Introduction to Web Development

Building Interactive features

Today's Plan

Building small interactive features and games with JavaScript

the event object

event object

```
button.onclick = function (event){

    event.preventDefault();

    console.log(event.type);

    const elem = event.target;

}
```

used to prevent default behavior

has target and type information

event.preventDefault()

HTML

```html
<a href="http://example.com" id="link-out">

  Example link

</a>
```

JS

```javascript
const link = document.getElementById('link-out');

link.onclick = function (event){

  event.preventDefault(); // what does this do?

}
```

event target

JS

```javascript
const list =
    document.getElementById('my-list');

list.onclick = function (event){
    const elemClicked = event.target;

    // what is elemClicked?
    console.log(elemClicked);
}
```

HTML

```html
<ul id="my-list">
    <li>item 1</li>
    <li>item 2</li>
    <li>item 3</li>
</ul>
```

important event functions and properties

event.preventDefault()

event.stopPropagation()

event.target

event.type

parentElement

JS

```
const list =
    document.getElementById('my-list');


list.onclick = function (event){
    const elemClicked = event.target;


    // what is this?
    console.log(elemClicked.parentElement);
}
```

HTML

```
<ul id="link-out">
    <li>item 1</li>
    <li>item 2</li>
    <li>item 3</li>
</ul>
```

children

JS

```
const list =
  document.getElementById('my-list');

// what is this?
console.log(list.children);
```

HTML

```
<ul id="link-out">
  <li>item 1</li>
  <li>item 2</li>
  <li>item 3</li>
</ul>
```

# an image gallery
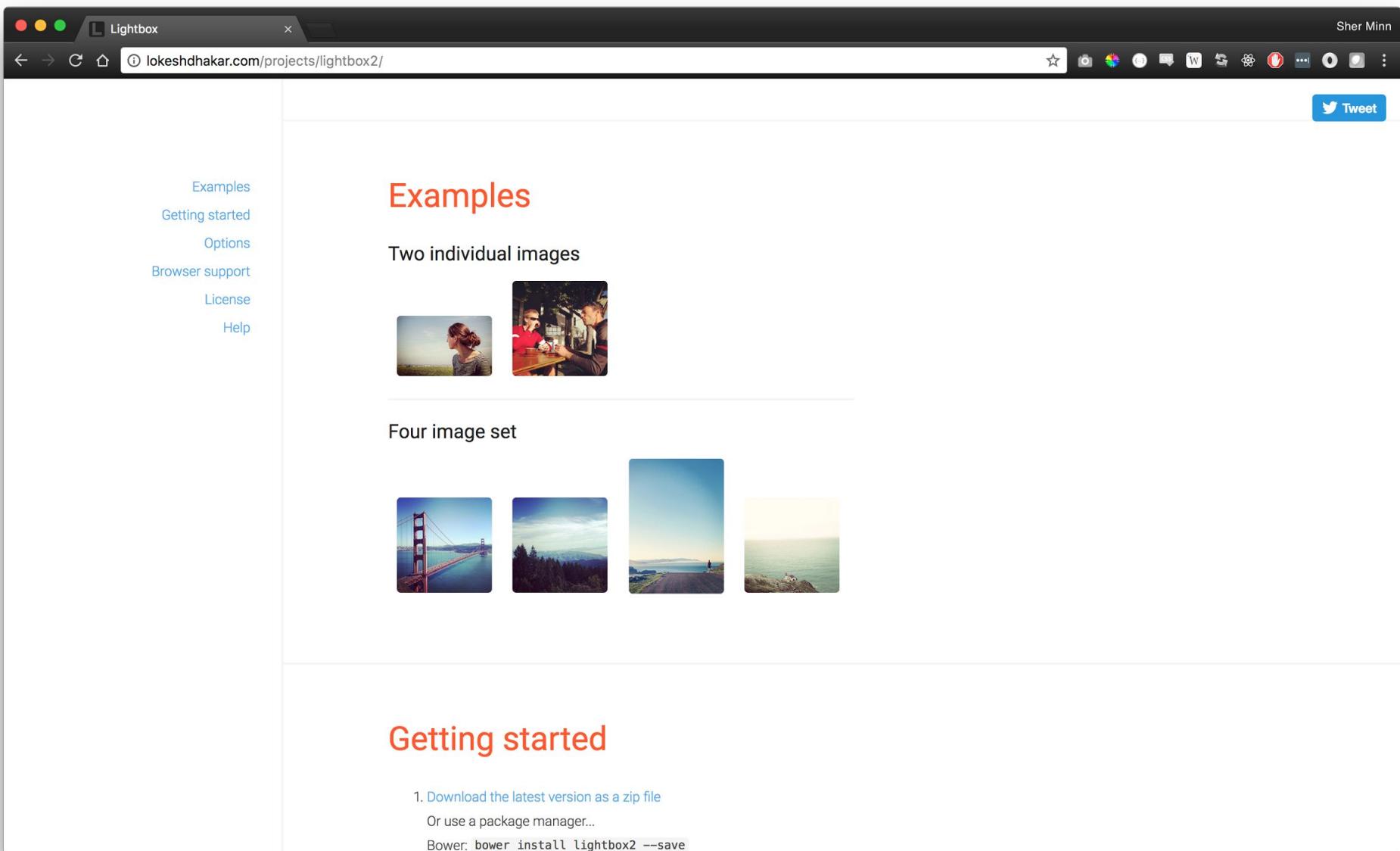
how do i even start?

breaking the problem down

example from: http://lokeshdhakar.com/projects/lightbox2/

breaking the problem down

example from: http://lokeshdhakar.com/projects/lightbox2/
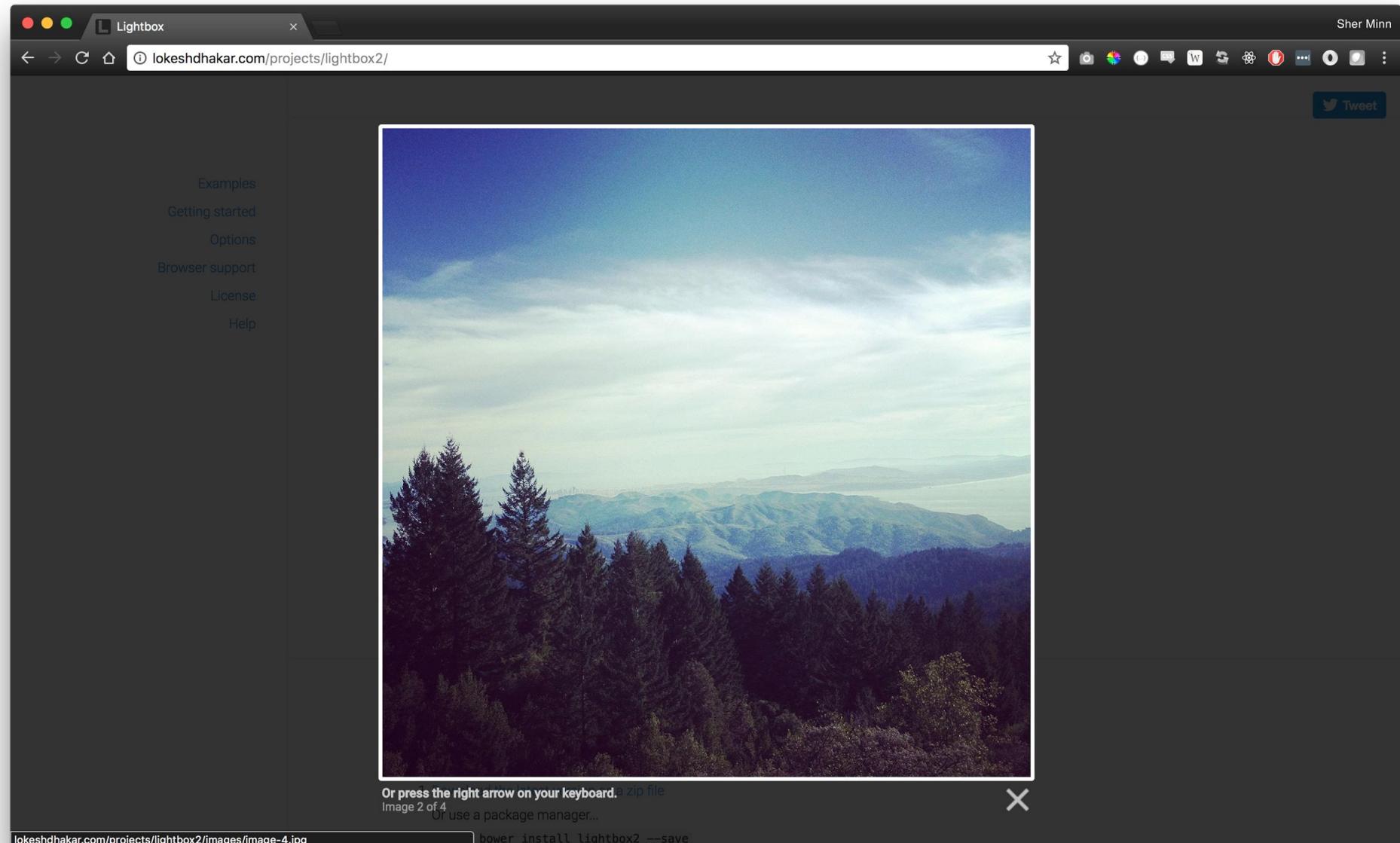
What HTML do I need?

1. What data do I need?

   a. image (thumbnail/full size)

   b. caption

2. How do I organize the…

   a. images with their captions?

3. What elements do I need for the…

   a. gallery?

   b. lightbox?

What HTML do I need?

4. How do I match images with the captions?

5. How many lightboxes do I need?

What CSS do I need?

1. How do I style the gallery?

2. How do I style the lightbox?

    a. how to position it in the middle?

    b. how to do the backdrop?

3. How to show/hide the lightbox?

    a. display: none?
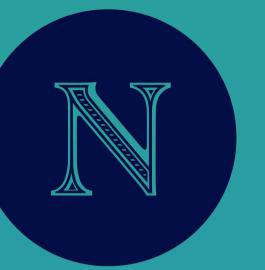
What JS logic do I need?

1. Clicking on an thumbnail shows the lightbox

   a. How to show correct image and caption in lightbox?

2. Clicking on the backdrop closes the lightbox

3. Clicking on next/previous button goes to next/previous image

   a. How to know which is the previous and next?

an small game

word guessing game

what HTML do I need?

1. way to show **correctly guessed part of word** so far

2. way to show **guesses left**

3. way to show **guessed alphabets**

4. **input** for user to enter an alphabet

5. **button** to submit input

what JS logic do I need?

1. a **word to guess**

2. a way to keep track of **wrongly guessed alphabets**

3. a way to keep track of **correctly guessed part of word**

4. number of **guesses left**

5. a way to know when **won** or **lost**

different behaviors

1. How to know if a user has submitted an alphabet before?

2. How to know when user has finished guessing the word?

Recap

Recap

1. event

    a. event.target

    b. event.preventDefault()

2. .parentElement

3. .children

Recap

1. image gallery
   a. event.target
   b. using CSS to show/hide
   c. creating dynamic lightbox

2. word game
   a. dealing with user input
   b. keeping track of game state
   c. win/lose logic