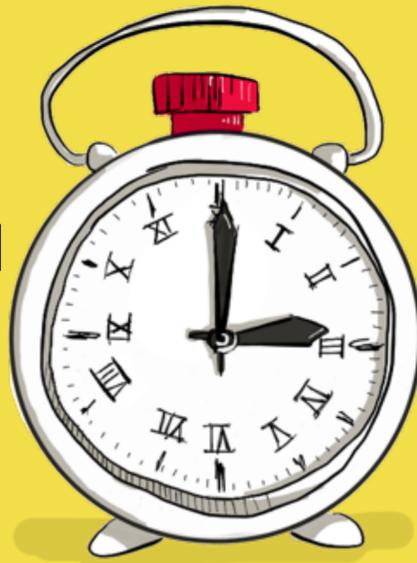




# WHY PERFORMANCE Matters?



# Conversions

Walmart 

**1 SECOND**  
PERFORMANCE  
IMPROVEMENT



+2%

# Conversions

Walmart 

**1 SECOND**  
PERFORMANCE  
IMPROVEMENT

|  
**\$482.2**  
billion

# Conversions



**1 SECOND**  
**DROP** in  
PERFORMANCE

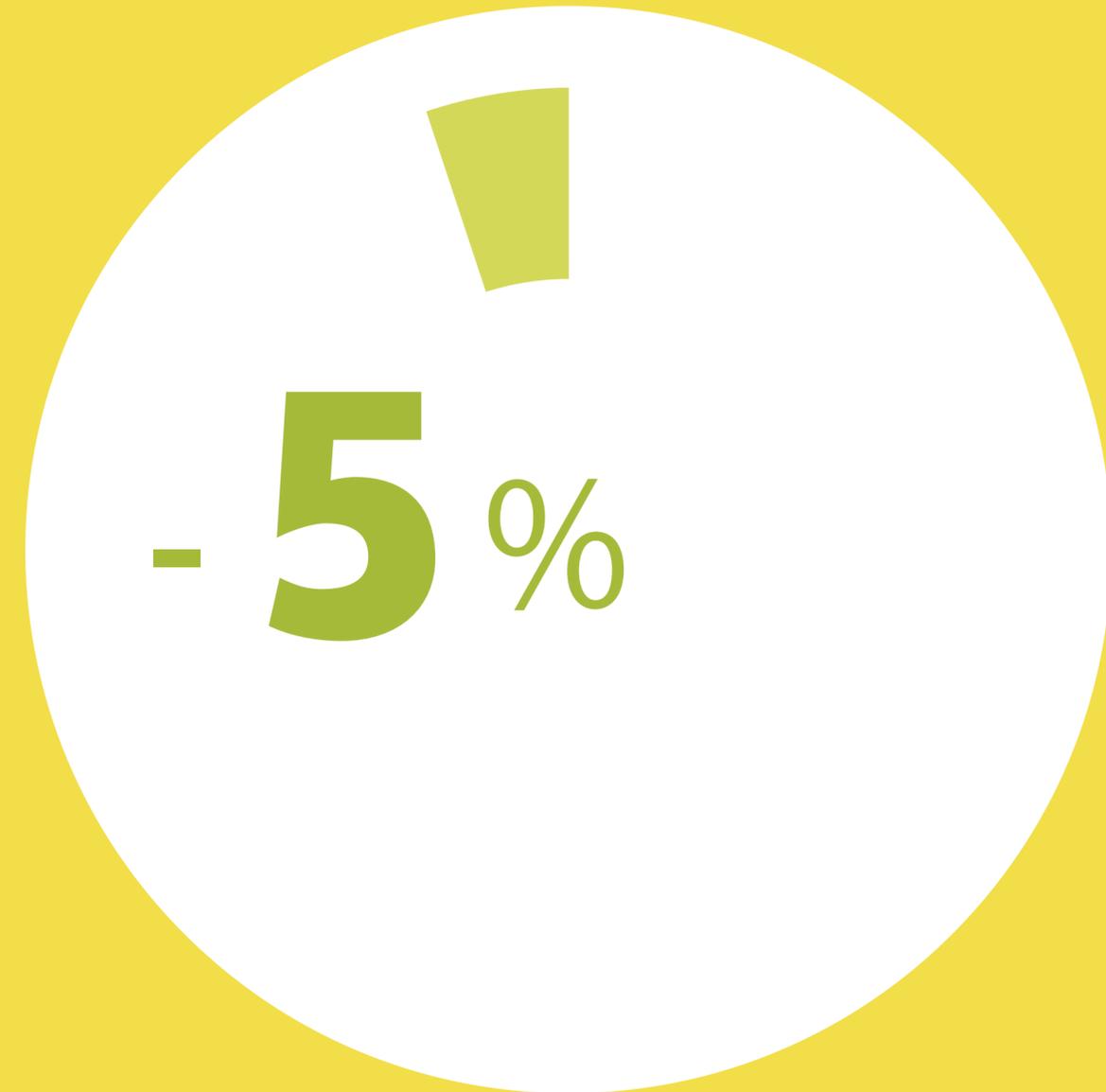
A large white circle containing a green exclamation mark at the top and the text '-4,6%' in a large green font in the center.

-4,6%

# Conversions



**2 SECONDS**  
**DROP** in  
PERFORMANCE



# Conversions



**3 SECONDS**  
**DROP** in  
PERFORMANCE





**Wikipedia**   
@Wikipedia



 Follow

Cut page load by 100ms and you save  
Wikipedia readers 617 years of wait annually.  
Apply as Web Performance Engineer:  
[boards.greenhouse.io/wikimedia/jobs ...](https://boards.greenhouse.io/wikimedia/jobs)

RETWEETS

246

LIKES

149



11:07 PM - 6 Apr 2015



# Web Page Performance

[gizmodo.com/](http://gizmodo.com/)

From: Dulles, VA - Chrome  
5/8/2016, 2:06:20 AM



[Export HTTP Archive \(.har\)](#)

Load Time	First Contentful Paint	Time to Interactive	User Time	Visually Complete	DOM Ready	Page Load Time	Document Complete			Fully Loaded		
							Time	Requests	Bytes In	Time	Requests	Bytes In
19.913s	1.100s	1.100s	10.373s	19.000s	1.100s	19.913s	89	8,784 KB	22.213s	115	9,310 KB	

<http://goo.gl/JnXZ2x>



# 33.3 million uniques

## Web Page Performance

[gizmodo.com/](http://gizmodo.com/)

From: Dulles, VA - Chrome  
5/8/2016, 2:06:20 AM



[Export HTTP Archive \(.har\)](#)

Load Time	First Contentful Paint	Time to Interactive	User Time	Visually Complete	Page Start	Page End	Document Complete			Fully Loaded		
							Time	Requests	Bytes In	Time	Requests	Bytes In
19.913s			10.373s	19.000s			19.913s	89	8,784 KB	22.213s	115	9,310 KB

<http://goo.gl/JnXZ2x>



## Web Page Performance

[gizmodo.com/](http://gizmodo.com/)

From: Dulles, VA - Chrome  
5/8/2016, 2:06:20 AM

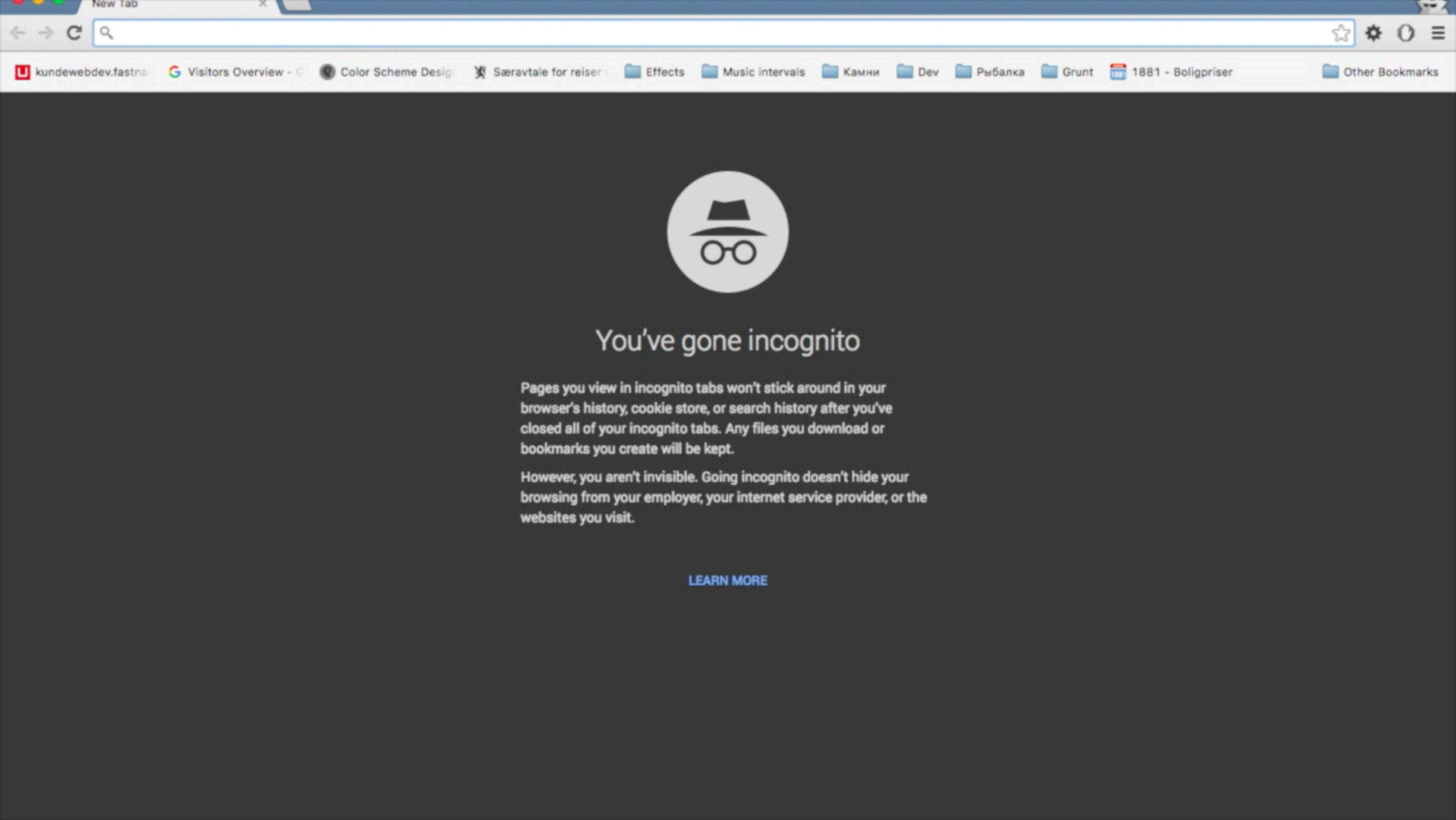


[Export HTTP Archive \(.har\)](#)

Load Time	First Contentful Paint	Time to Interactive	User Time	Visually Complete	Page Start	Page End	Document Complete			Fully Loaded		
							Time	Requests	Bytes In	Time	Requests	Bytes In
19.913s	1.100s	1.100s	10.373s	19.000s	1.100s	1.100s	19.913s	89	8,784 KB	22.213s	115	9,310 KB

<http://goo.gl/JnXZ2x>



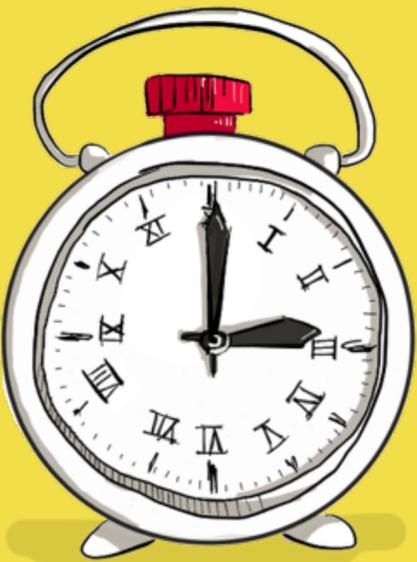


## You've gone incognito

Pages you view in incognito tabs won't stick around in your browser's history, cookie store, or search history after you've closed all of your incognito tabs. Any files you download or bookmarks you create will be kept.

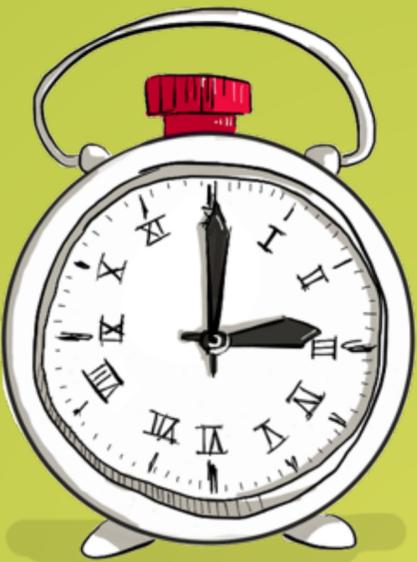
However, you aren't invisible. Going incognito doesn't hide your browsing from your employer, your internet service provider, or the websites you visit.

[LEARN MORE](#)

PERF  ORMANCE

is not

MATHEMATICS

PERF  ORMANCE

is

PERCEPTION



# Supercharged page load

Jake Archibald

@jaffathecake

[https://www.youtube.com/watch?v=d5\\_6yHixpsQ](https://www.youtube.com/watch?v=d5_6yHixpsQ)





# **WEBER-FECHNER LAW**

**JND**

(just noticeable difference)

# 20% RULE



EVENT

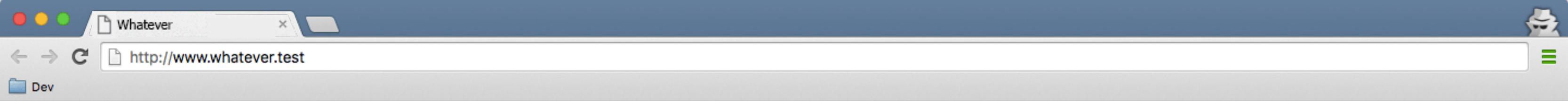
# 20% RULE



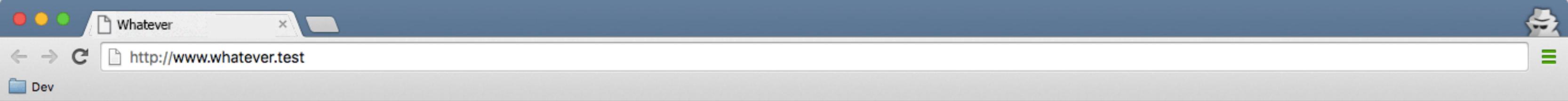
EVENT

20%

**NOTICEABLE**  
  
**MEANINGFUL**



Duis autem vel eum iriure  
dolor in hendrerit in  
vulputate velit esse molestie  
consequat, vel illum dolore  
eu feugiat nulla facilisis at  
vero eros et accumsan et  
iusto odio.



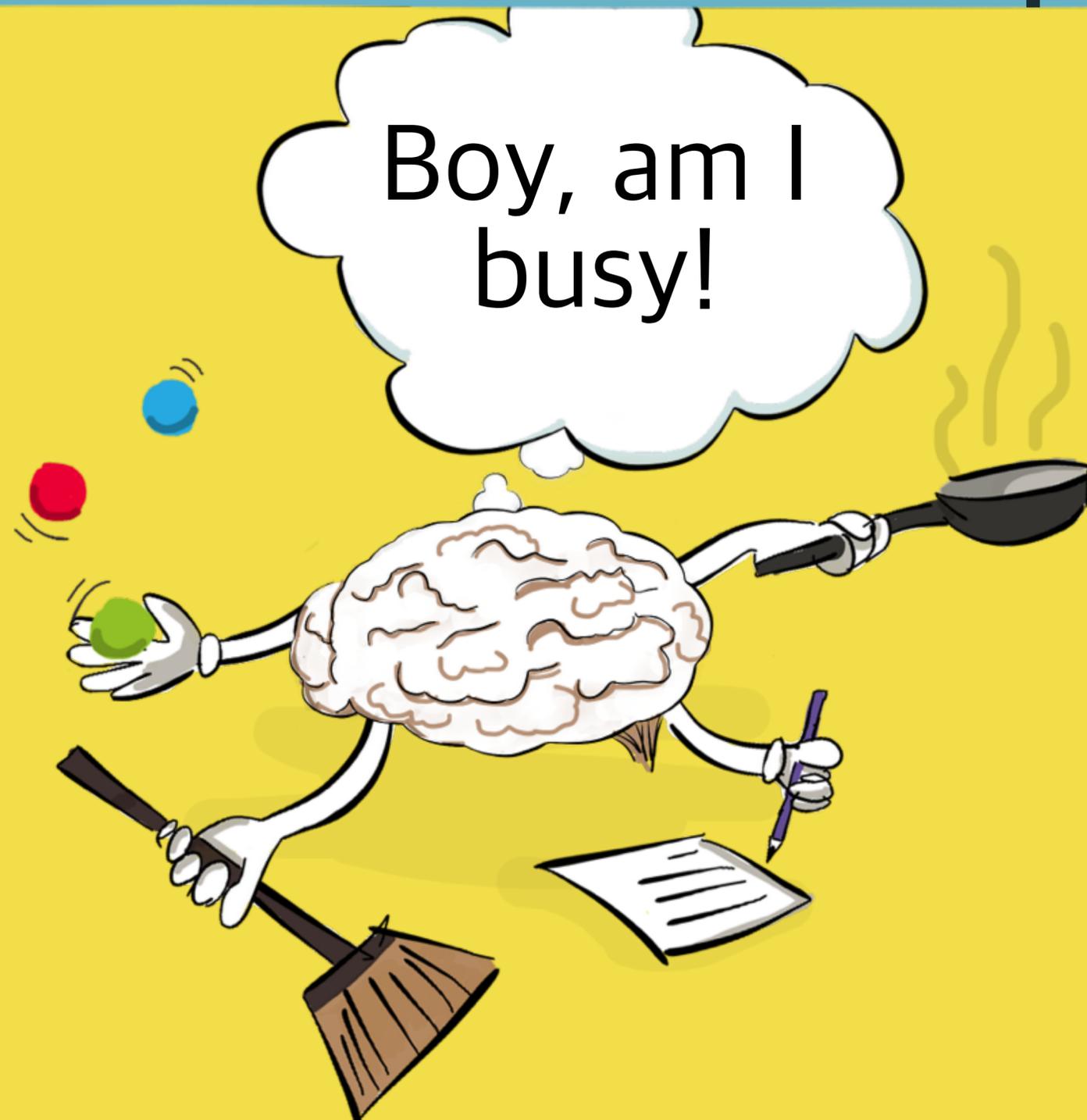
Duis autem vel eum iriure  
dolor in hendrerit in  
vulputate velit esse molestie  
consequat, vel illum dolore  
eu feugiat nulla facilisis at  
vero eros et accumsan et  
iusto odio.





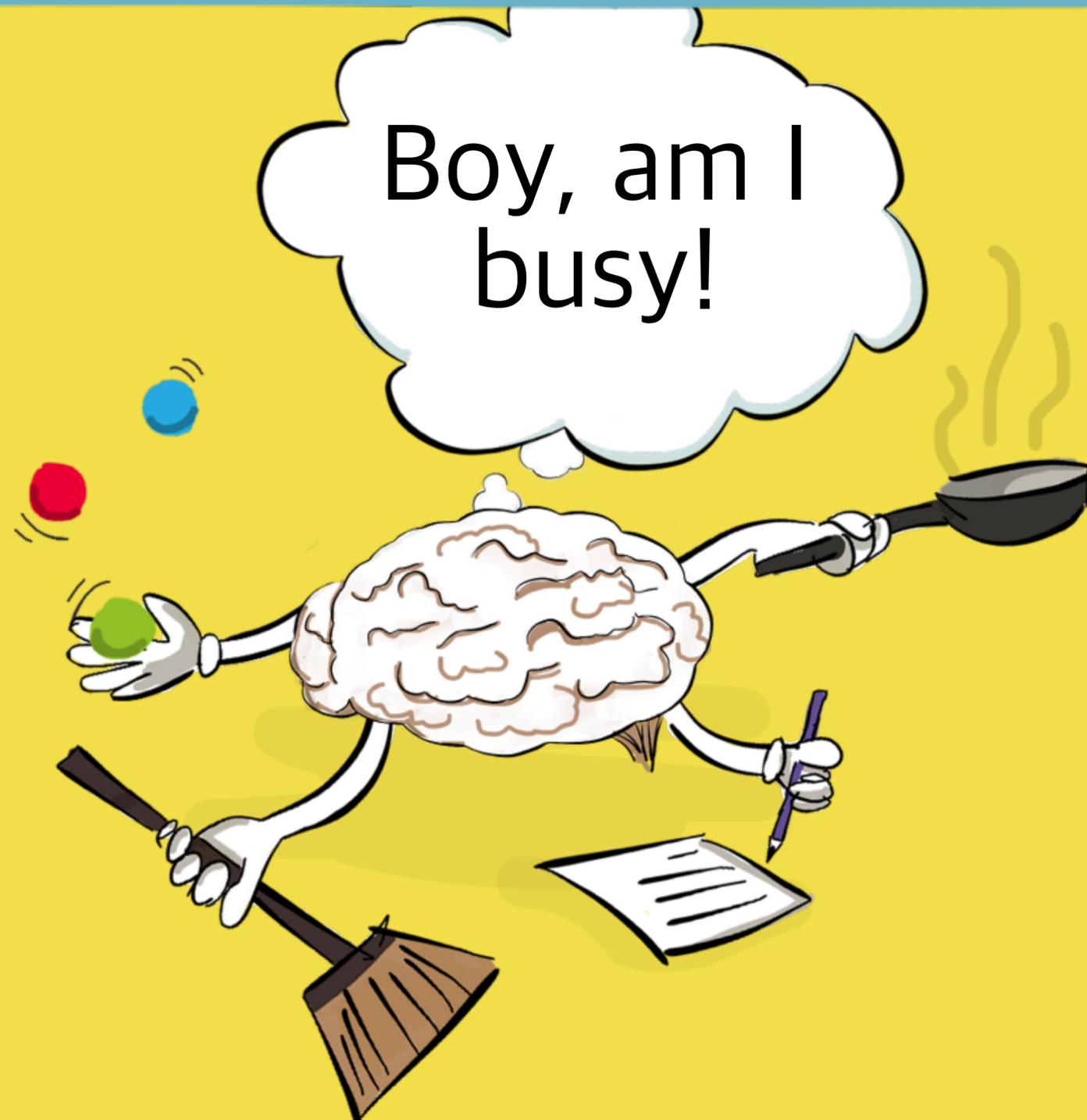
# ACTIVE

# PASSIVE



# ACTIVE

# PASSIVE



# PREEMPTIVE START

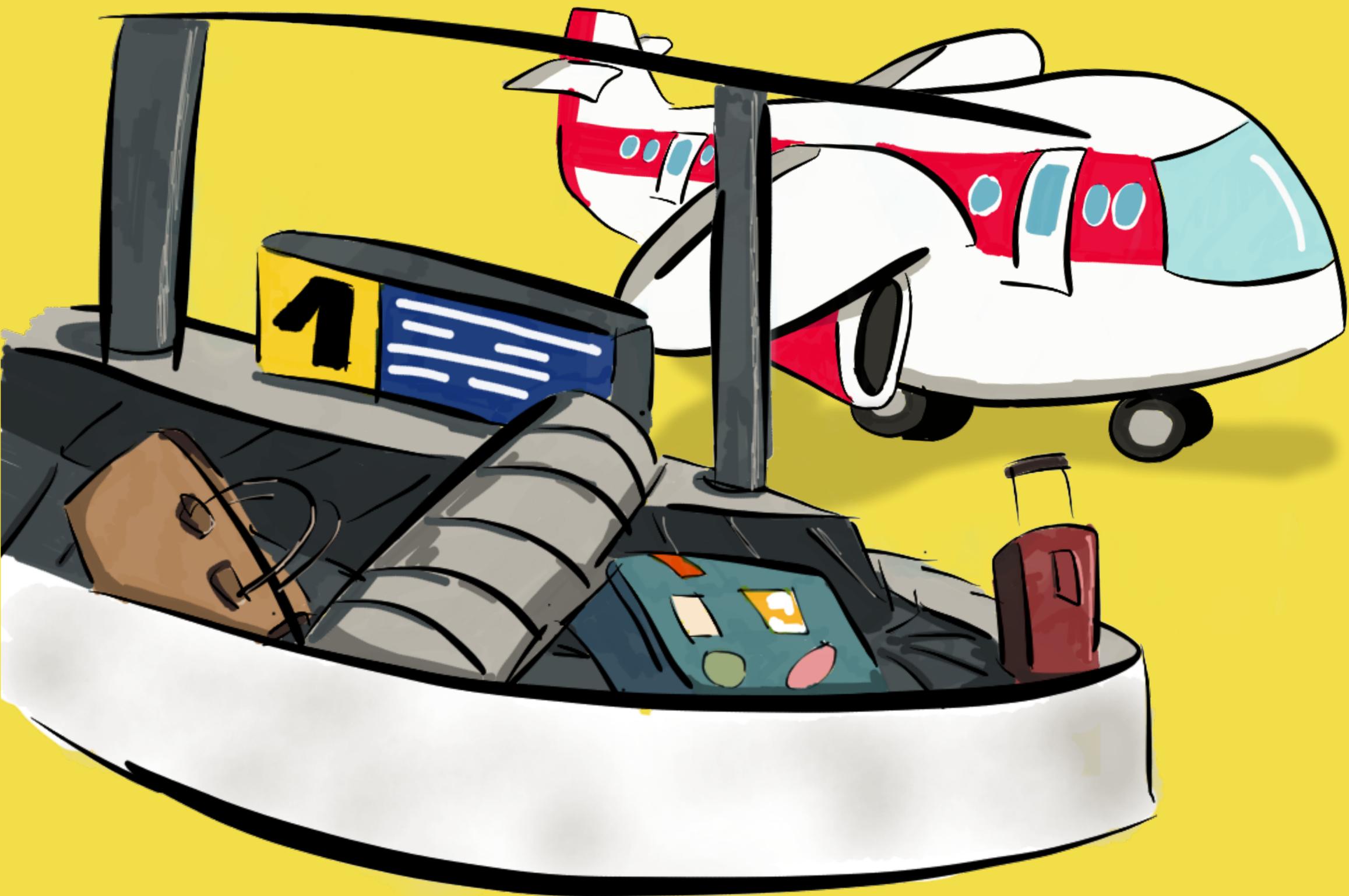
EVENT



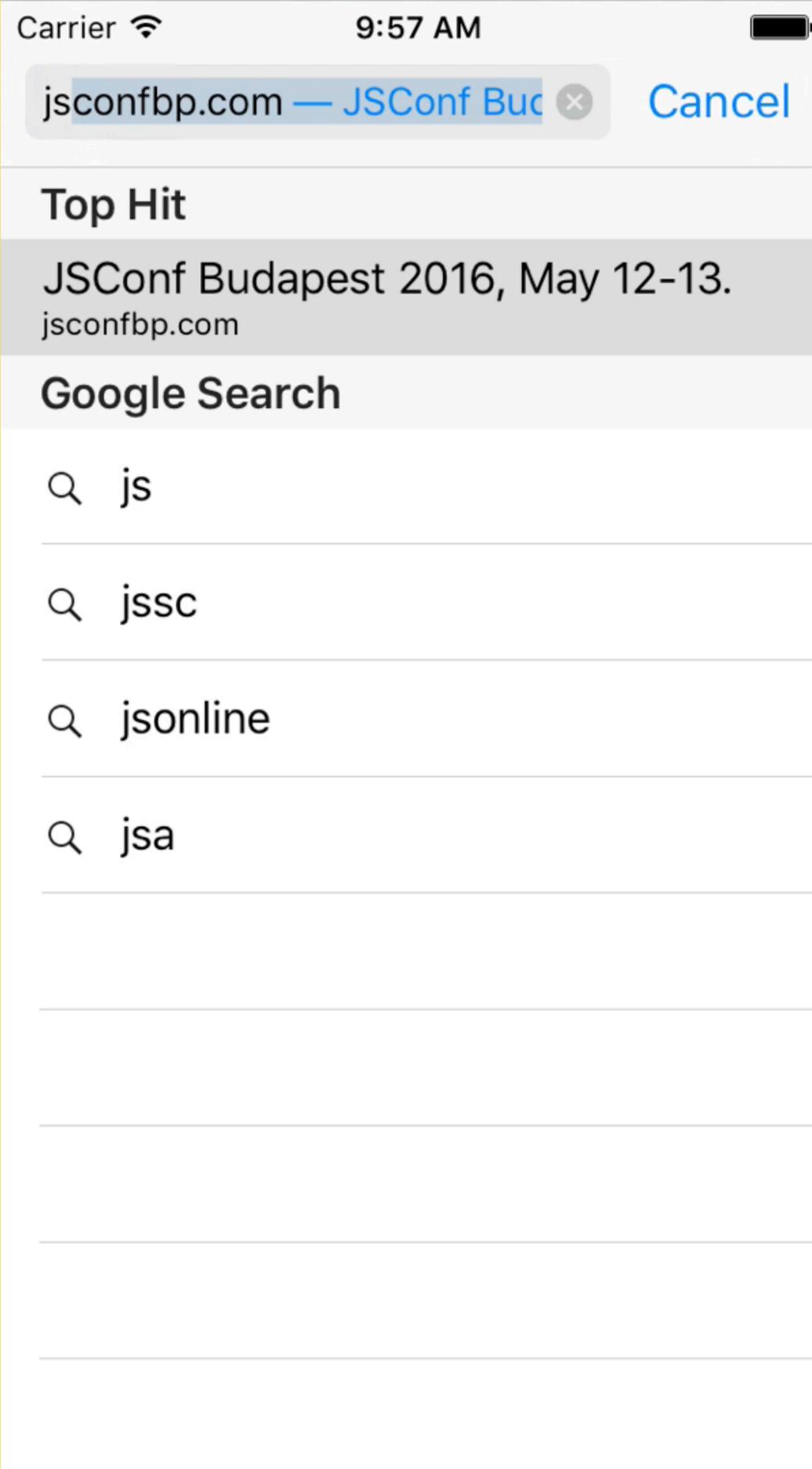
ACTIVE  
**PHASE**

EVENT









# PRELOAD TOP HITS mobile Safari

Settings / Safari / Preload Top Hits



- DOMENE
- NETTSIDE
- HOSTING
- E-POST
- SUPPORT

# DOMENE

DIN WEBSITE STARTER MED ET DOMENENAVN

Finn ditt domene her

- uniweb.no
- uniweb.se
- srhtr
- srher
- sarh
- butikkpriser.no

Hvordan velger jeg et domenenavn?

Først og fremst bør et firma registrere sitt eget merkenavn. I Norge er det .no og .com som er de mest benyttede adresseendelsene.

Forkortelser på domener vil bare fungere dersom kundene kjenner til dem. Kjenner ikke kundene til forkortelsene kan det medføre





DOMENE

NETTSIDE

HOSTING

E-POST

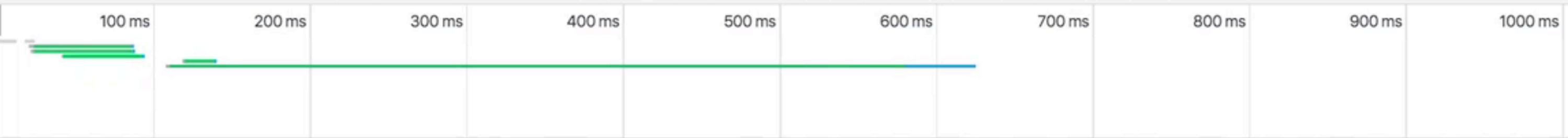
SUPPORT

# DIN WEBSITE STARTER MED ET DOMENENAVN

Finn ditt domene her



Help



Name	Method	Status	Domain	Type	Initiator	Size	Time	Timeline - Start Time
search.js?bust=?v20160511080504	GET	200	www.uniweb.no	script	require.js?v2016...	(from cache)	7 ms	

# EARLY COMPLETION



EVENT

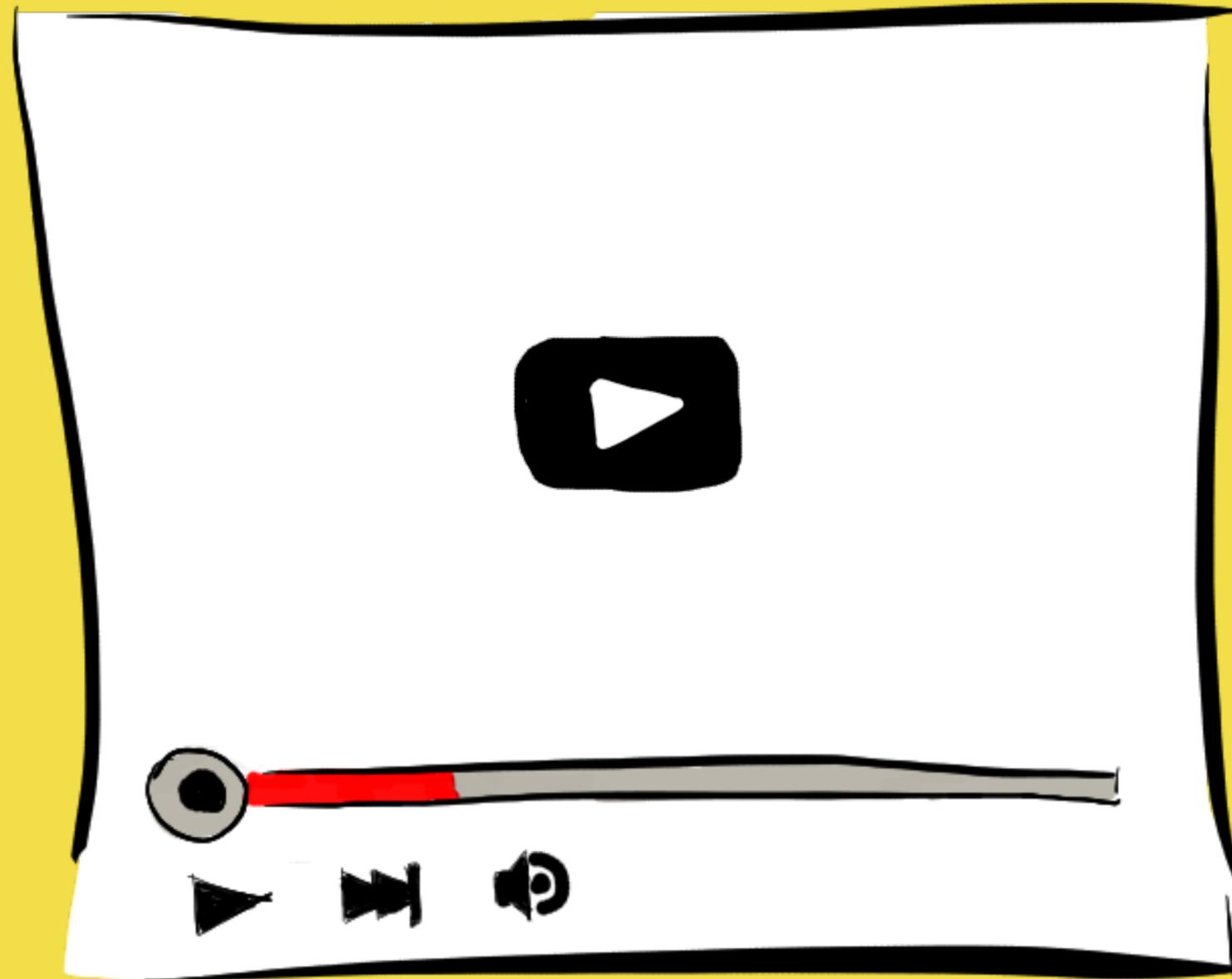


EVENT

ACTIVE  
**PHASE**

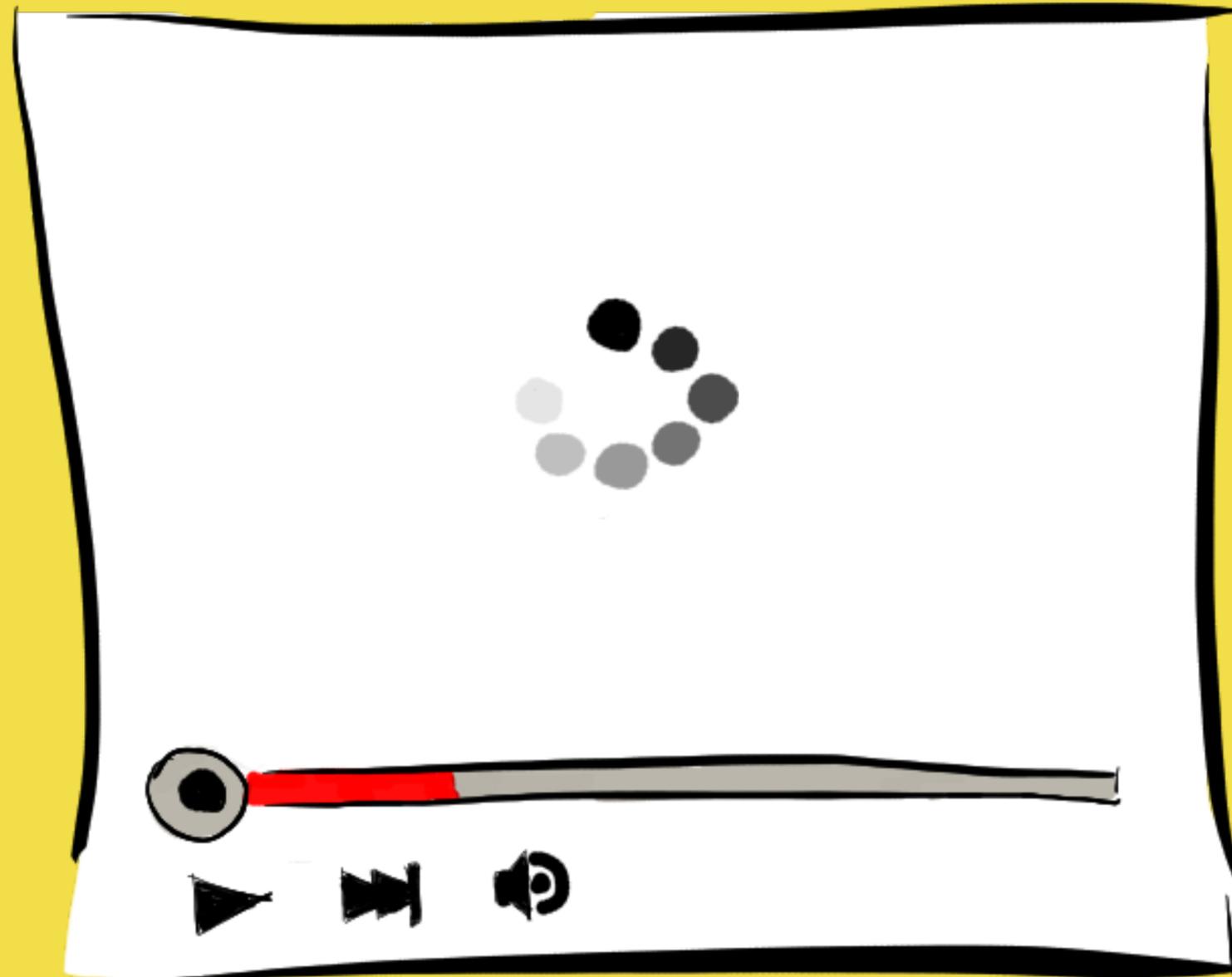
You Tube

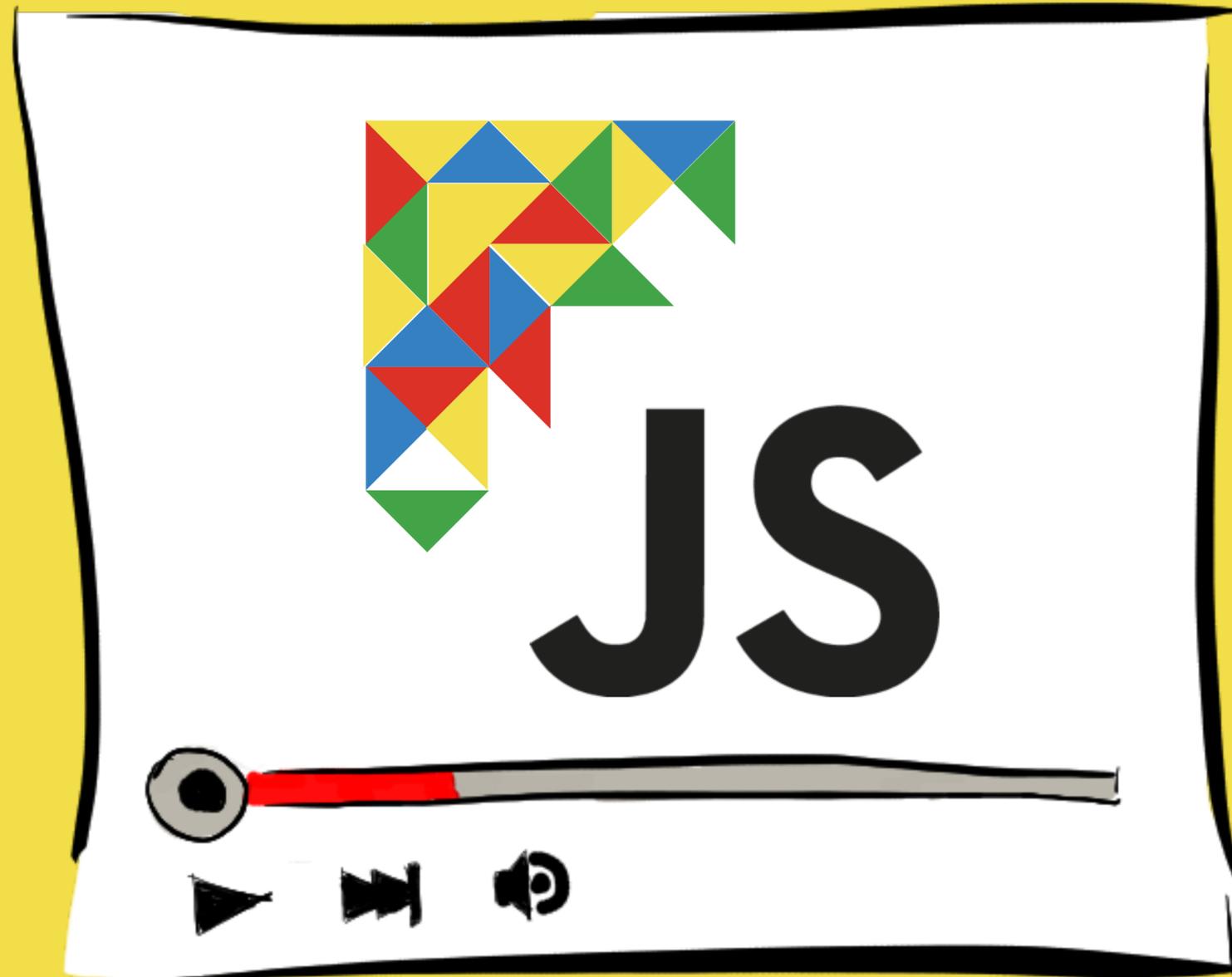
**PASSIVE  
PHASE**





**PASSIVE  
PHASE**





**ACTIVE  
PHASE**



Want Gizmodo's email newsletter? ×

[Subscribe](#)

### You may also like



## WhatsApp Finally Has a Desktop App

Jamie Condliffe · 43 minutes ago



The future might be mobile, but for now plenty of us still use a computer. WhatsApp has finally conceded that point, releasing its very first desktop app.



6

Shared from Sploid

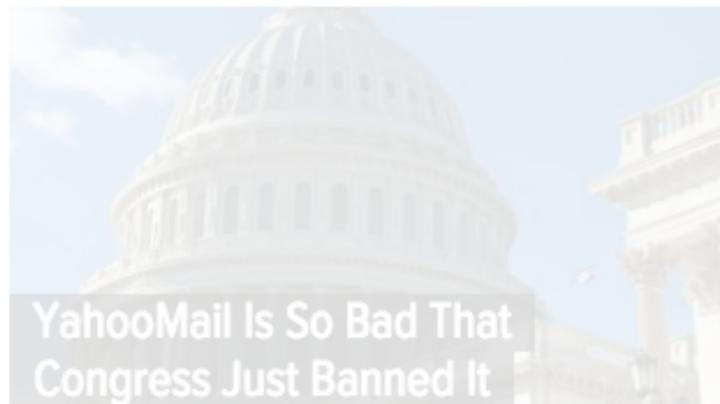
## Watch a Carnivorous Plant Wrap Itself Around a Bug and Entomb It

[goo.gl/JnXZ2x](http://goo.gl/JnXZ2x)

Casey Chan · Yesterday 10:00pm



3



0.0s

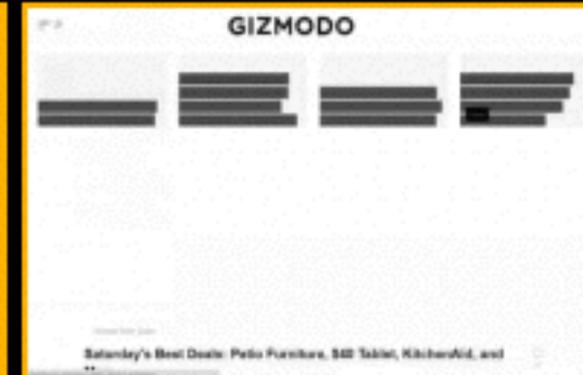
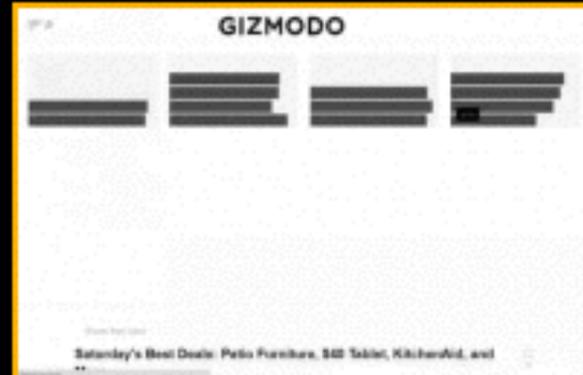
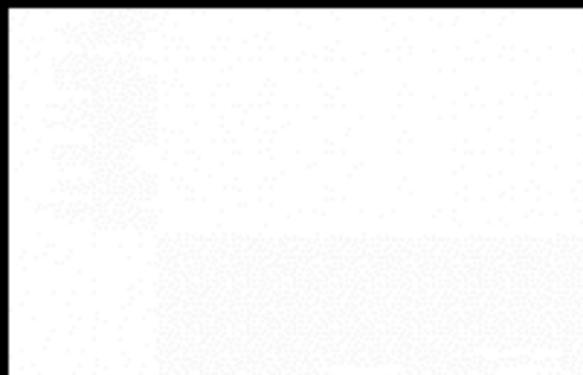
0.5s

1.0s

1.5s

2.0s

Gizmodo



its very first desktop app.

Shared from Splid

## Watch a Carnivorous Plant Wrap Itself Around a Bug and Entomb It

[goo.gl/JnXZ2x](http://goo.gl/JnXZ2x)

Casey Chan - Yesterday 10:00pm





0.0s

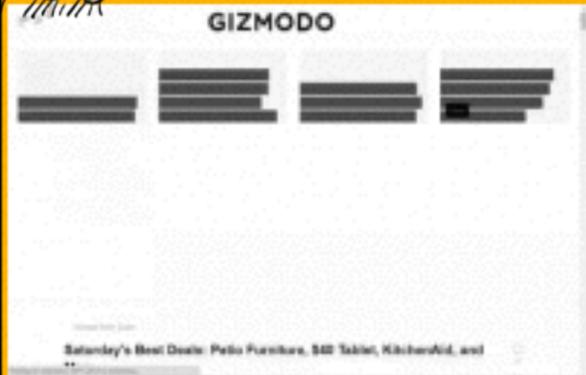
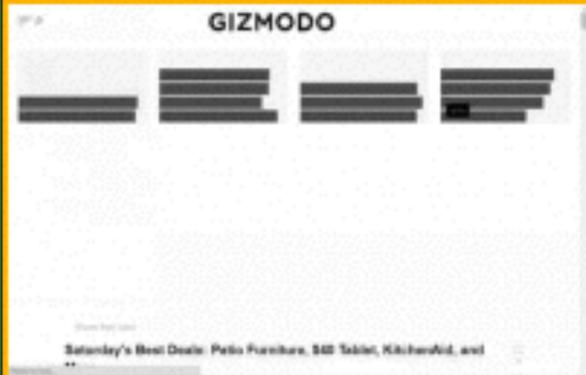
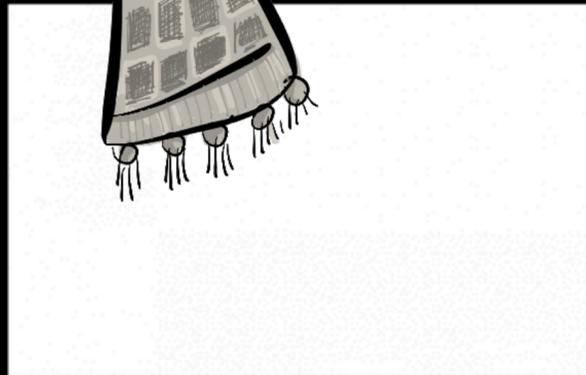
0.5s

1.0s

1.5s

2.0s

Gizmodo



## PASSIVE PHASE

## ACTIVE PHASE

[goo.gl/JnXZ2x](http://goo.gl/JnXZ2x)

# compress



# async



# workers





“

The **perception of performance**  
is just as **effective** as actual  
performance in many cases

”





# THANK YOU

DENYS MISHUNOV · Digital Garden AS · @mishunov