

# ASYNCHRONOUS JAVASCRIPT AND XML

**What:** Tool to allow JavaScript to issue HTTP requests to servers, and get the response data

**Why:**

- 1) Fetch data from a server to process/display  
e.g. Gmail, Facebook, Yelp (cue demo)
- 2) No page refresh; better user experience

# SERVER DATA VS. LOCALSTORAGE

Why get data from a server when we could use `localStorage`?

# SERVER DATA VS. LOCALSTORAGE

Why get data from a server when we could use `localStorage`?

- 1) `localStorage` is client-specific storage; can't get other users' data (e.g. your Facebook friends' posts)
- 2) Unreliable; if computer crashes, data goes with it
- 3) Storage limit of 2.5 - 10 MB (i.e. nothing)

# SERVER DATA VS. LOCALSTORAGE

Benefits of a server:

- 1) Can store all users' data (e.g. your posts and your Facebook friends' posts)
- 2) Can be much more reliable (not based on user)
- 3) Storage limit based on disk size

# AJAX

So how do we interface with a server? AJAX!

Tool to allow JavaScript to issue HTTP requests to servers, and get the response data

To employ AJAX, we use the XMLHttpRequest object

# XMLHTTPREQUEST: GET REQUEST

```
var request = new XMLHttpRequest();
request.addEventListener('load', function() {
    // will be called when request is finished
});

// configure a GET request to /people
request.open('GET', '/people?name=Karthik');

// make the request!
request.send();
```

# XMLHTTPREQUEST: POST REQUEST

```
var request = new XMLHttpRequest();
request.addEventListener('load', function() {
    // will be called when request is finished
});

// configure a POST request to /people
request.open('POST', '/people');

// make the request!
request.send();
```

# XMLHTTPREQUEST: POST REQUEST

```
var request = new XMLHttpRequest();
request.addEventListener('load', function() {
    // will be called when request is finished
});

// configure a POST request to /people
request.open('POST', '/people');
request.setRequestHeader('Content-type',
    'application/json');

// make the request!
var postArgs = { name: 'John Doe', age: 27 };
request.send(JSON.stringify(postArgs));
```



# XMLHTTPREQUEST: HANDLER

```
request.addEventListener('load', function() {  
    // log status code and response text  
    console.log(request.responseText);  
    console.log(request.status);  
});
```