Handling files

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Browser restrictions

- It is impossible to write a piece of code that reads an arbitrary file in (server-side) Javascript
- Only files selected by users through file input forms can be processed

Sending a file from the terminal

```
$ curl -X POST
-H "Content-Type: multipart/form-data"
-F "picture=@localpath/to/img.png"
-F "username=bart"
http://...
```

Sending a file from the browser

Form action (with page refresh)

```
<form action="/url"
   method="POST"
   enctype="multipart/form-data">
```

Ajax request (without page refresh)

```
var file = document.get ...
var formdata = new FormData();
formdata.append("picture", file);
xhr.send(formdata);
```

What is received on the server

File metadata

- filename
- mimetype (file type)
- size
- and others

File content

Compressed binary or string

MIME types

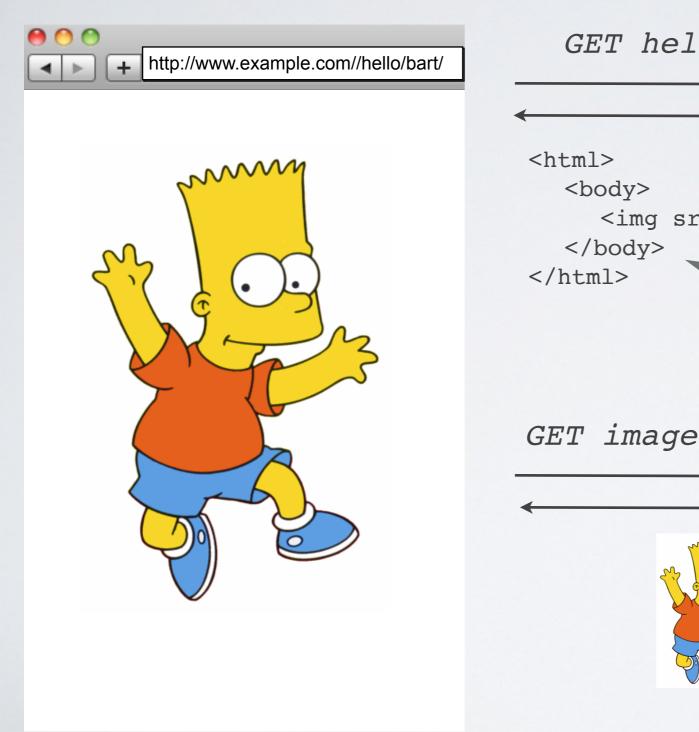
MIME (Multipurpose Internet Mail Extensions) is also known as the **content type**

→ Define the format of a document exchanged on internet (IETF standard) http://www.iana.org/assignments/media-types/index.html

Examples of MIME types

- text/html
- text/css
- text/javascript
- image/jpeg image/gif image/svg image/png (and so on)
- application/pdf
- application/json

Example of how images are retrieved



```
GET hello/bart/
    <img src=images/bart.jpg/>
              MIME: text/html
GET images/bart.jpg
```

MIME: image/jpg

Do/Don't with files

- Do not send a base64 encoded file content with JSON, use multipart/form-data instead (compression)
- · Do not store uploaded files with the static content
- Do not serve uploaded files statically (security)
- Do store the mimetype and set the HTTP response header mimetype when files are sent back