WELCOME TO FRONT-END WEB DEVELOPMENT

Please sit next to a different classmate
and write your name on your name tag.

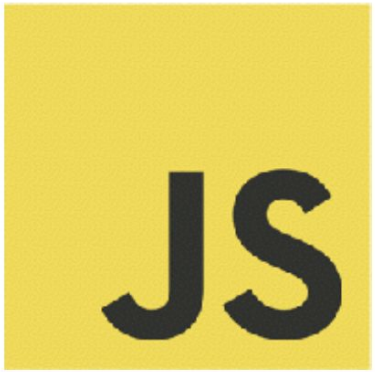
Wi-fi: GA-Guest
pw: yellowpencil

JavaScript + jQUERY RECAP

A quick note...

We're learning **JavaScript**, not Java.

Java and JavaScript are actually two different languages.



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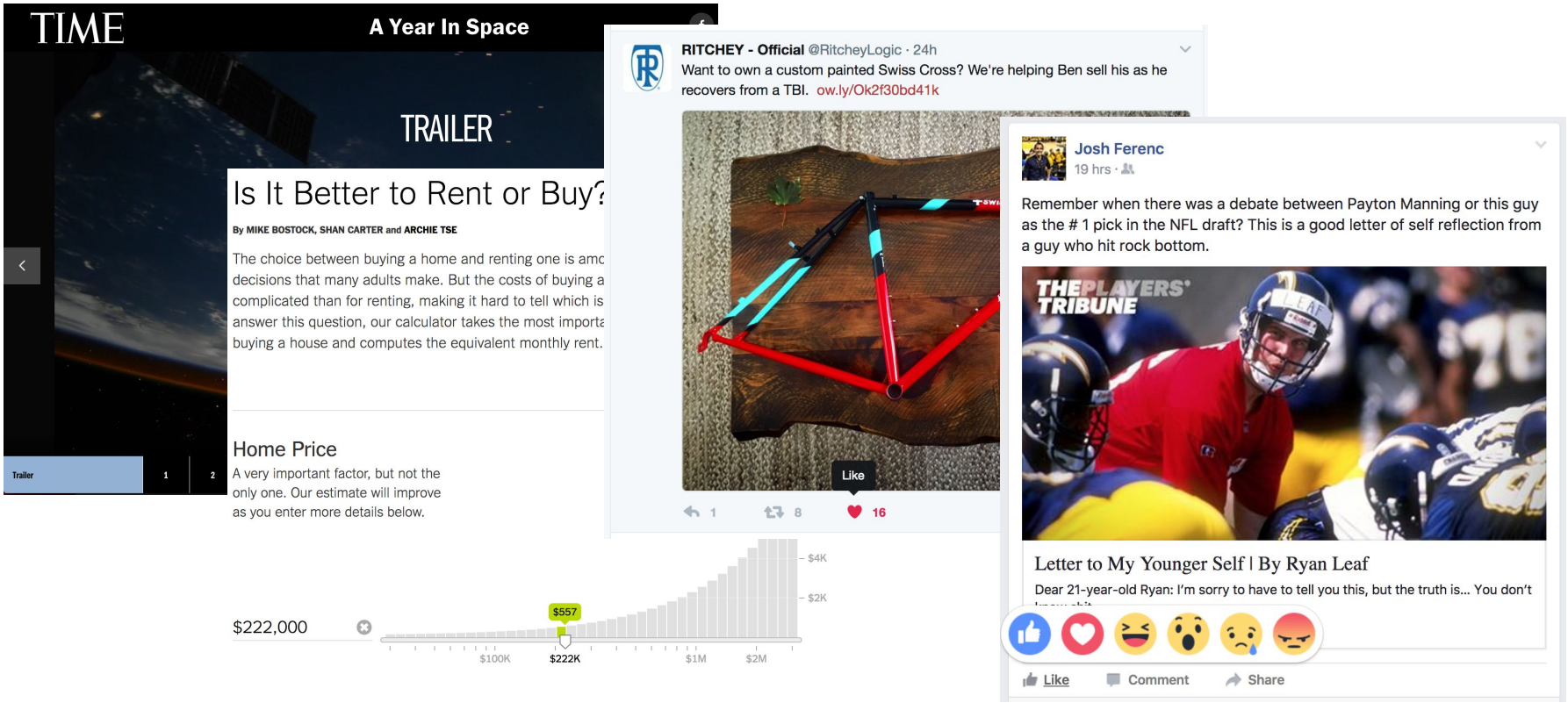
Three basic layers of web-development

Behavior?

Think **interaction** or **functionality**

Some examples of interactivity



What can JavaScript do?

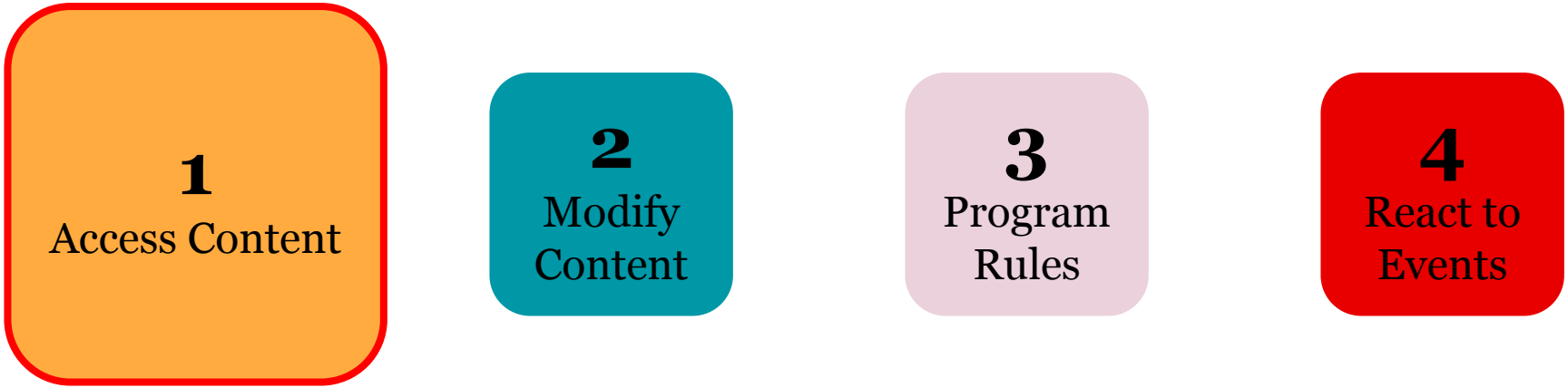
1 Access Content

2 Modify Content

3 Program Rules

4 React to Events

What can JavaScript do?

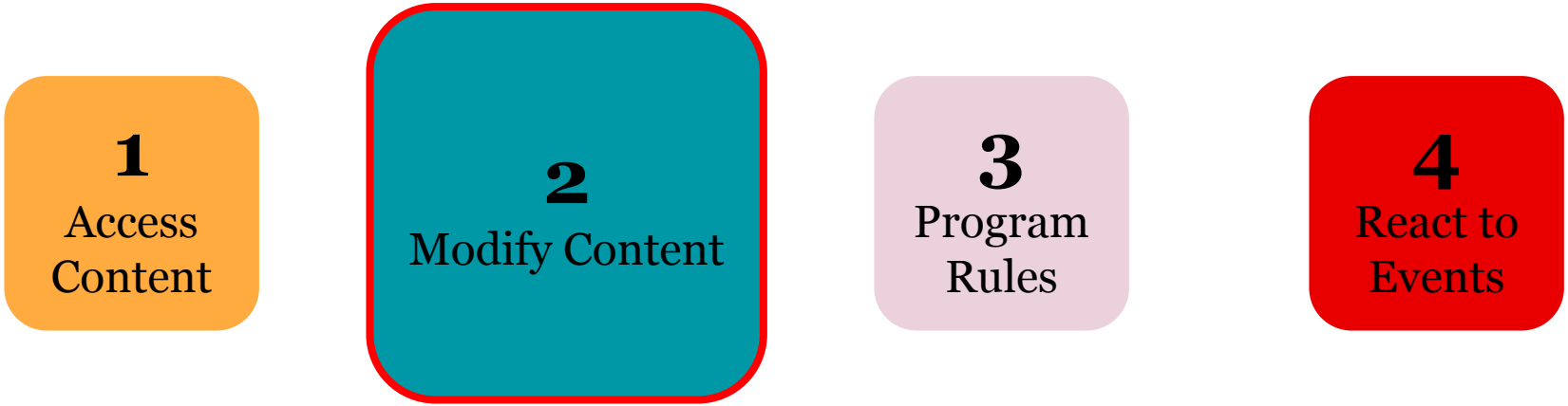


You can use JS to select any element, attribute or text from an HTML page.

For example:

- Find out what the user entered into a text input when they submit a form
- Find out whether the user checked a checkbox

What can JavaScript do?

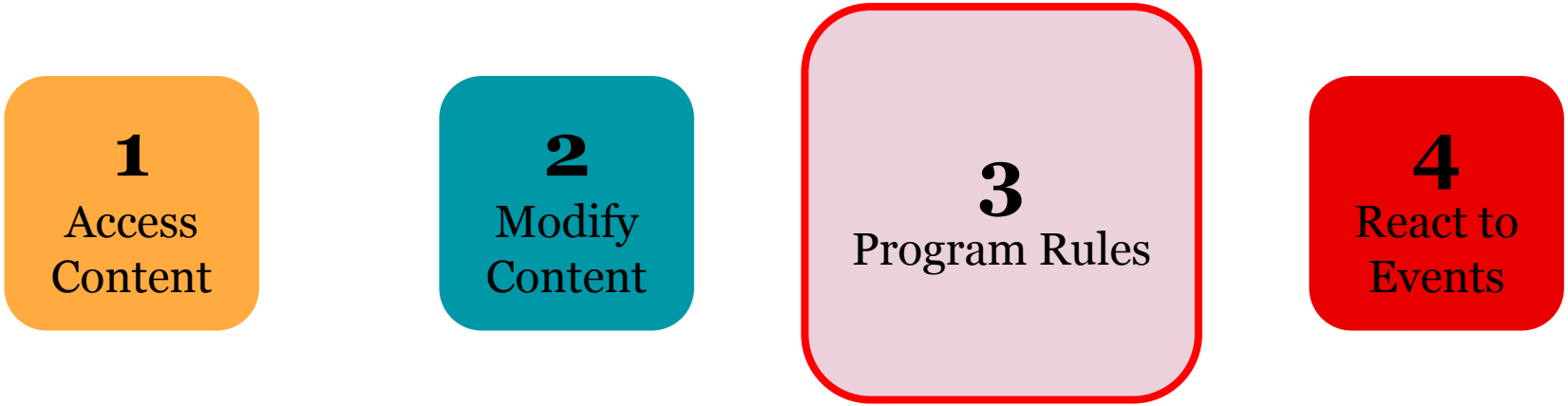


You can use JS to add elements, attributes and text to the page (or remove them)

For example:

- Add an error message below a form
- Change the size, position, color, or other styles for an element

What can JavaScript do?

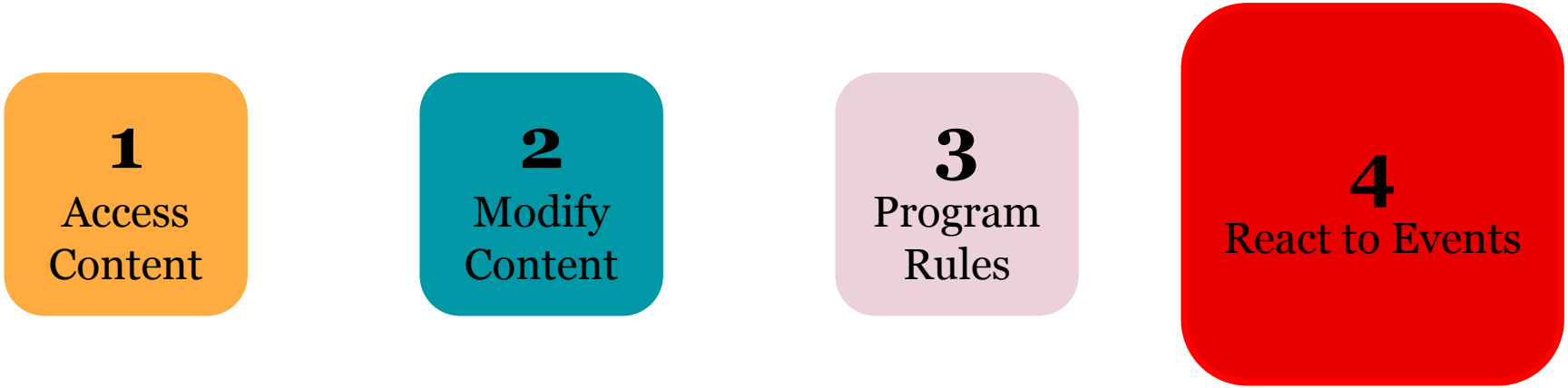


You can specify a set of steps (instructions) for the browser to follow

For example:

- Have images/text fade in if the user has scrolled to a certain portion of the page
- Check to make sure the user has entered a valid email address into a form and display
- an error message if not

What can JavaScript do?



You can specify that a script should run when an event occurs

For example:

- When a button is clicked
- When the cursor hovers over an element
- When the user types information into a form

Programming in pseudo-code

Pseudo-code is:

- not a programming language
- a simple way of describing a set of instructions that solve a specific problem
- the perfect way of planning the development of a computer program
- varied in style: it can be very close to real programming language or look like prose

```
Put water into kettle;
Turn kettle on;
Wait for water to boil;
Put teabag in cup;
Add water to cup;
Remove teabag;
Serve;
```

```
IF X > Y
  PRINT "X is greater than Y"
ELSE
  PRINT "Y is greater than X"
END
```

Programming basics

Computer programs are constructed using:

- **input data**: hardcoded in the program or provided by the user (e.g. *“Date of birth?”*)
- **output data**: normally the result of processed input data (e.g. *“You are over 21.”*)
- **variables**: markers that store values (e.g. `dateOfBirth`)
- **basic arithmetic**: addition, subtraction, multiplication, division (e.g. `currentDate - dateOfBirth`)
- **simple comparisons**: boolean logic (e.g. `userAge >= ageLimit`)
  - Equals =, Greater than >, Less than <, Greater than or equal to >=, Less than or equal to <=, Does not equal <>, And &&, Or ||, Not !
- **logical operations**
  - **if** *condition true* **then** *output* **else** *alternative output*
  - **while** *condition true* **do** *operation*

Applying JavaScript

There are two ways to apply JS to HTML

Internal

```
<body>
  …
  <script>
    alert("Hello World!");
  </script>
</body>
```

External

```
<body>
  …
  <script src="hello.js"></script>
</body>
```

Why jQuery?

*“it is a fast and concise **JavaScript Library** that simplifies HTML/DOM manipulation, event handling, effects and animation for rapid web development across all modern web-browsers”*