

Media, Geolocation & utvecklingsmetoder

2018-02-20

Dagens föreläsning

- 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 av filer
- Utvecklingsmetodik
 - Pakethanterare



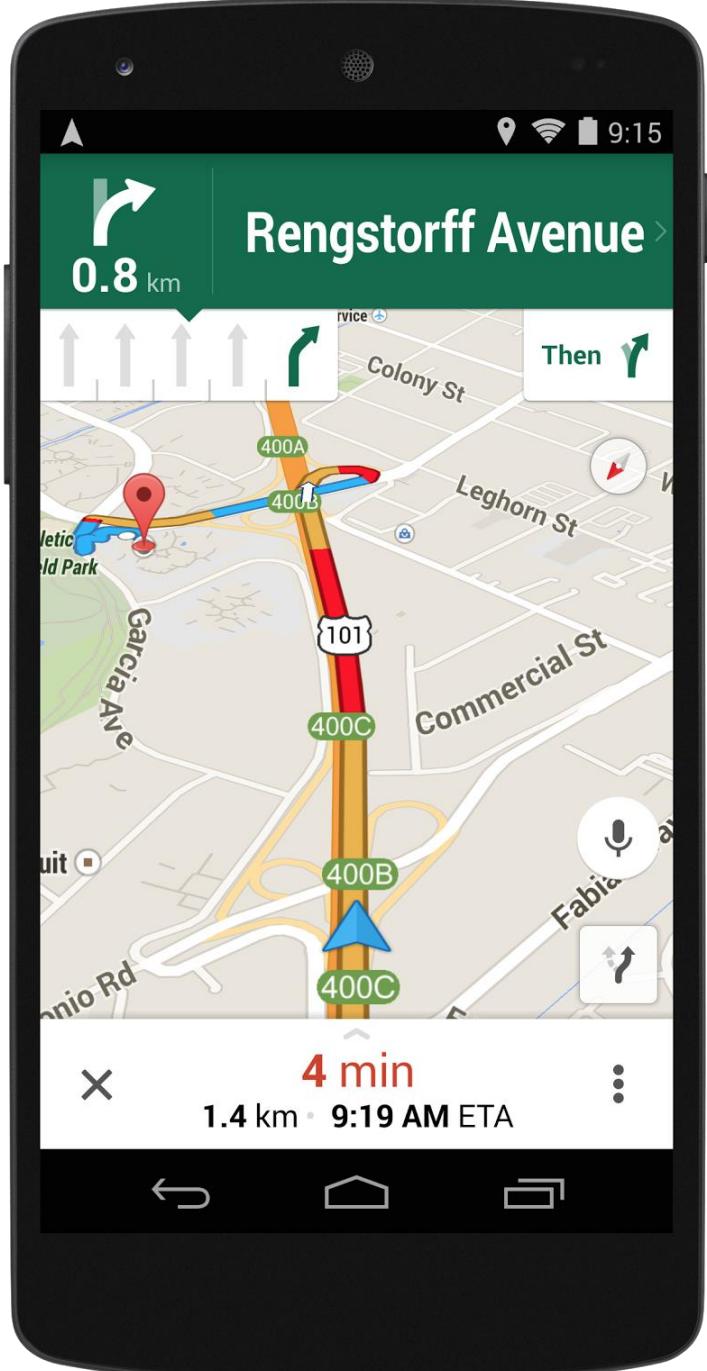
Geolocation

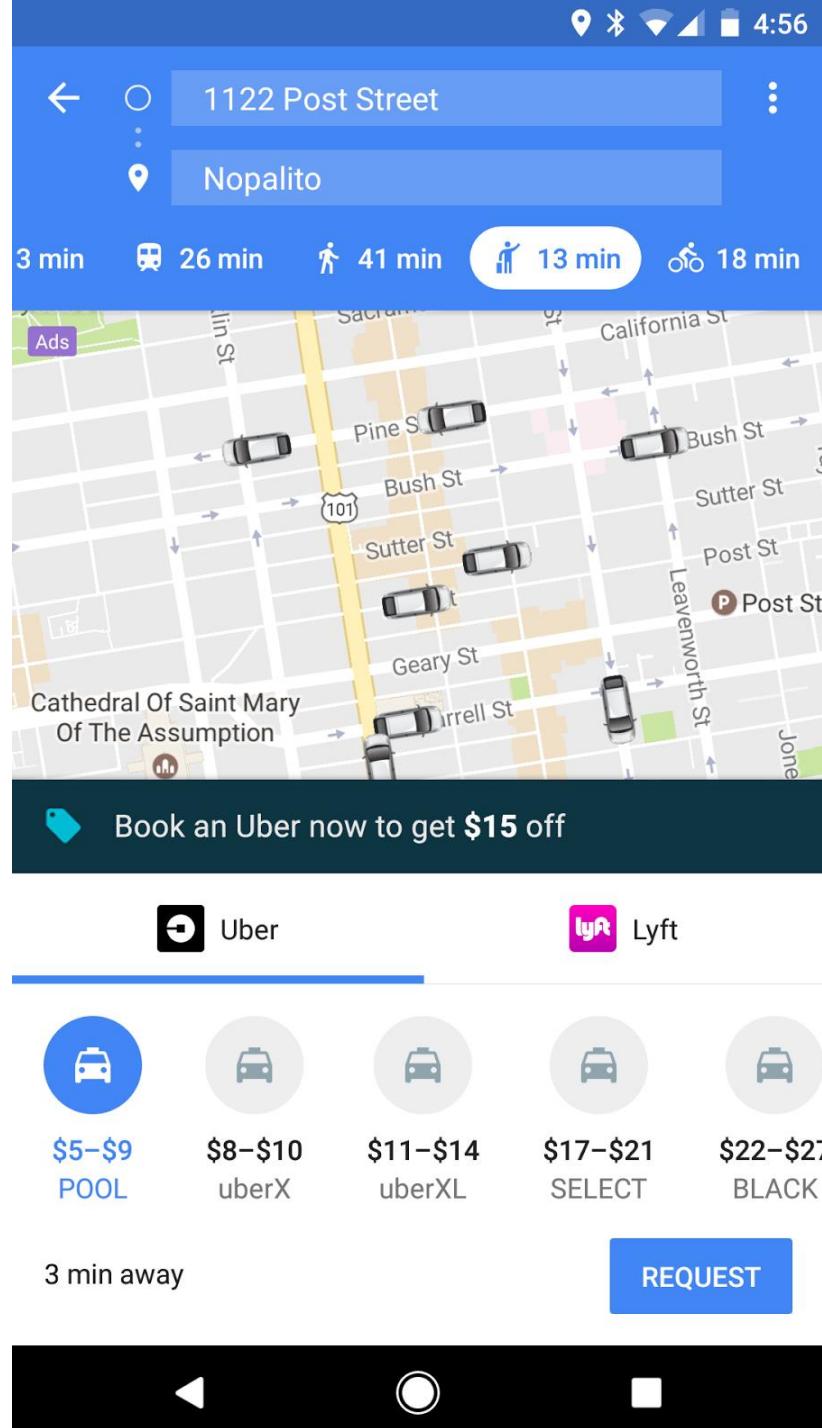


Att skräddarsy tjänster

Vilka applikationer använder geolocation?







42% 16:55

https://www.siba.se/#

3 :

≡ ⚡ siba ⚡

Sök efter produkt Sök

Veckans kampanj!

Nespresso coffee machine and PlayStation console.

Se alla produkter ➔

Aktuella kampanjer

Veckans Annonsblad, Aktuella kampanjer m.m.

www.siba.se vill använda enhetens platsinfo.

BLOCKERA TILLÅT

41% 16:57

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

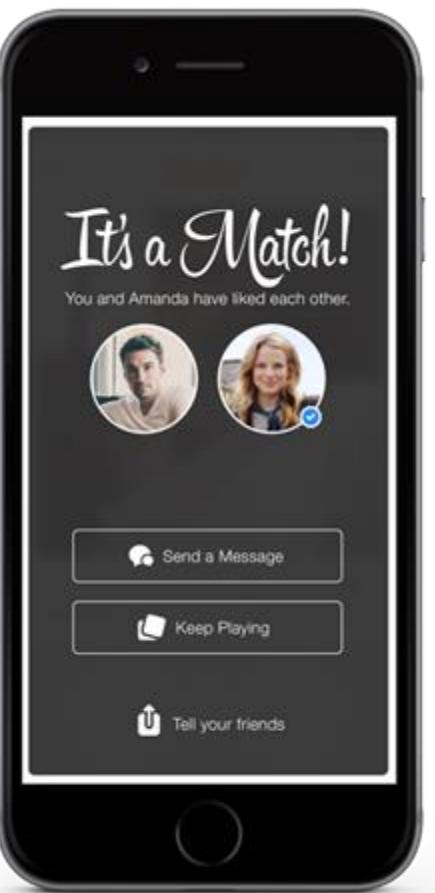
Boka och Hämta i butik
Se lagerstatus och reservera varan i 24h - Gratis

Alla butiker

Sök efter butik

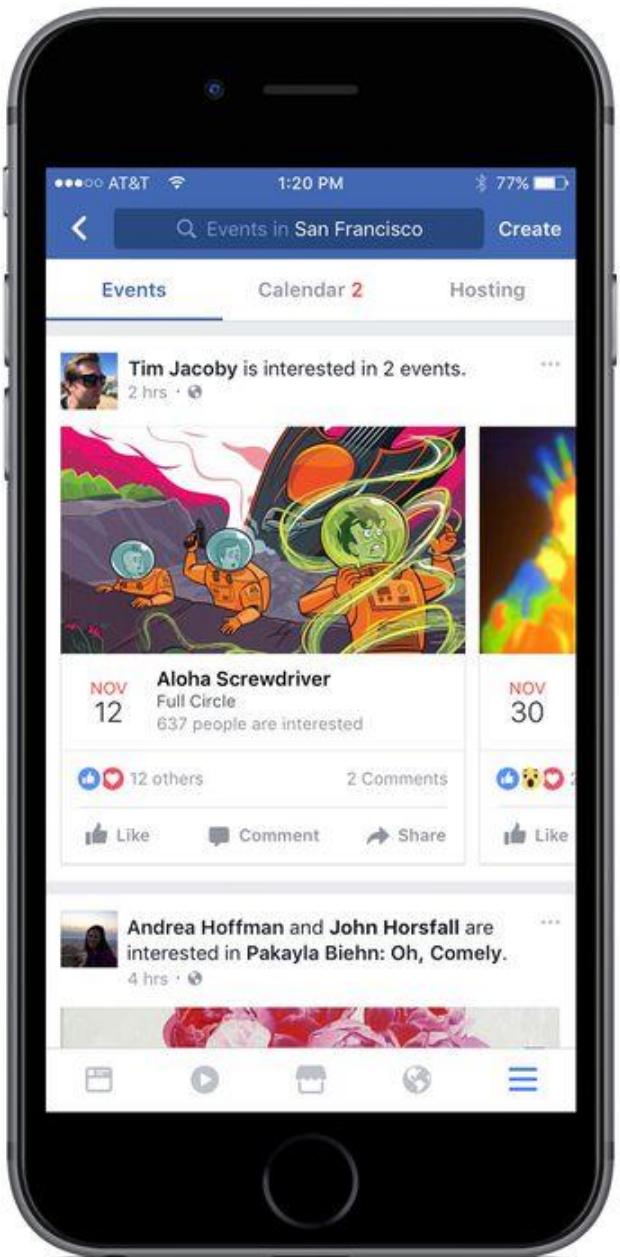
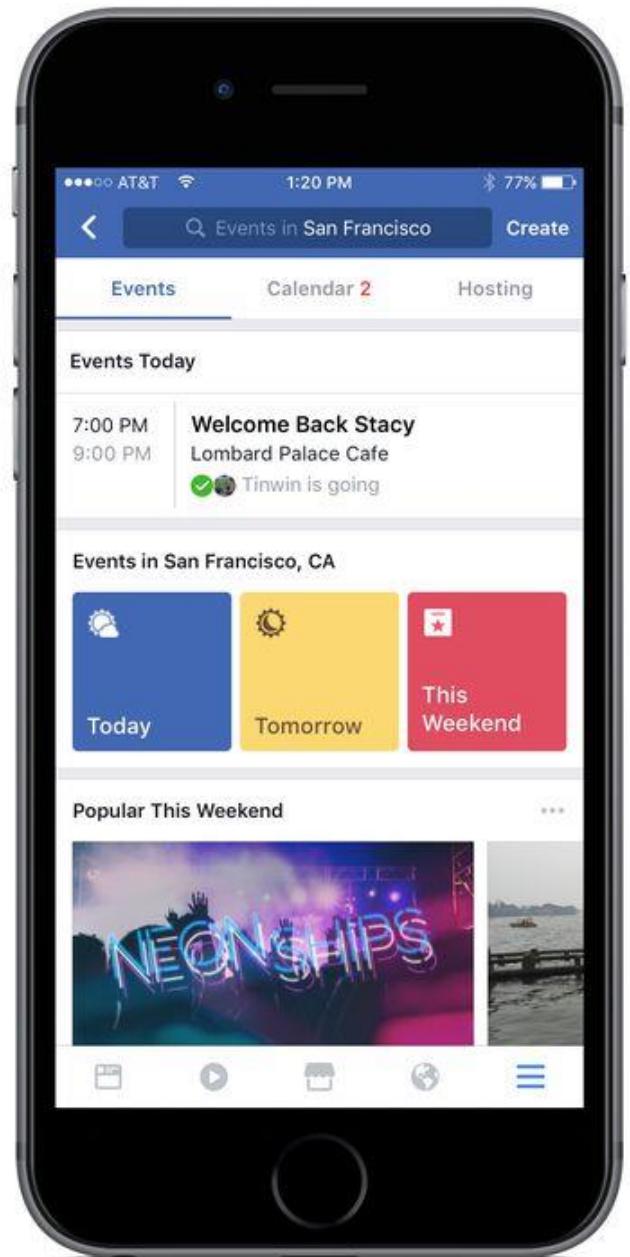
Falun
Regementet

i lager



runkeeper







instagram

...

4,141
posts215M
followers198
following

Following



Instagram

Discovering — and telling — stories from around the world.

Curated by Instagram's community team.

blog.instagram.com/Followed by pagesandplaces, watchthatbook, literaryrage +
146 more



See the World

Norway

See Snaps of events, breaking news and more from around the world.

Next

Find Your Friends

You can also choose to share your location.

Who can see my location?

Only Me (Ghost Mode)

My Friends

This includes friends you add in the future

Select Friends ...

Next

Add to Our Story

See something amazing? Add a Snap to Our Story and it could appear on the Map!

Send To ...

STORIES

My Story

Our Story

BEST FRIENDS

Benjamin Walsh

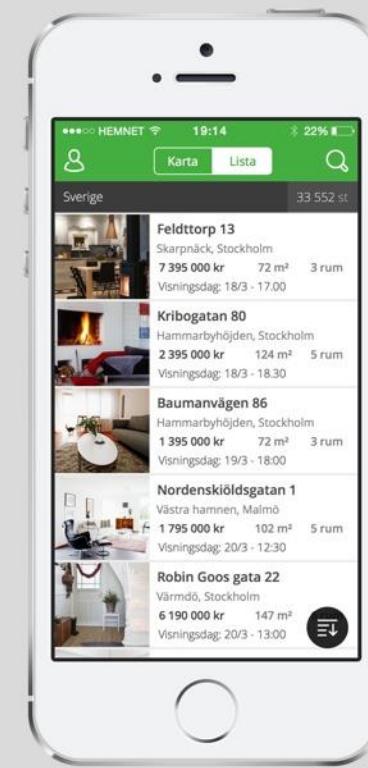
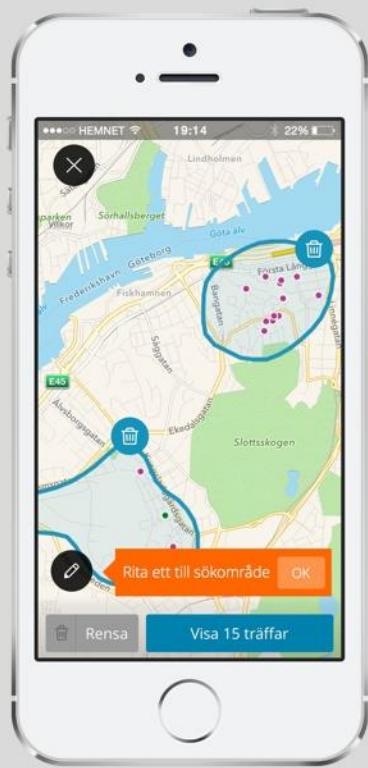
Olivia James

Zach Stephens

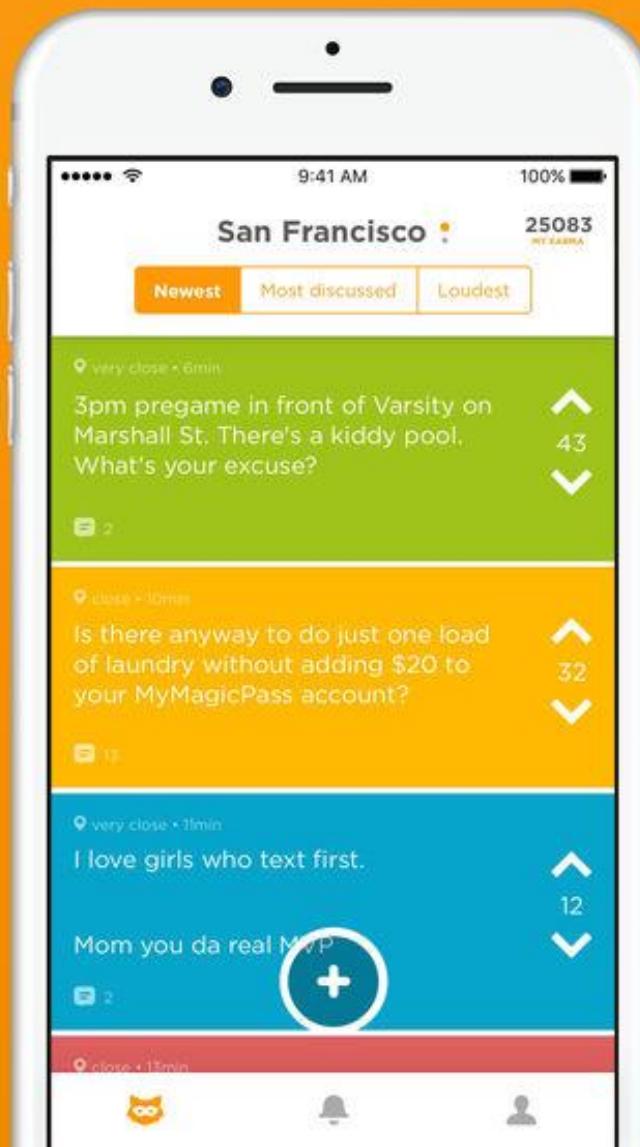
Brian Jackson

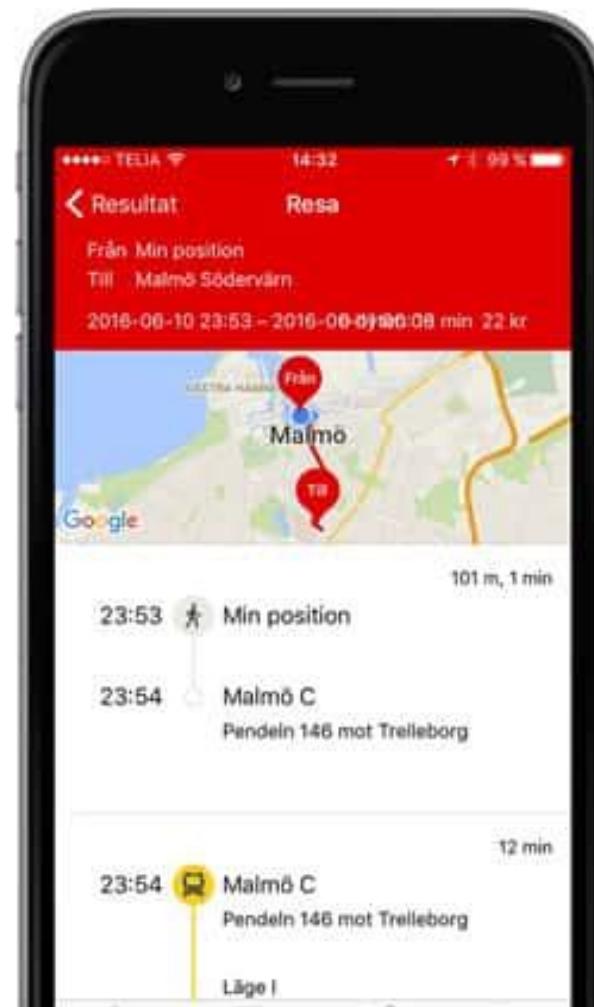
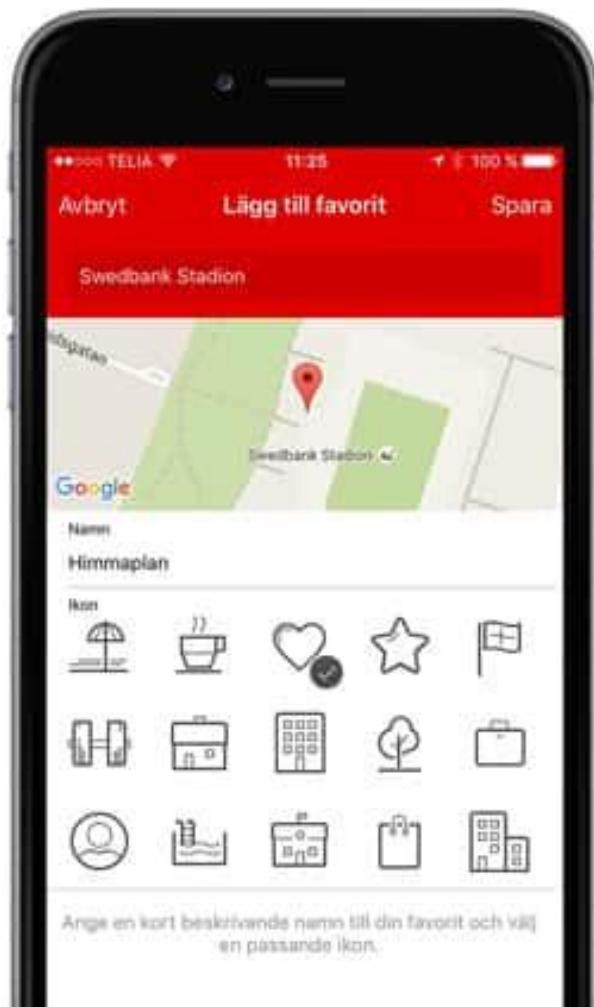
Jessica Alans

Finish



The buzz on your campus

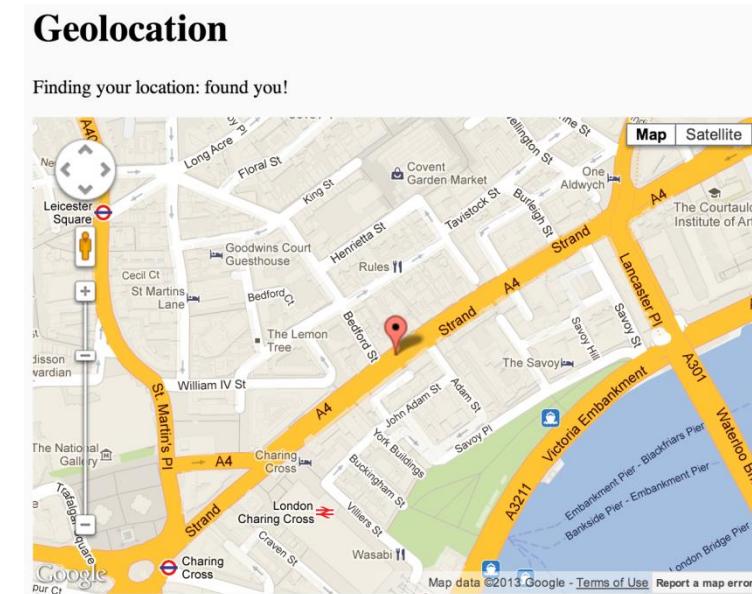




**Ju mer man tänker på positionering, ju fler
appar upptäcker man använder det...**

Geolocation i webbutveckling

- JavaScript gör det möjligt för oss att ta reda på enhetens position.
- Det krävs att användaren godkänner att vi får ta del av denna position
 - Vissa webbläsare kräver [https](https://)
- Får svar i form av koordinatorer m.m.
 - Longitud
 - Latitud
 - Etc.



Funktion - `getCurrentPosition`

- Den vanligaste funktionen som används är:
 - `getCurrentPosition`
- Den kallas genom JavaScript-objektet " navigation"
 - `navigator.geolocation.getCurrentPosition();`
- Funktionen tar 3st parametrar
 - Funktion för success
 - Funktion för fail
 - Egenskaper att skicka med
- `navigator.geolocation.getCurrentPosition(
 onSuccess,
 onFailure,
 {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
coords.latitude	The latitude as a decimal number
coords.longitude	The longitude as a decimal number
coords.accuracy	The accuracy of position
coords.altitude	The altitude in meters above the mean sea level
coords.altitudeAccuracy	The altitude accuracy of position
coords.heading	The heading as degrees clockwise from North
coords.speed	The speed in meters per second
timestamp	The date/time of the response

Demo

Hämta vår position

Demo 2

Använd Google Maps för att visa vår position!

Labb för detta

<http://mah-dv.github.io/courses/da344a-da355a/exercises/ex12.html>





You Tube



Podcast



HTML

V/S

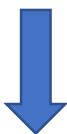
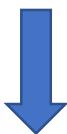
JS



Filuppladdning

Att ladda upp filer genom HTML

- Vi behöver ett formulär!



```
<form action="upload.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>
```

A screenshot of a web browser showing a file upload form. At the top is a standard file input field with a grey border and rounded corners, containing the text "Choose File" and "No file chosen". Below it is a green rectangular button with white text that reads "Ladda upp".

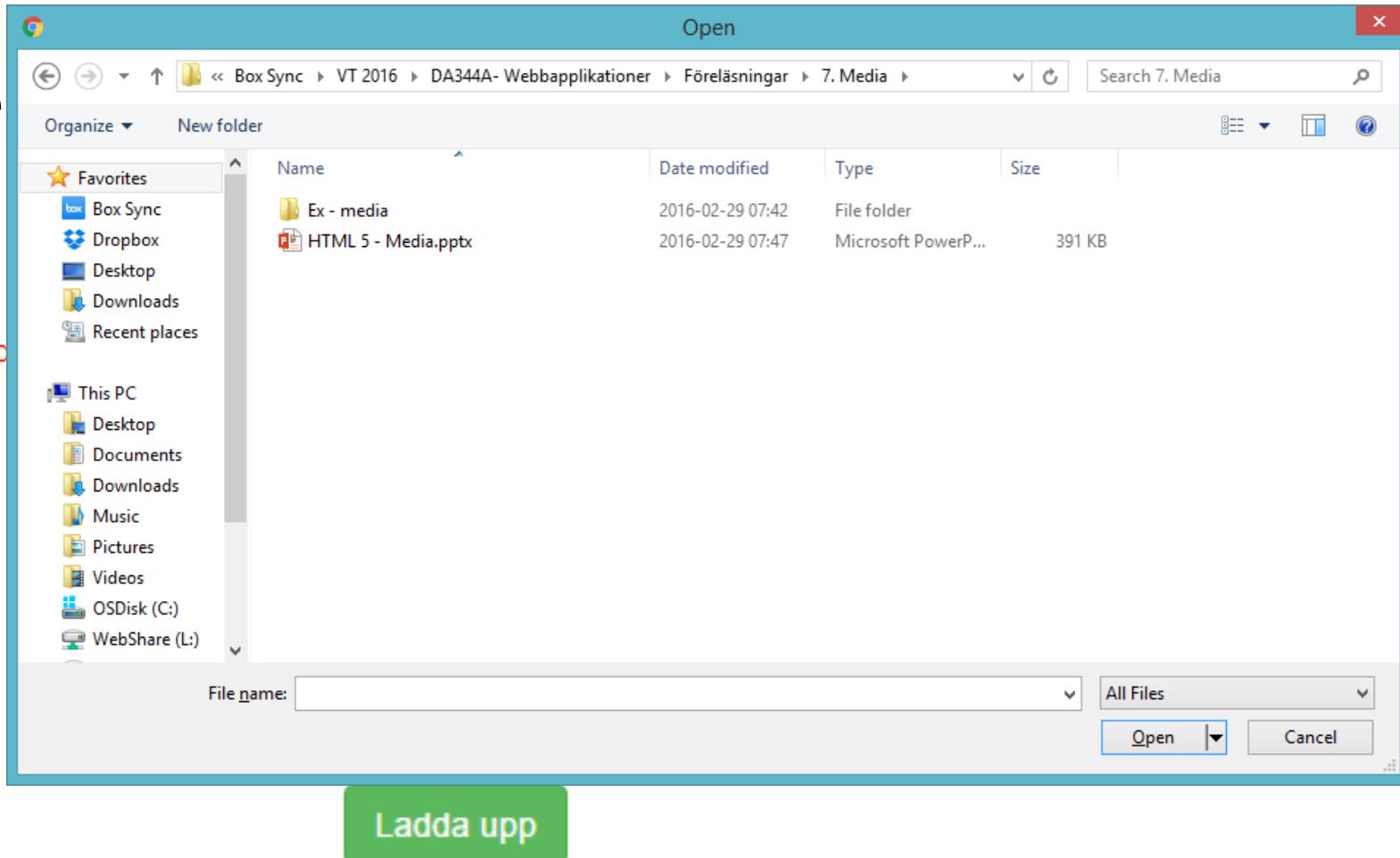
Choose File No file chosen

Ladda upp

Att ladda upp filer genom HTML

- Vi be

```
<form action="...>
  <input type="file">
  <input type="submit" value="Ladda upp fil">
</form>
```



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>";
    }
}
?>
```

Demo filuppladdning (1)

- **"klassiskt sätt"**

<http://localhost:8000/>

Demo filuppladdning (2)

- Genom ajax

<http://localhost:8000/>

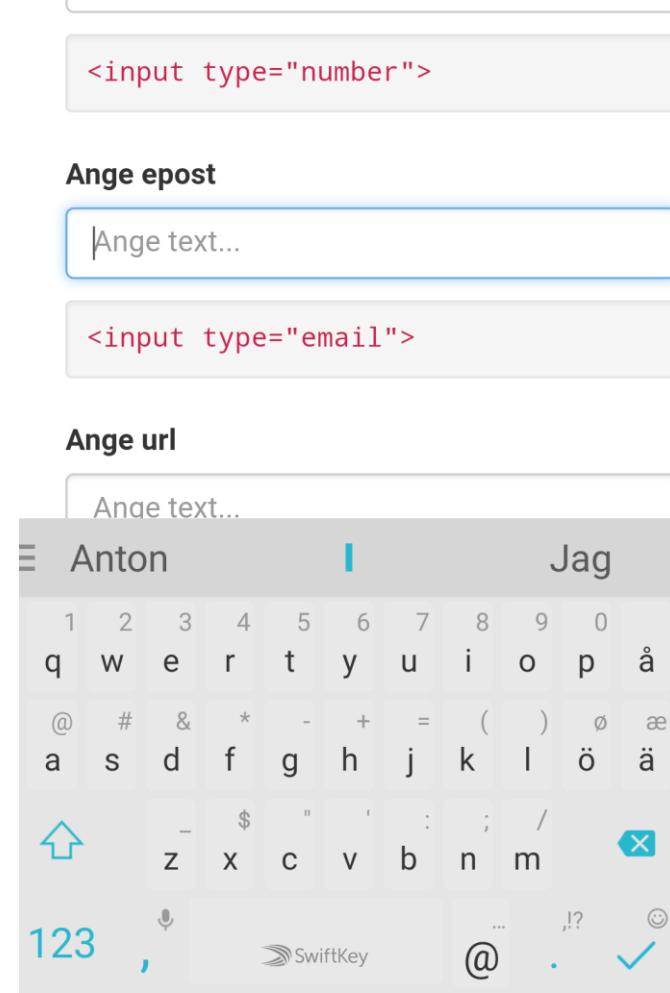
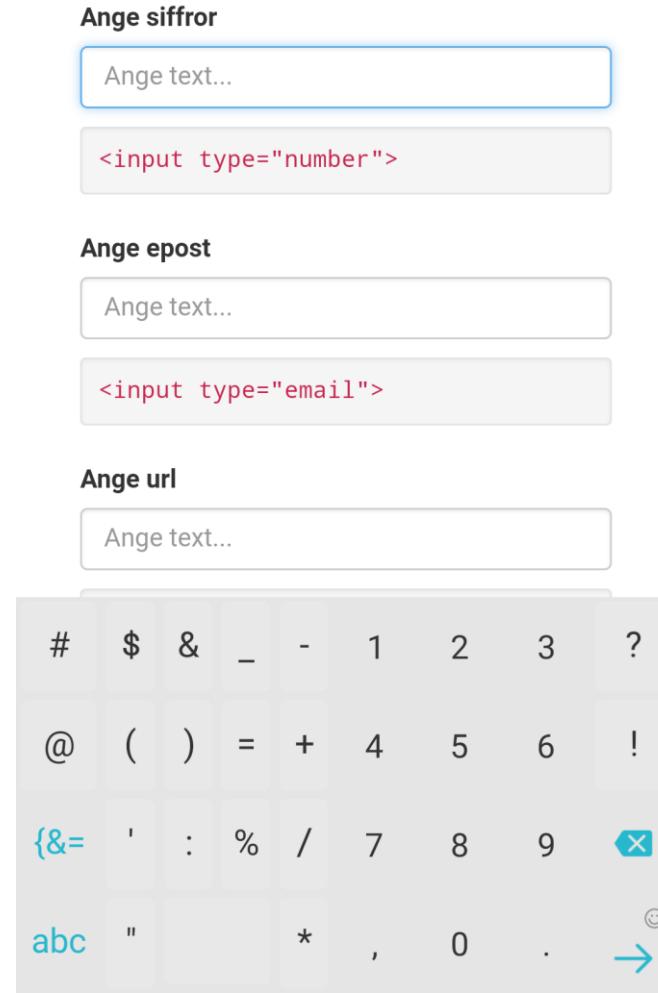
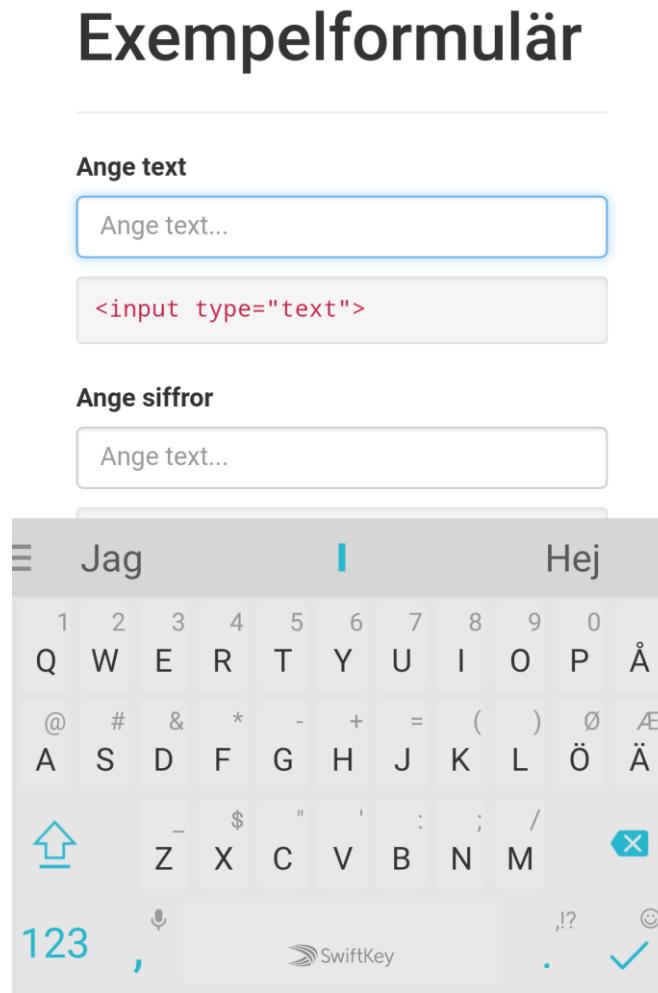
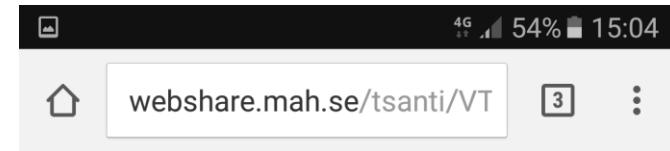
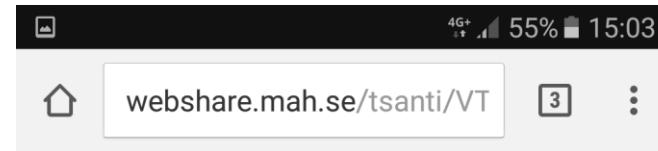
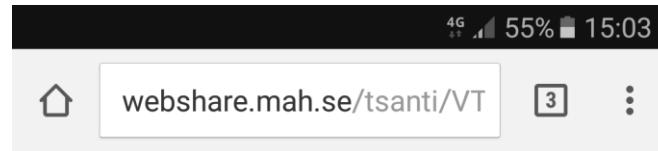


**Men användaren kunde ju välja
vilken filtyp som helst?**

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
<code>file_extension</code>	A file extension starting with the STOP character, e.g: .gif, .jpg, .png, .doc
<code>audio/*</code>	All sound files are accepted
<code>video/*</code>	All video files are accepted
<code>image/*</code>	All image files are accepted
<code>media_type</code>	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 media capture

Att visa upp bilder, video, ljud





Att visa upp bilder

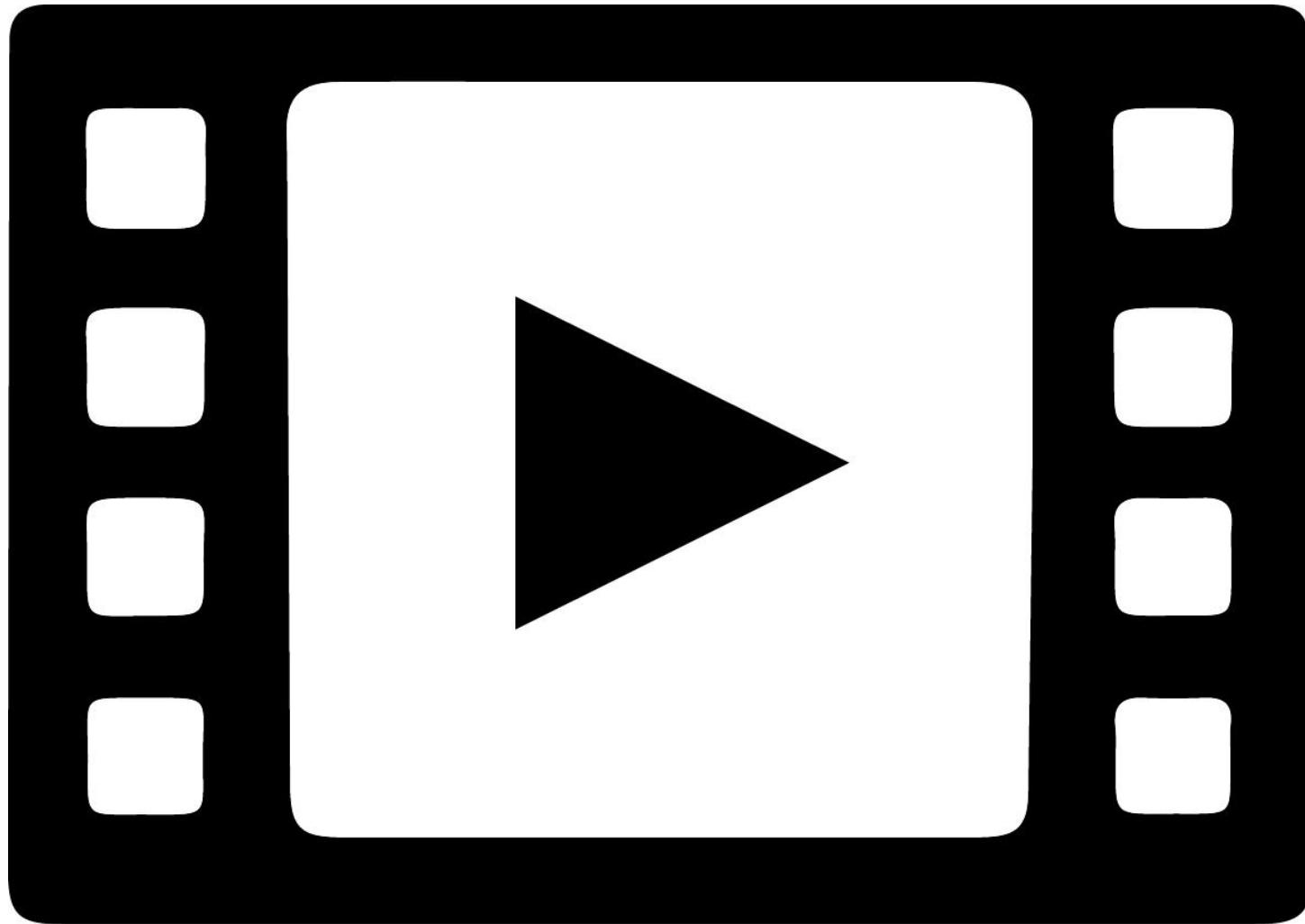
```
<h1>Bilder</h1>
<hr>

<hr>

<hr>

<hr>
```





Att visa upp video

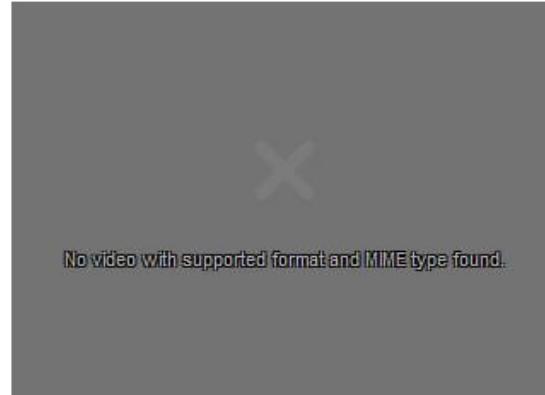
```
<video width="320" height="240" controls>
    <source src="movie.mp4" type="video/mp4">
    <source src="movie.ogg" type="video/ogg">
Your browser does not support the video tag.
</video>
```

Olika video-widgets i olika webbläsare

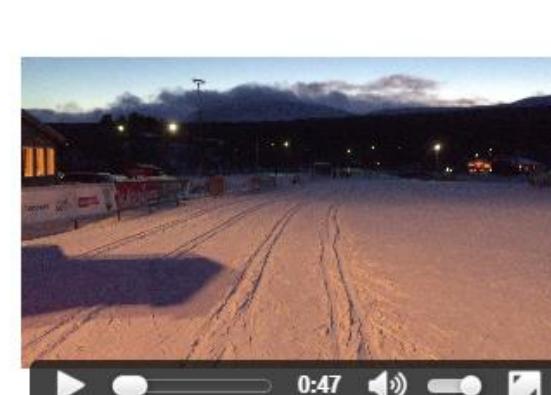
Video



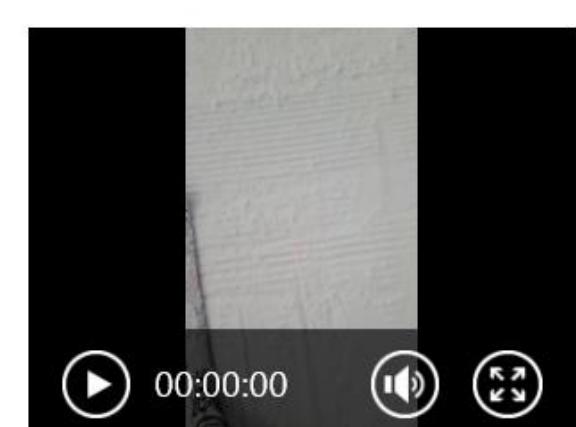
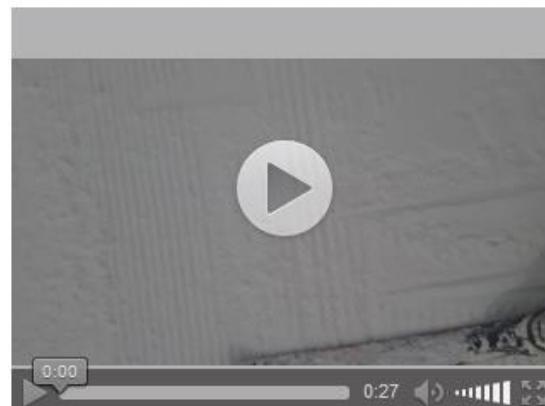
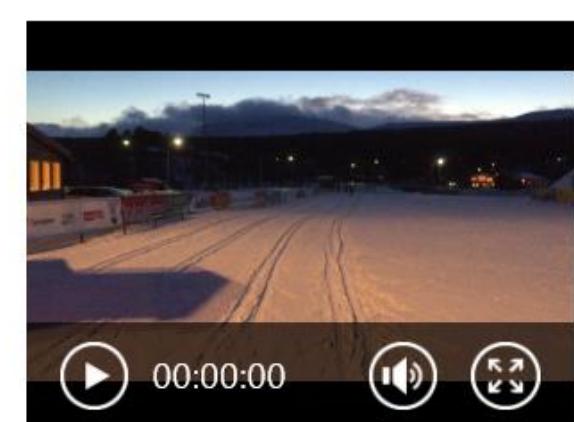
Video



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>	pixels	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>	pixels	Sets the width of the video player

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

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



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

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

Demo av ljud, bild, video

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

Labb för detta

<http://mah-dv.github.io/courses/da344a-da355a/exercises/ex13.html>

Del 2 – Utvecklingsmetodik

```
21 <?php wp_head(); ?>
22 </head>
23 <body <?php body_class();?>
24 <div id="page-header" class="hfeed site">
25 $theme_options = fruitful_get_theme_options();
26 $logo_pos = $menu_pos = '';
27 if (isset($theme_options['logo_pos'])) {
28     $logo_pos = esc_attr($theme_options['logo_pos']);
29     if (isset($theme_options['menu_pos'])) {
30         $menu_pos = fruitful_get_theme_options('menu_pos');
31     }
32 }
33 <?php wp_header(); ?>
34 <meta charset="<?php bloginfo( 'charset' ); ?>" />
35 <meta name="viewport" content="width=device-width" />
36 <link rel="profile" href="http://gmpg.org/xfn/11" />
37 <link rel="pingback" href="<?php bloginfo( 'pingback_url' ); ?>" />
38 <?php fruitful_get_favicon(); ?>
39 <?php if (IE_9)><script src="<?php echo get_template_directory_uri() . '/js/ie9.js' ?>"></script>
40 <?php wp_title( '|', true, 'right' ); ?></title>
41 <?php bloginfo( 'pingback_url' ); ?>
```

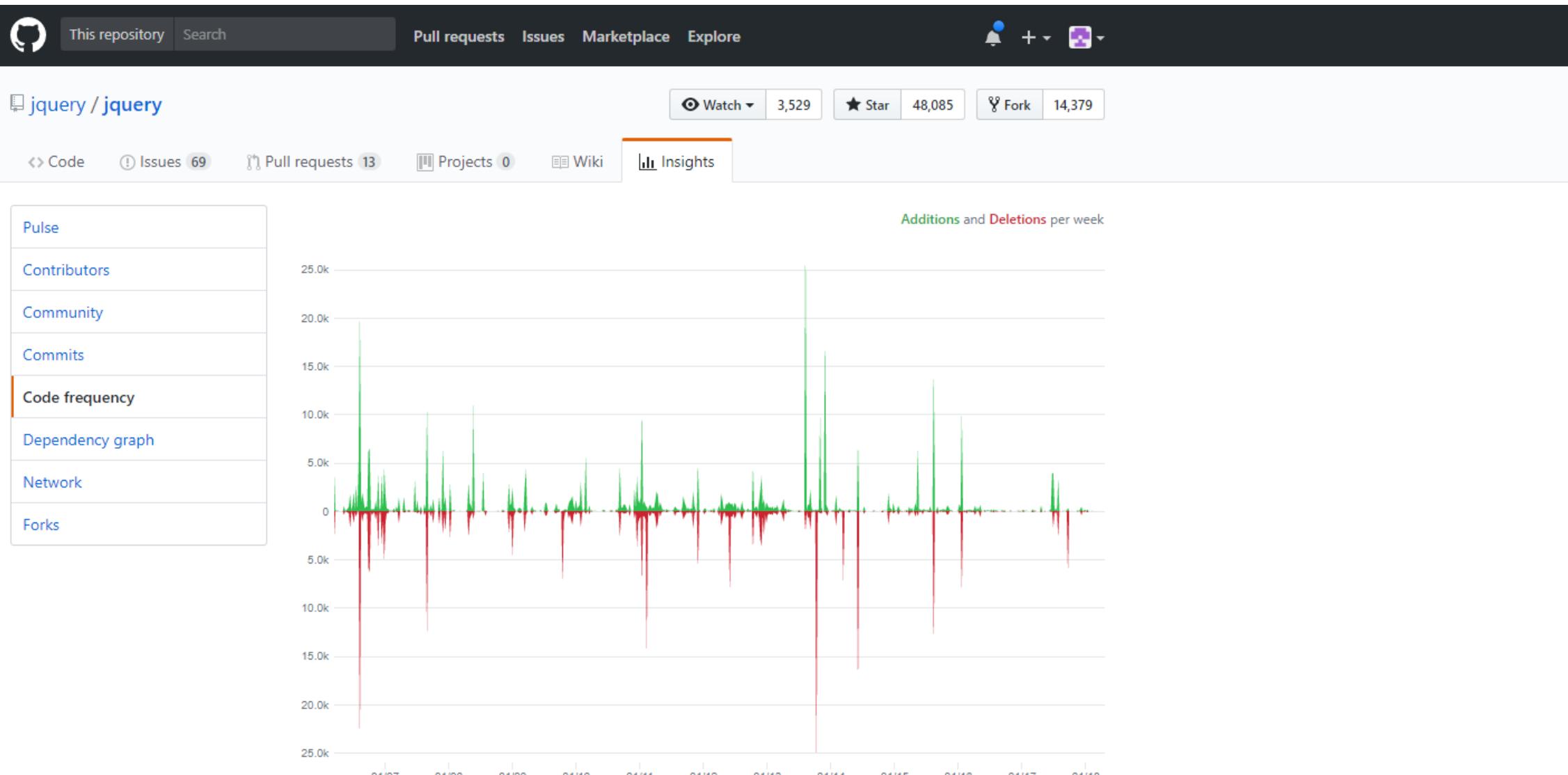


Hur arbetar man smart?

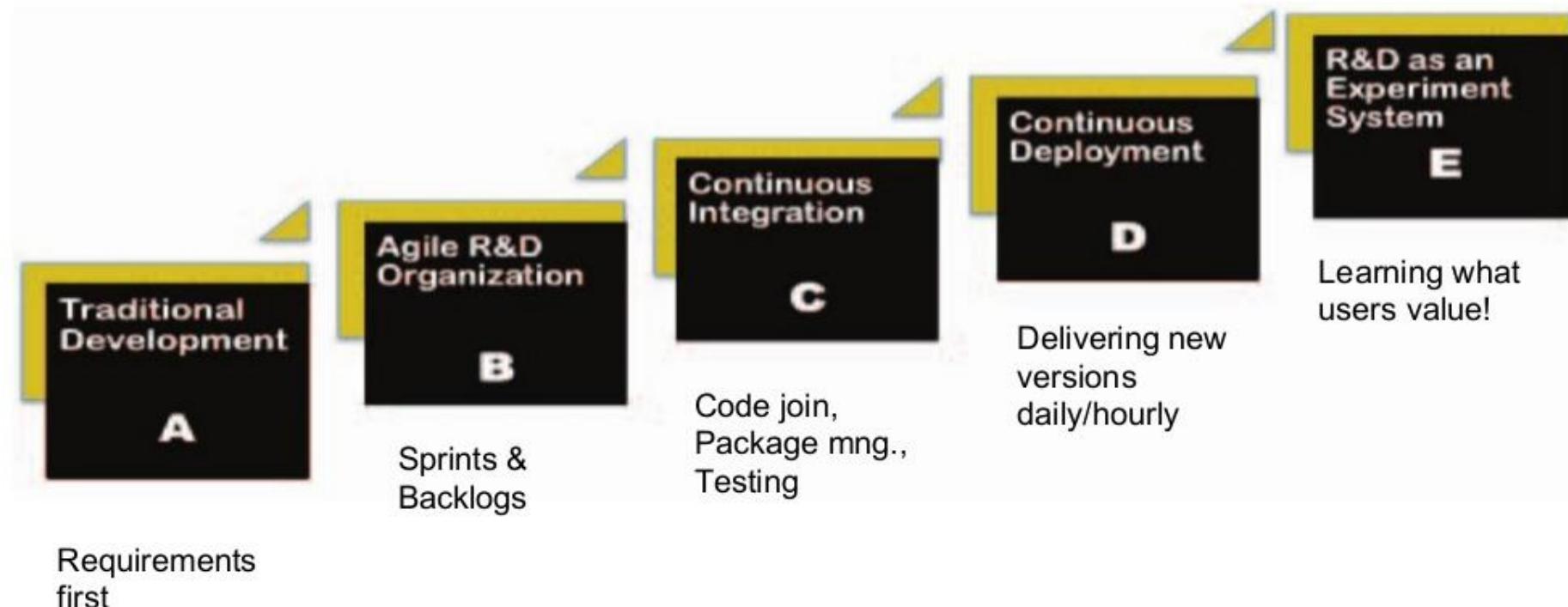
Motivation

- Vi vill kunna snabbt och stabilt (saker kraschar inte när vi utvecklar) kunna utveckla mjukvara.
- Det är väldigt frustrerande när mjukvara kraschar och slutar fungera
- Det är dessutom väldigt dyrt (i tid & ev. pengar) att dela kod med kollegor, felsöka, osv. om vi inte är smarta!

iQuery över tid (github)

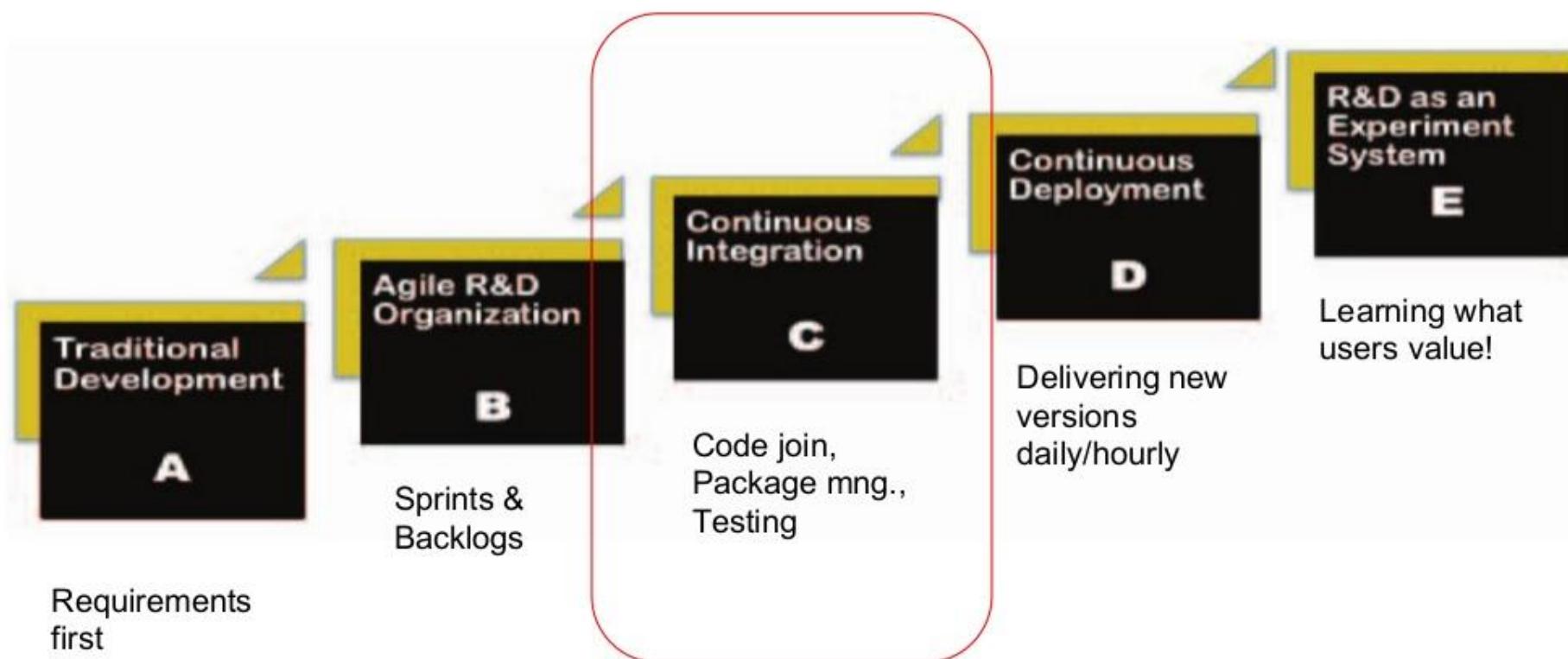


Stairway to Heaven



Olsson, Helena Holmström, Hiva Alahyari, and Jan Bosch. "Climbing the" Stairway to Heaven"--A Multiple-Case Study Exploring Barriers in the Transition from Agile Development towards Continuous Deployment of Software." *Software Engineering and Advanced Applications (SEAA), 2012 38th EUROMICRO Conference on*. IEEE, 2012.

Stairway to Heaven



Olsson, Helena Holmström, Hiva Alahyari, and Jan Bosch. "Climbing the" Stairway to Heaven"--A Multiple-Case Study Exploring Barriers in the Transition from Agile Development towards Continuous Deployment of Software." *Software Engineering and Advanced Applications (SEAA), 2012 38th EUROMICRO Conference on*. IEEE, 2012.

Utmaningar med mjukvaruutveckling

1. Ändringar av beroenden

- Hur snabbar vi upp nerladdning av nödvändiga beroenden / paket?
- Hur säkerhetsställer vi att våra kollegor använder rätt version av biblioteken/ramverket?

2. Ändringar i koden

- Hur säkerhetsställer vi att ändringar i koden inte kommer att skapa buggar, fel, etc.?

Pakethanterare

En pakethanterare förenklar installation och uppdatering av ett projekts beroenden.

Att manuellt leta upp och ladda ner alla bibliotek/ramverk tar mycket tid och är dyrt.

Allt detta kan vi automatisera genom en pakethanterare.

Pakethanterare

"En pakethanterare är ett datorprogram, främst i Linux-miljö, som används för att installera så kallade paket, till sin dator."

- Fördelar med en pakethanterare
 - Paketförråd – Hitta paket
 - Beroenden – Håll koll på att paketen fungerar (genom beroenden)
 - Uppdatering – Ha senaste versionen av paketet
 - Säkerhetsaspekter – Kontrollera att det är ett "säkert" paket
- T.ex. NPM (<https://www.npmjs.com/>) och Bower (<https://bower.io/>)

Genom nerladdning



Downloading jQuery

Compressed and uncompressed copies of jQuery files are available. The uncompressed file is best used during development or debugging; the compressed file saves bandwidth and improves performance in production. You can also download a [sourcemap file](#) for use when debugging with a compressed file. The map file is *not* required for users to run jQuery, it just improves the developer's debugger experience. As of jQuery 1.11.0/2.1.0 the `//# sourceMappingURL` comment is [not included](#) in the compressed file.

To locally download these files, right-click the link and select "Save as..." from the menu.

jQuery

For help when upgrading jQuery, please see the [upgrade guide](#) most relevant to your version. We also recommend using the [jQuery Migrate plugin](#).

[Download the compressed, production jQuery 3.3.1](#)

[Download the uncompressed, development jQuery 3.3.1](#)

[Download the map file for jQuery 3.3.1](#)

You can also use the slim build, which excludes the [ajax](#) and [effects](#) modules:

[Download the compressed, production jQuery 3.3.1 slim build](#)

[Download the uncompressed, development jQuery 3.3.1 slim build](#)

[Download the map file for the jQuery 3.3.1 slim build](#)

[jQuery 3.3.1 release notes](#)

Downloading jQuery using npm or Yarn

jQuery is registered as [a package](#) on [npm](#). You can install the latest version of jQuery with the npm CLI command:

```
1 | npm install jquery
```

As an alternative you can use the [Yarn](#) CLI command:

```
1 | yarn add jquery
```

This will install jQuery in the `node_modules` directory. Within `node_modules/jquery/dist/` you will find an uncompressed release, a compressed release, and a map file.

Downloading jQuery using Bower

jQuery is also registered as a package with [Bower](#). You can install the latest version of jQuery with the command:

```
1 | bower install jquery
```

Genom npm



Genom yarn



Genom bower



Att installera en pakethanterare

- NPM
 - <https://www.npmjs.com/> (<https://nodejs.org/en/>)
- Bower
 - npm install -g bower

Att skapa ett projekt – att ange beroenden

Skapa ett projekt med NPM

- Genom: npm init

package.json

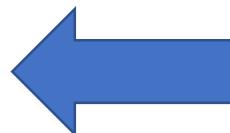
```
{  
  "name": "anton-test",  
  "version": "1.0.0",  
  "description": "A test project",  
  "main": "index.js",  
  "scripts": {  
    "test": "echo \\\"Error: no test specified\\\" && exit 1"  
  },  
  "author": "Anton Tibblin",  
  "license": "MIT"  
}
```

Lägga till paket i projektet med NPM

- För att lägga till jQuery
 - npm install jquery --save



Paketet vi vill installera



Att det läggs till i package.json

Demo - NPM

Demo – Från github

<https://github.com/Tibbelit/packet-manager-example>

Inlämningsuppgift 2

<http://mah-dv.github.io/courses/da344a-da355a/assignments/as2.html>