but should reflect your academic interests, your creative practice or some other interest of yours.

Some examples can include: an interactive resume, a project gallery site, an interactive media representation of your creative / academic work, a single page personal statement. It's up to you.

The form of your site should emerge from the content and it must be thoughtful and well designed. This means creating something more than a straightforward portfolio page layout.
Think of it as something that you'd show to potential employers or a gallery interested in your work to show off your work and your personality.

Final Project Assignment (due December 7)

The project must:

- Have a well-thought through concept and appropriate form to implement it
- Have a well-thought out and cohesive visual design, using color, external fonts, icons and images
- Have a responsive design (using Bootstrap is highly recommended) and it should be well implemented
- Utilize extensive media elements (up to you how many and which ones)
- Contain a degree of button/link transitions and CSS animation
- Have interactivity using JavaScript (invite users to click something that changes design elements, etc.)

Note: If you did this assignment for the midterm you must meet with me to discuss how you will take yours to the next level technically and conceptually

Final Project Assignment (due December 7)

Technical requirements:

- Original content - well thought through, proofread, etc.
- HTML structure with CSS styling
- CSS - use of classes and IDs, as well as pseudo classes such as :hover and :active
- CSS Fonts, Styles and Colors
- CSS Positioning and Layout (responsive)
- **JavaScript interactivity: if...else statements, for and/or while loops, use of functions, at least one object**
- Visual Design - I want you to thoughtfully use color, iconography and type, minimal will not work for the final
- Structure - folder structure, external stylesheets, clean code with comments

Note: I am not putting a page minimum on the site, but it should be a complete site without dead links. Scale it appropriately for what you can achieve. You will be graded on the complexity of the project (i.e. if it's only one page, it needs to be complex, some kind of infinite scroll sites, etc.).

Final Project Assignment (due December 7)

References and inspiration:

- Robby Leonardi Interactive Resume
- Making of Robby Leonardi's Resume
- CSS Awards
- Awwwards Creative Web Portfolios
- Semplice Labs showcase
- Siteinspire Portfolio Gallery
- Raf Simons
- HAWRAF
- Dribbble and Designspiration for design inspiration

Note: a lot of these websites use advanced Javascript or other advanced techniques, so look at them for visual and interaction reference. Talk to me to make sure the scale of your project is appropriate and achievable.

Final Project Assignment (due December 7)

Project structure:

1. Concept
2. Content preparation
3. Wireframe how you want to make it
4. Design
5. Code
6. Test
7. Iterations
8. Final presentation

Final Project Assignment Timeline

Monday, November 20th:
- Concepts ready to present
- In-class 1 min presentations (1 slide ready)
- Office hours after class available

Thursday, November 23rd:
- NO CLASS, Thanksgiving

Monday, November 27th:
- Content ready
- Wireframes ready
- Visual Design ideas ready: options for use of color, iconography and fonts
- In-class workshop for feedback (3min presentations ready)
- Office hours after class available

Thursday, November 30th:
- First website drafts ready (HTML structure & CSS)
- Office hours after class available if necessary

Monday, December 4th:
- More functional websites ready (improving CSS, adding JavaScript functionality)
- Office hours after class available

Thursday, December 7th:
- Final in-class presentations
- 5min presentations ready
- Double class w/ guest critics

Homework assignment

Homework

By Sunday, November 26, 6pm

1. **Web review presentations: Danielle, Briana, Ish**
    1. Post website links you'll be presenting to Slack by Sunday 6pm
2. **Review the class slides**
3. **Final Project assignment:**
    1. Prepare all the content for your site (it should be proofread and ready to go)
    2. Prepare wireframes for your site - it should be as detailed as possible
    3. Prepare your visual design ideas: different options for use of color, iconography and fonts
    4. Prepare 3min presentation for in-class feedback workshop (it should include your concept to remind people, wireframes, visual design ideas)
        - You should have slides or all information very organised ready to present
        - Post it to #general channel on Slack, so I could review before class