

HTML 5 – Media & Geolocation

Dagens agenda

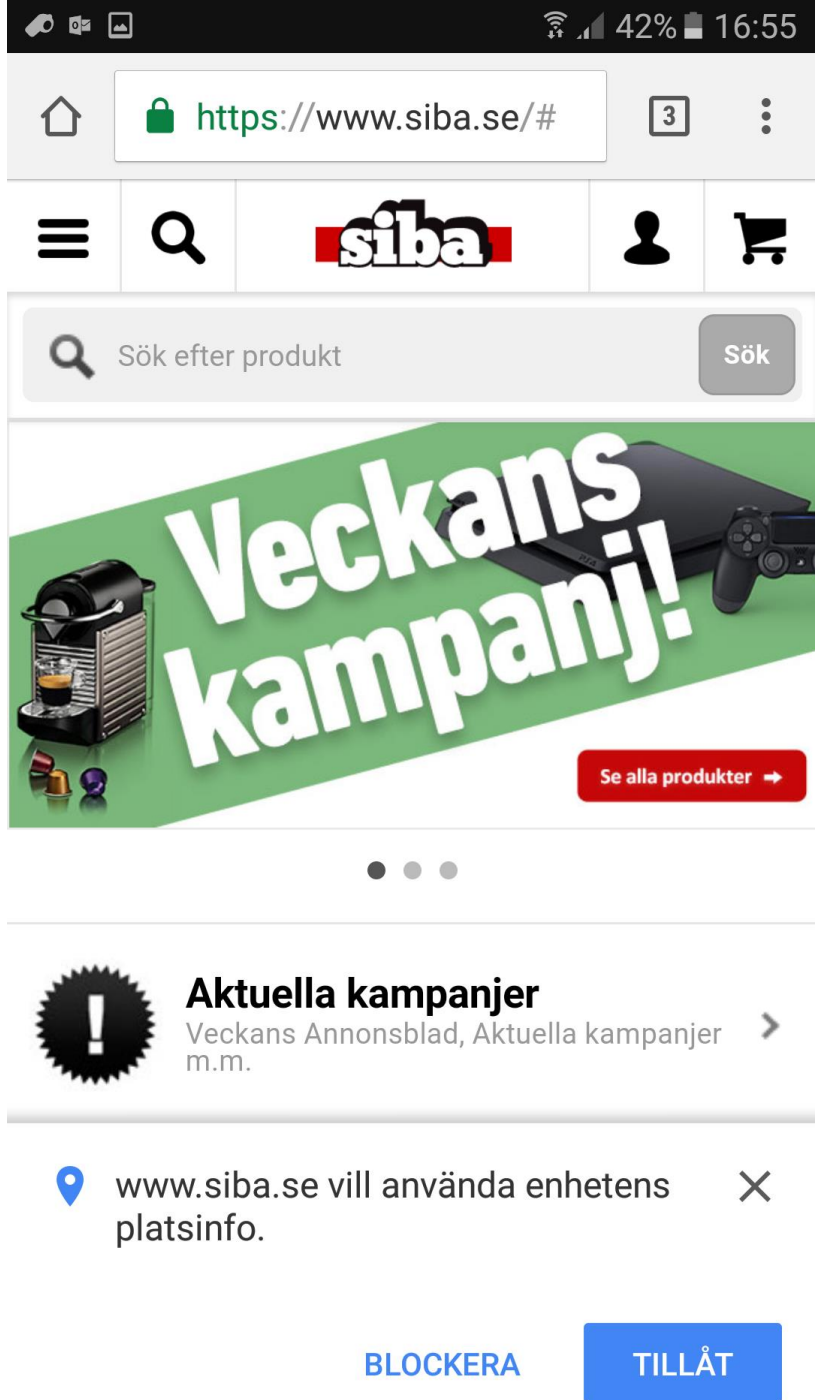
- **Geolocation i webbapplikationer**
 - Hur vi kan ta reda på användarens plats
- **Media i webbapplikationer**
 - Hur man hanterar media i webbapplikationer
 - Exempel på hur man kan *styra* webbplatser kring val
- Om inlämningsuppgift 2
- Om projektet



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



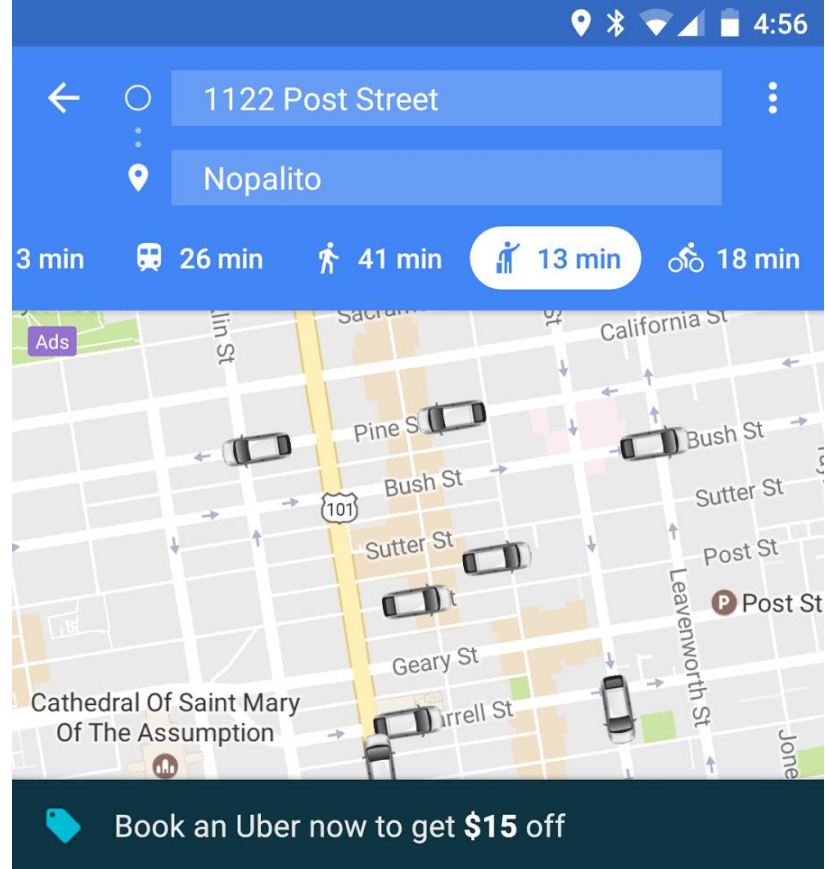
Sök efter butik

Falun

Regementet

● i lager





\$5-\$9
POOL



\$8-\$10
uberX



\$11-\$14
uberXL



\$17-\$21
SELECT



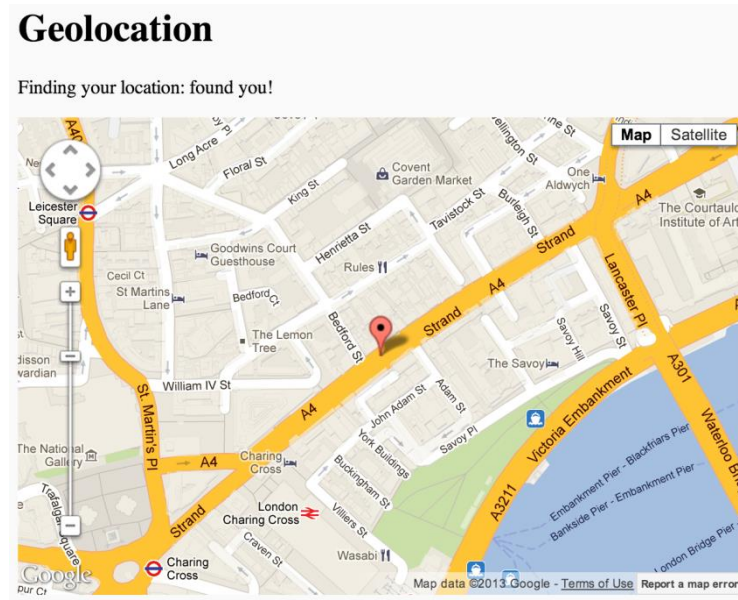
\$22-\$27
BLACK

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 webbläsare kräver https
- Får svar i form av koordinater m.m.



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

<https://goo.gl/CXD9ee>

Demo





HTML



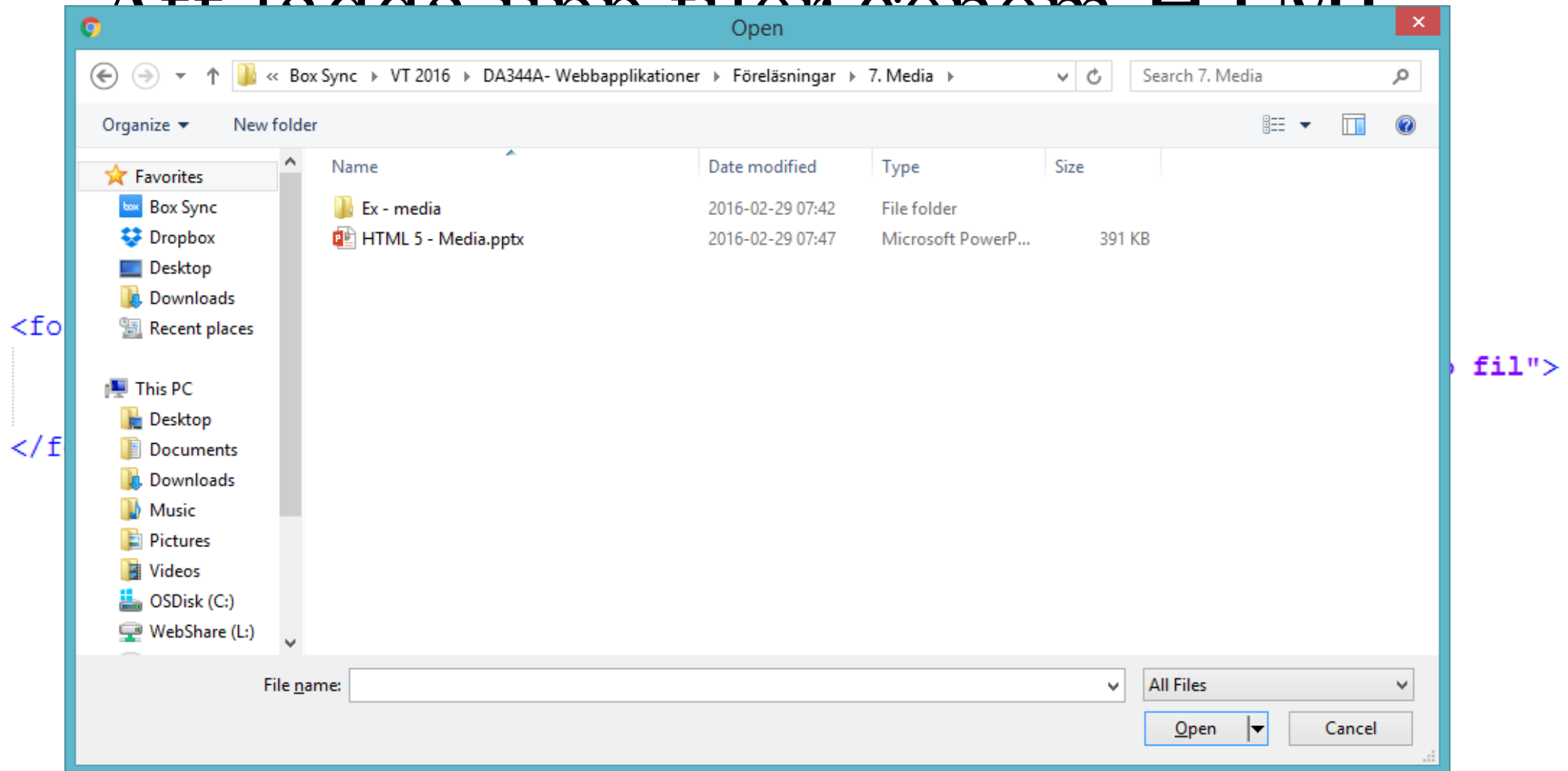
V/S





Filuppladdning

Att ladda upp filer genom UTM



Attributet: enctype

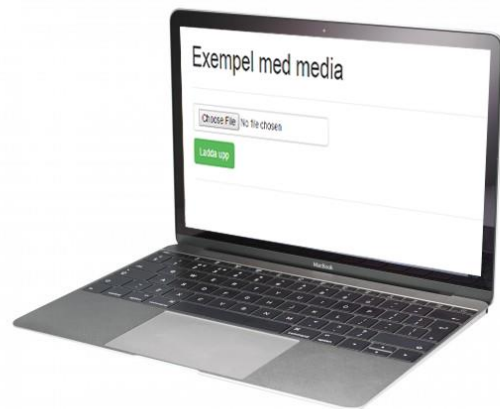
Syntax

```
<form enctype="value">
```

Attribute Values

Value	Description
application/x-www-form-urlencoded	Default. All characters are encoded before sent (spaces are converted to "+" symbols, and special characters are converted to ASCII HEX values)
multipart/form-data	No characters are encoded. This value is required when you are using forms that have a file upload control
text/plain	Spaces are converted to "+" symbols, but no special characters are encoded

Att ladda upp filer



Skickar filen till upload.php



Servern returnerar ett svar



Klient - HTML

```
<h1>Fil uppladdad!</h1>
<hr>
<form action="server.php" method="post" enctype="multipart/form-data">
    <input type="file" class="btn btn-default" name="fileToUpload" value="Ladda upp fil">
    <input type="submit" class="btn btn-success" value="Ladda upp" name="submit">
</form>
```

Server – PHP (server.php)

```
<?php
if(isset($_FILES['fileToUpload']['tmp_name'])) {
    if(move_uploaded_file($_FILES['fileToUpload']['tmp_name'], "uppladdat/".$_FILES['fileToUpload']['name'])) {
        echo "<h1>Fil uppladdad!</h1>";
    } else {
        echo "<h1>Kunde inte ladda upp fil!</h1>";
    }
}
?>
```

Test av filuppladdning

<http://localhost:8000/>

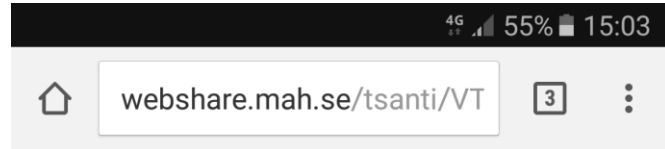


Men användaren kunde ju
välja vilken filtyp som helst?

Kom ihåg!

- Olika typer av input!

<https://goo.gl/PGf24I>

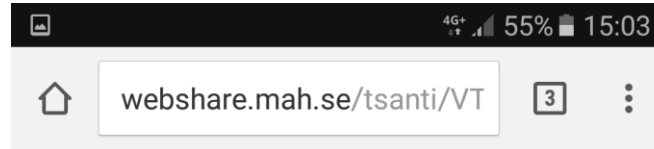


Exempelformulär

Ange text

```
<input type="text">
```

Ange siffror



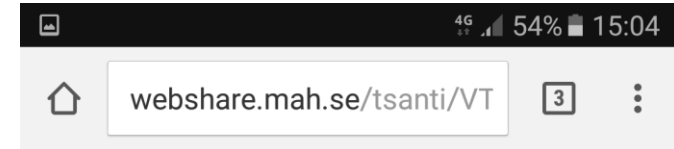
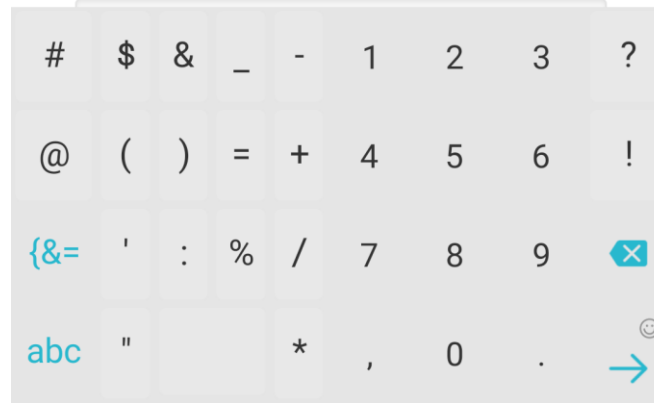
Ange siffror

```
<input type="number">
```

Ange epost

```
<input type="email">
```

Ange url



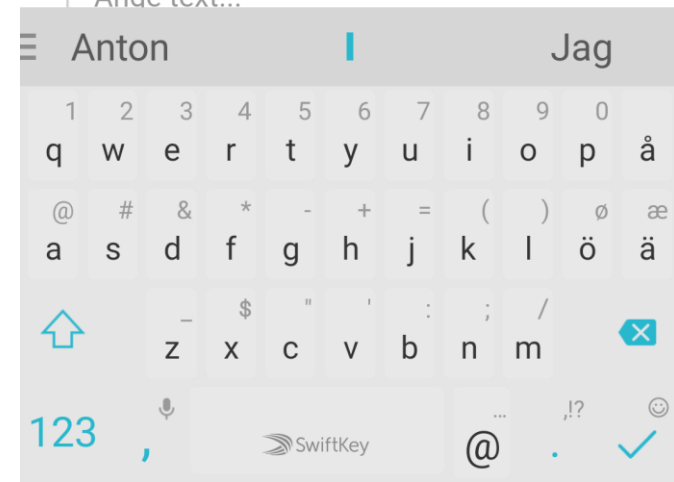
Ange text...

```
<input type="number">
```

Ange epost

```
<input type="email">
```

Ange url



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

- 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.



Att visa upp bilder, video, ljud



Foto

Att visa upp bilder

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

<hr>

<hr>

<hr>
```

Bilder



Video

Att visa upp video

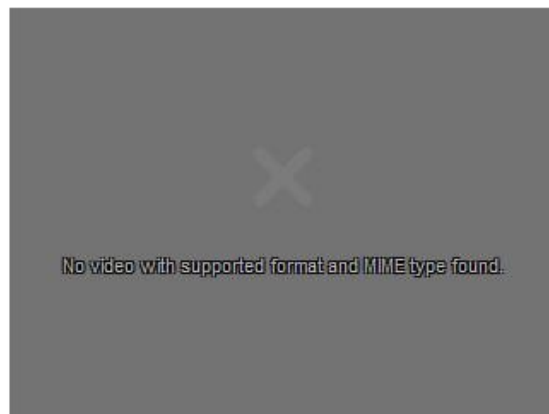
```
<video width="320" height="240" controls>  
  <source src="movie.mp4" type="video/mp4">  
  <source src="movie.ogv" type="video/ogg">  
  Your browser does not support the video tag.  
</video>
```

Olika video-widgets i olika webbläsare

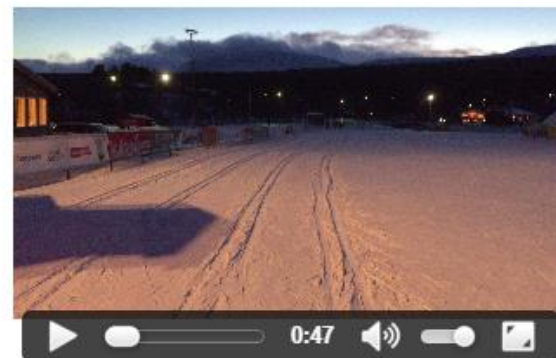
Video



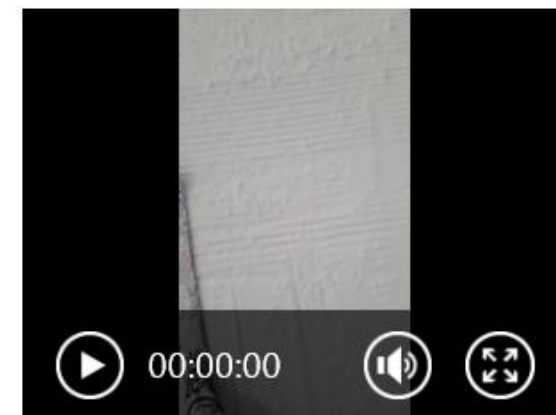
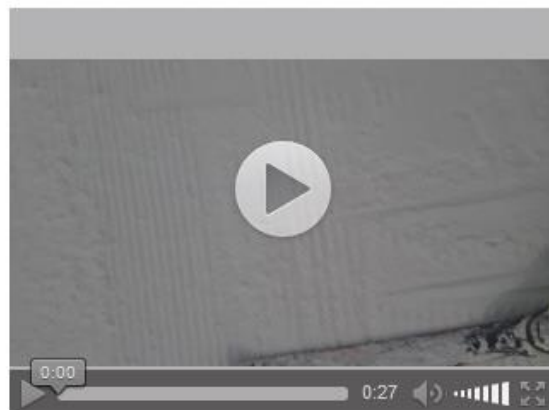
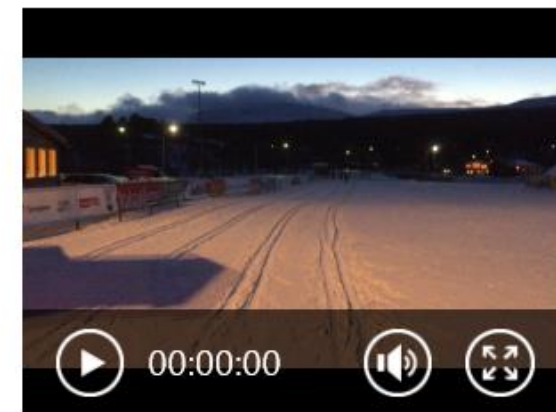
Video



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>	<i>URL</i>	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>	<i>URL</i>	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

https://www.w3schools.com/html/html5_audio.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

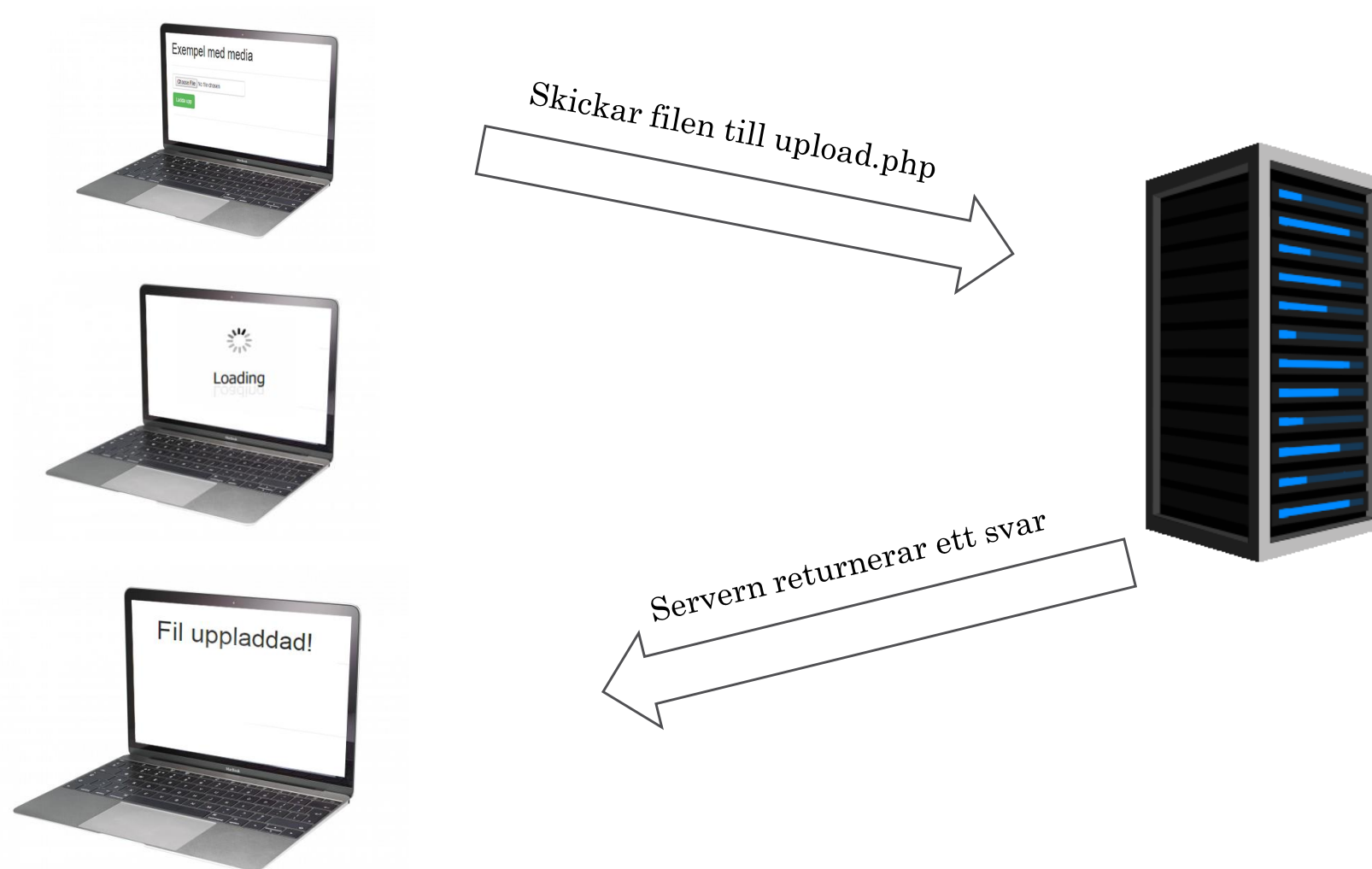
https://www.w3schools.com/tags/ref_av_dom.asp

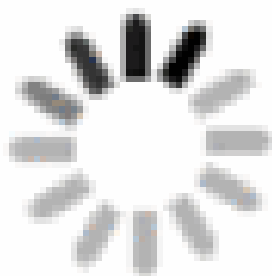
Demo av ljud, bild, video

Ajaxuppladdning av filer

... och om begränsningar...

Att ladda upp filer





Loading

<http://jquery.malsup.com/form/>

Plugin som underlättar att skicka filer genom Ajax

<http://tibbelit.se/mah/da117a/file-upload/api.html>

Frågor?

Del 2 - Projekt

Tre val

1. Göra en mobil-/tabletanpassad/desktop webbplats av en befintlig (ej anpassad) webbplats
 - Fokus på användbarhet/gränssnitt för olika enheter
2. Bygga en egen applikation mot *minst ett API*
 - Bygga en applikation som ser mervärde/förenkling av datakälla
3. Bygga en egen applikation med datavisualisering (d3.js)
 - Bygga en applikation med fokus på datavisualisering för data

Projektet ska godkännas av
mig/Aleksander

Presentation av projekt: 21/23 mars

Nästa laboration