Browsers can be synchronous or asynchronous

Servers can too, but let's focus on the browser

Synchronous code → if I perform a task, I have to wait until that process / task / function is complete

#### **Upload video**

Video title:

Your video title

Video thumbnail:

Attach your video's image

Video description:

What is your video about?

Submit

#### **Upload video**

Video title:

My good dogs

Video thumbnail:

doggy.jpeg

Video description:

A quick video showing how well behaved my dogs are

Submit

#### **Upload video**

Video title:

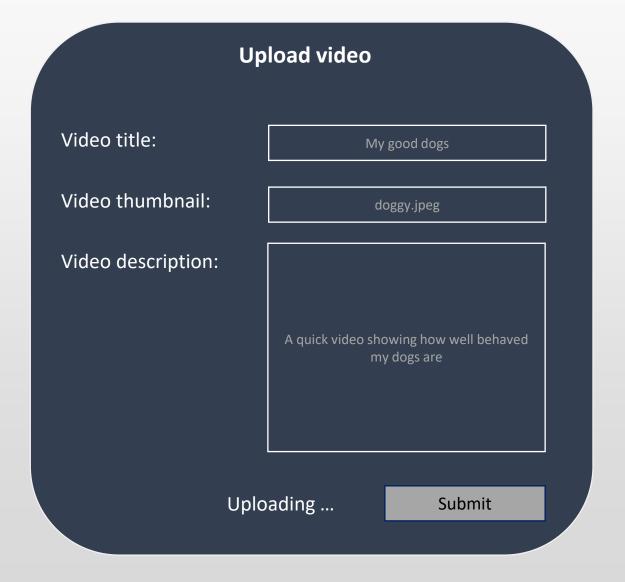
My good dogs

Video thumbnail:

doggy.jpeg

Video description:

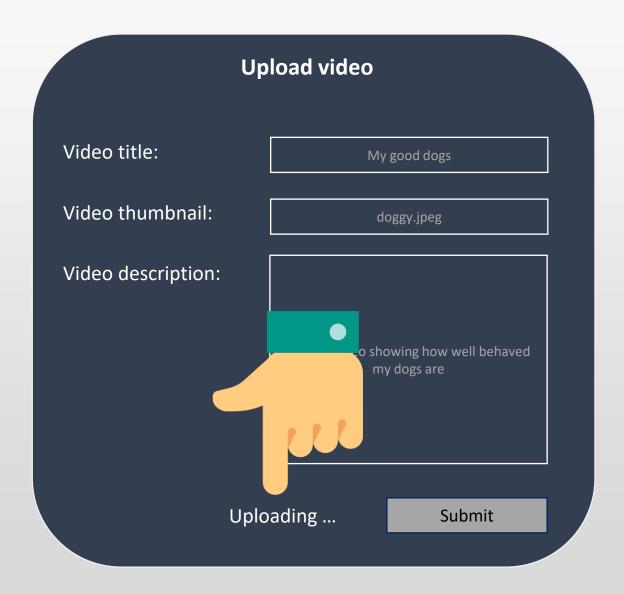
A quick video showing how well behaved my dogs are



When the user hits "submit" everything is disabled

# **Upload video** Video title: My good dogs Video thumbnail: doggy.jpeg Video description: A quick video showing how well behaved my dogs are Uploading ... Submit

```
upload() {
    print('Uploading ...')
    x = UploadVideo()
    print("successUrl: " + x)
}
```



```
upload() {
    print('Uploading ...')
    x = UploadVideo()
    print("successUrl: " + x)
}
```

# **Upload video** Video title: My good dogs Video thumbnail: doggy.jpeg Video description: A quick video showing how well behaved my dogs are Uploading ... Submit

```
upload() {
    print('Uploading ...')
    x = UploadVideo()
    print("su ssUrl: " + x)
}

We have to wait
```

# **Upload video** Video title: my good dogs Video thumbnail: doggy.jpeg Video description: A quick video showing how well behaved my dogs are successUrl: http://yourvid/id=1234 Submit

```
upload() {
    print('Uploading ...')
    x = UploadVideo()
    print("successUrl: " + x)
}
```

GOOD

Easy to read code

Top to bottom

BAD

Have to wait

Not user friendly

#### Upload video

Video title:

my good dogs

Video thumbnail:

doggy.jpeg

Video description:

A quick video showing how well behaved my dogs are

Submit

#### **Upload video**

Video title:

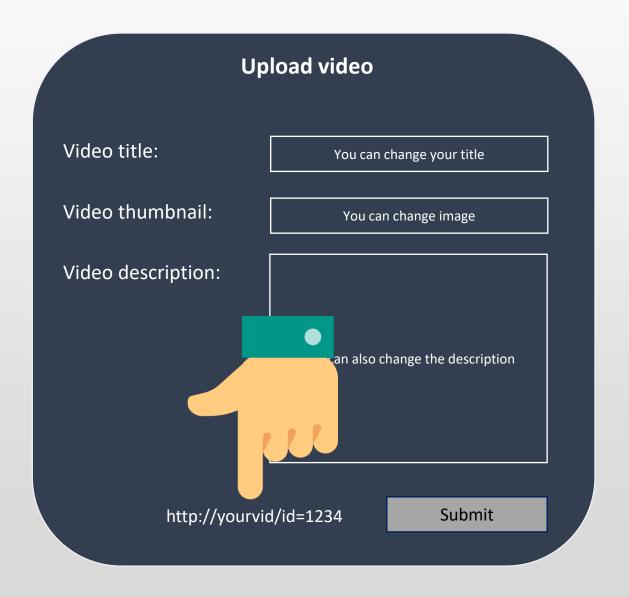
my good dogs

Video thumbnail:

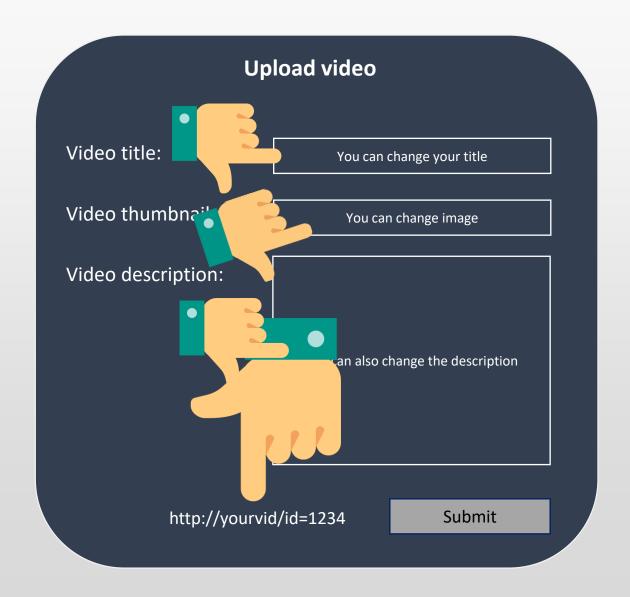
doggy.jpeg

Video description:

A quick video showing how well behaved my dogs are

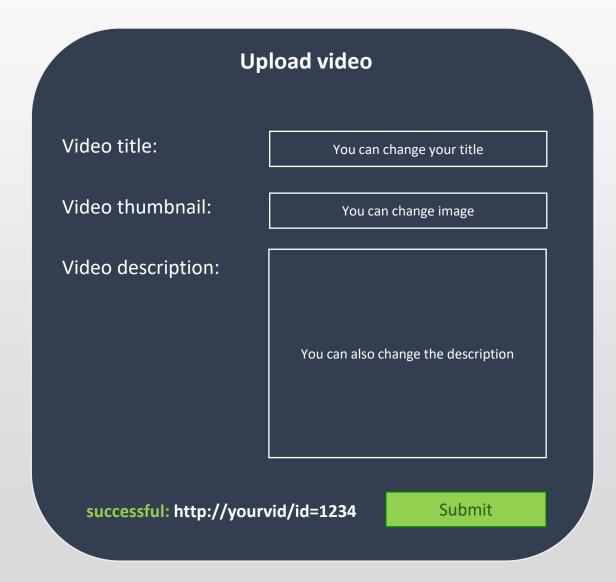


When you hit "submit" you immediately get back the URL



When you hit "submit" you immediately get back the URL

The user is unblocked and can change titles, thumbnails and descriptions



When you hit "submit" you immediately get back the URL

The user is unblocked and can change titles, thumbnails and descriptions

# **Upload video** Video title: You can change your title Video thumbnail: You can change image Video description: You can also change the description successful: http://yourvid/id=1234 Submit

```
upload() {
     x = UploadVideo(uploadDone)
     print(x)
uploadDone(x) {
     print("successful: " + x)
```

#### GOOD

Immediate results

No refresh or waiting

Improved user experience

#### BAD

Can be difficult to read code

Not as simple as top-to-bottom