In this lecture, we will discuss…
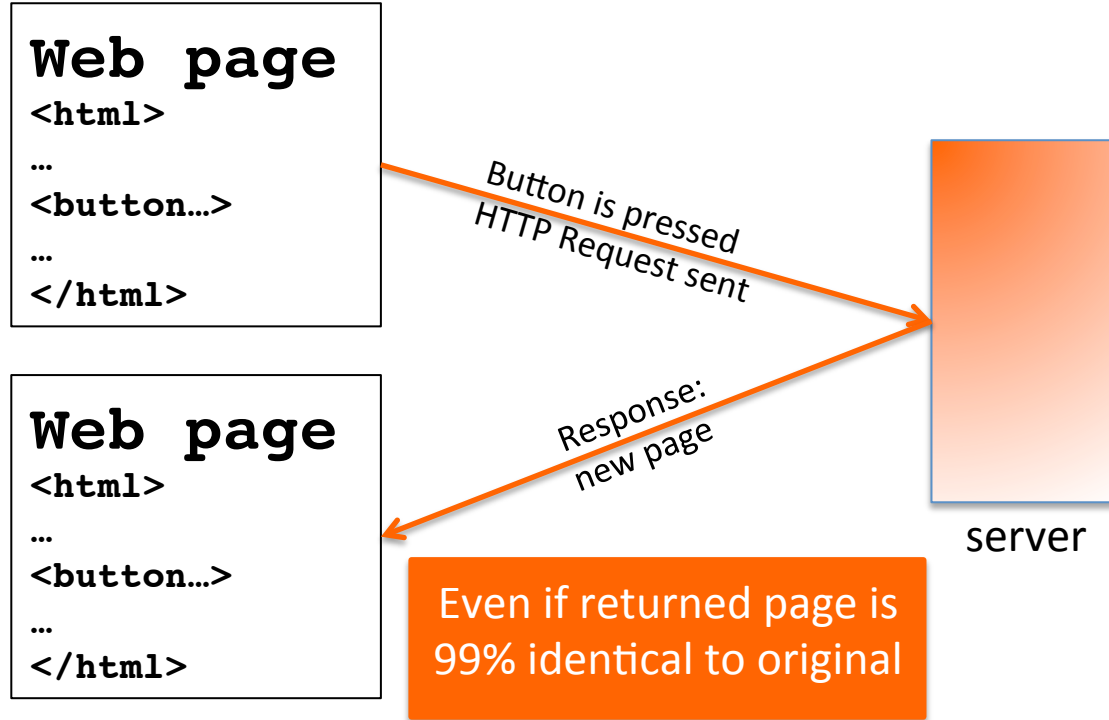
Ajax Basics

What is Ajax?
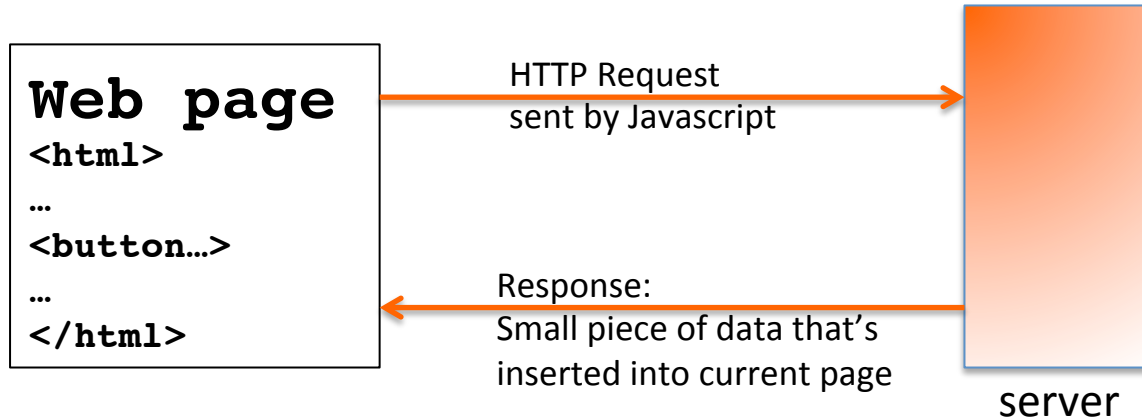
stands for

Asynchronous Javascript And XML

✧ **While Ajax started with XML, very few apps use it nowadays**

- **Plain text (at times as html) and JSON is used instead**

Traditional Web App Flow

Web page
`<html>`
…
`<button…>`
…
`</html>`

Button is pressed
HTTP Request sent

Response:
new page

server

Web page
`<html>`
…
`<button…>`
…
`</html>`

Even if returned page is
99% identical to original

Ajax Web App Flow


```
Web page
<html>
…
<button…>
…
</html>
```

HTTP Request
sent by Javascript

server

Response:
Small piece of data that's
inserted into current page

✧ **Faster response**
- **Less bandwidth, nicer experience for user**

Synchronous Execution
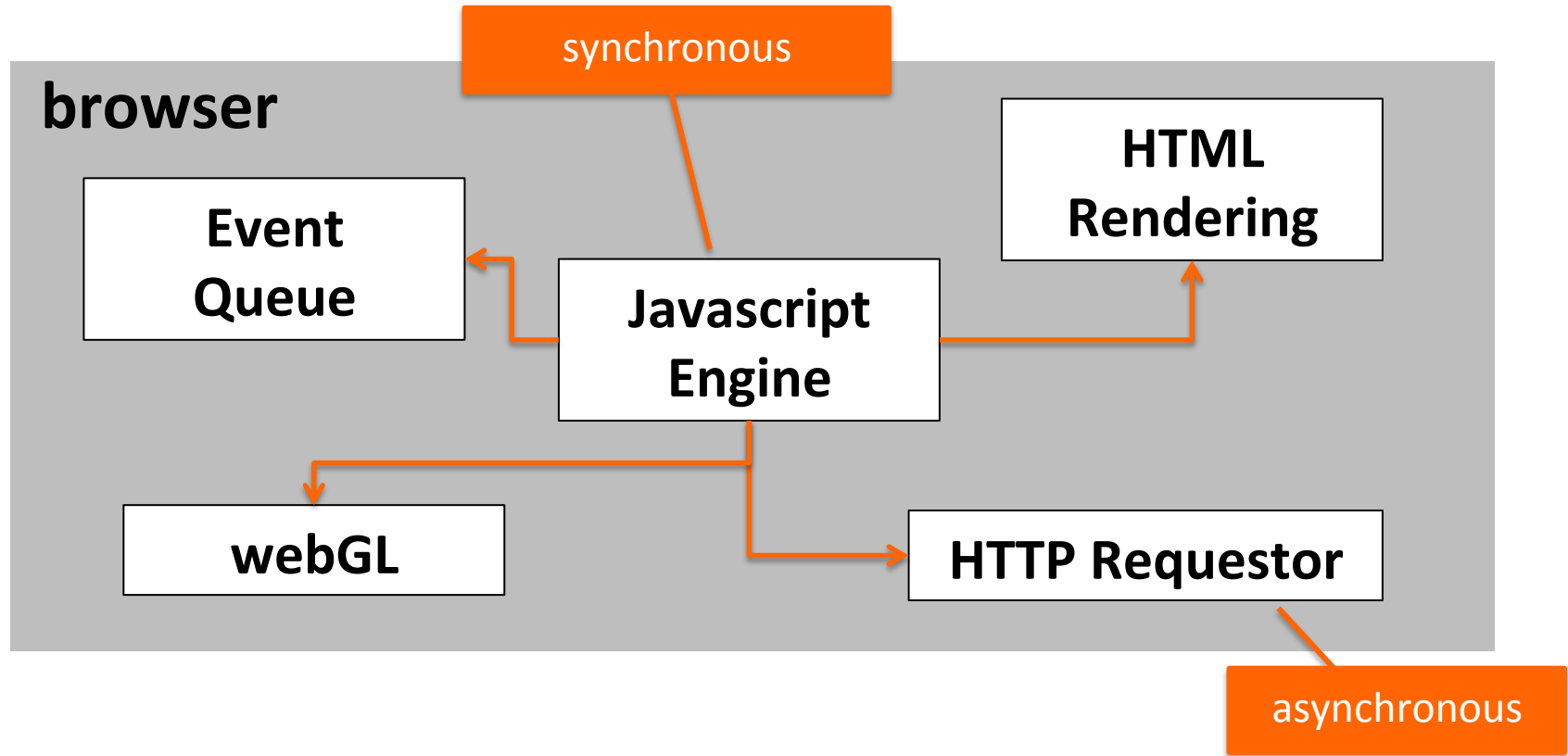
> # Execution of one instruction at a time

✧ **Can't start execution of another instruction until the first instruction finished its execution**

Asynchronous Execution

Execution of more than one instruction at a time

✧ **Asynchronous instruction returns right away**
✧ **The actual execution is done in a separate thread or process**

How Does Ajax Work Then?

Ajax Process

Javascript Engine

HTTP Requestor

js code line

js code line

make Ajax request

Address JS function
response handler

js code line

js code line

Handle server response

callback function