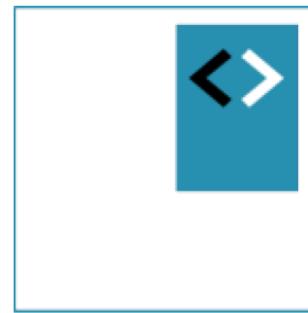




Ministerie van Defensie

Crossplatform Mobile Apps

Module 1 – Inleiding



Peter Kassenaar – info@kassenaar.com

Peter Kassenaar

- Trainer, author, developer – since 1996
- Specialty: "*Everything Front-end*"
- HTML, CSS, JavaScript, ES6, Angular, TypeScript, jQuery, PhoneGap, Ionic,...

www.kassenaar.com/blog

info@kassenaar.com

Twitter: [@PeterKassenaar](https://twitter.com/PeterKassenaar)



The screenshot shows a website for 'Angulartraining.nl'. On the left, there's a sidebar with a file browser displaying project files like 'app-routing.module.ts', 'app.component.css', and 'index.html'. The main content area features a large Angular logo (a red hexagon with a white 'A'). Below the logo, the text reads: 'World-class Angular training in Dutch and English' and 'Live classrooms - focused on today's developers'. At the bottom are two buttons: 'LEARN MORE' (teal) and 'SIGN UP!' (blue). A yellow diagonal banner in the top right corner says '2018 dates now available!'. The code editor on the right shows a snippet of TypeScript code for a routing module:

```
const routes: Routes = [
  { path: '', redirectTo: 'home', pathMatch: 'full' },
  { path: 'home', loadChildren: './home/home.module#HomeModule' },
  { path: 'training', loadChildren: './training/training.module#TrainingModule' },
];
const config: ExtraOptions = {
  enableTracing: false,
  preloadingStrategy: PreloadAllModules
};
@NgModule({
  imports: [RouterModule.forRoot(routes, config)],
  exports: [RouterModule]
})
export class AppRoutingModule { }
```

www.angulartraining.nl

github.com/PeterKassenaar/mindef

(beschikbaar 6 maanden, tot medio april 2019)

Even bijpraten...



Praktijkervaring opgedaan in HTML, CSS, JavaScript?

Praktijkervaring mobile webapps?

Android, iOS, beiden?

Verwachtingen van de cursus?

Concrete projecten?

Materialen

Software

Visual Studio Code, browser, libraries

Handouts

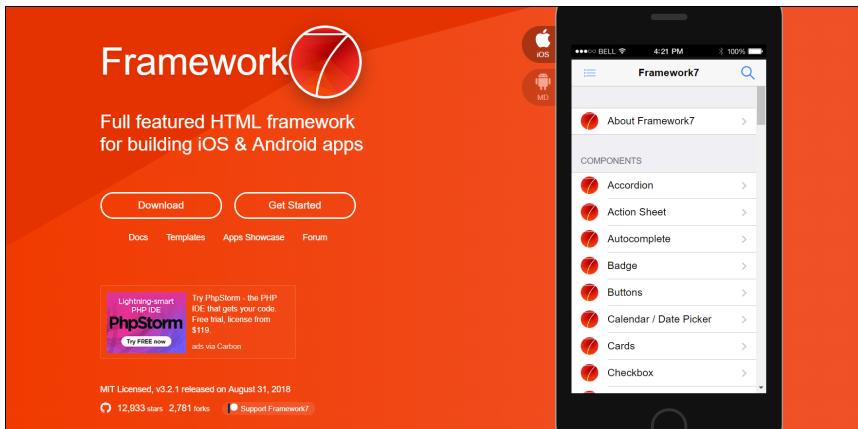
(PPTX/PDF)

Oefeningen

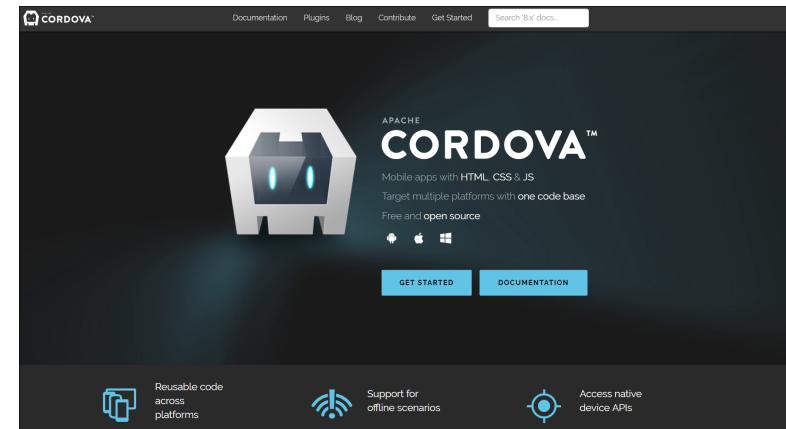
(in de presentaties)

Websites

(online)



Framework 7



Cordova/PhoneGap



Web Development Library - PhoneGap

(build proces enigszins gedateerd, overige informatie up-to-date)

Voorbeeldcode en demo's

github.com/PeterKassenaar/mindef-mobile

The screenshot shows the GitHub repository page for 'mindef-mobile' owned by 'PeterKassenaar'. The repository has 1 commit, 1 branch, 0 releases, and 1 contributor. The README.md file contains the text: 'Voorbeeldcode en slides bij training Mobile Apps, MinDef, najaar 2018'. The GitHub footer includes links to Contact GitHub, Pricing, API, Training, Blog, and About.

PeterKassenaar / mindef-mobile

Code Issues 0 Pull requests 0 Projects 0 Wiki Insights Settings

Unwatch 1 Star 0 Fork 0

Voorbeeldcode en slides bij training Mobile Apps, MinDef, najaar 2018

1 commit 1 branch 0 releases 1 contributor

Branch: master New pull request Create new file Upload files Find file Clone or download

PeterKassenaar Initial commit Latest commit 3e87829 just now

README.md Initial commit just now

README.md

mindef-mobile

Voorbeeldcode en slides bij training Mobile Apps, MinDef, najaar 2018

© 2018 GitHub, Inc. Terms Privacy Security Status Help Contact GitHub Pricing API Training Blog About

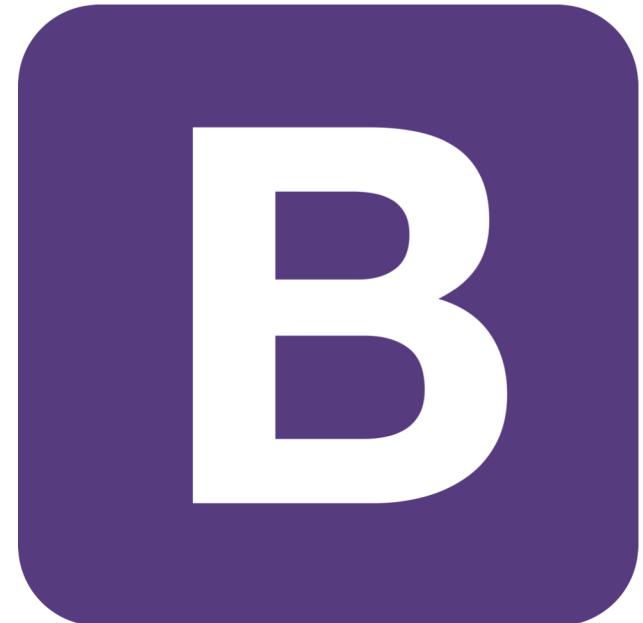
Datums en tijden

- 1 groep
 - 29, 30, 31 oktober
 - 12, 13, 14 november
 - 22, 23 november
- 08:00 - 15:00

Doelen van de training

1. **Theorie:** Algemene kennis van App-ontwikkeling en diverse soorten apps (native, hybride, web).
2. **Praktijk:** Hybride apps maken met HTML, CSS en JavaScript.
3. **Praktijk:** Libraries kunnen inzetten om apps te maken.
Specifiek: gebruik van Framework 7 en Cordova.
4. **Praktijk:** De app builden en testen op een mobiel device.
5. **Theorie:** Kennis van distributie via App Store of op andere wijze.

Vorige keer:



Nu:



Waarom?

- *Standalone applicaties* maken met HTML, CSS en JavaScript
- Draaien op *mobiele device*, geen browser
- *User Interface* aangepast op mobiele device
 - Lay-out voor Android
 - Lay-out voor iOS

Eigenlijk, 2 delen

Deel 1:

- De app maken met HTML, CSS en JavaScript
- Framework 7
- Testen in de browser (!)

Deel 2:

De app maken met Cordova/PhoneGap en testen op mobile device

The screenshot shows a browser window with the Framework7 website. The left side displays the homepage with a red header and various links like 'Download', 'Get Started', 'Docs', 'Templates', 'App Showcase', and 'Forum'. The right side shows a mobile application interface with a sidebar menu containing items such as 'About Framework7', 'Components' (Accordion, Action Sheet, Autocomplete, Badge, Buttons, Calendar / Date Picker, Cards, Checkbox), and 'Cards'. Below the sidebar is a main content area. The developer tools are open, specifically the 'Elements' tab, which shows the HTML structure of the page. The HTML code includes various CSS classes and JavaScript scripts. The browser's status bar at the top indicates it's an iPhone 6/7/8 device with dimensions 375 x 667, 99% zoom, and online status.



Dag 1 - 3 In detail - Globaal (!)

Ochtend	Theorie bij Apps	FW7: Components	Components vervolg
Middag	Praktijk: starten met framework 7	Components vervolg	Specifieke mobiele acties
	29 oktober	30 oktober	31 oktober

Globale werkwijze

Ik

Jullie

...

Vragen?

(beknopte)

Geschiedenis

~1991

http://www



~2000



2007





sinds juni 2008

Google Play

Search

Categories Home Top charts New releases

Apps

My apps

Shop

Games Family Editors' Choice

Account My subscriptions Redeem Buy gift card My wishlist My Play activity Parent guide

2008

See more

Recommended for you

GPS Tools® VirtualMaze Air Traffic Flight Apps Army Knife for Andr Digital & Dreams DuckDuckGo Privacy DuckDuckGo SkyView® Free Terminal Eleven Microsoft Apps Microsoft Corporation

★★★★★ ★★★★★ ★★★★★ ★★★★★ ★★★★★ ★★★★★

Offline games

Minesweeper Evgeny Karavashkin Helix Jump VOODOO Paper Wings Fit Games Chess Chess Prince 8 Ball Pool Miniclip.com Angry Birds Space Rovio Entertainment Co

★★★★★ ★★★★★ ★★★★★ ★★★★★ ★★★★★ ★★★★★

You Might Like...

Based on your recent installs

See more

sinds oktober 2008



R.I.P Windows Phone

Soorten apps

- Native Apps
 - Geschreven in de programmeertaal die bij het platform hoort.
 - Distributie via App Store
- Hybride Apps
 - Geschreven in HTML, CSS en JavaScript, daarna gecompileerd naar het gewenste doelplatform.
 - Distributie via App Store
- Progressive Web Apps ("PWA")
 - Sinds 2017
 - Geschreven in HTML, CSS en JavaScript, worden geopend in de browser, maar gedragen zich als een app (offline werken, caching, etc).
 - Distributie via het web

1. Native Apps

Programmeertaal van het doelplatform

Apple/iOS : Objective C, Swift, Kotlin



 **Swift**

THE SWIFT
PROGRAMMING
LANGUAGE
SWIFT 4.2

WELCOME TO SWIFT

[About Swift](#)

[Version Compatibility](#)

[A Swift Tour](#)

LANGUAGE GUIDE

LANGUAGE
REFERENCE

About Swift

Swift is a fantastic way to write software, whether it's for phones, desktops, servers, or anything else that runs code. It's a safe, fast, and interactive programming language that combines the best in modern language thinking with wisdom from the wider Apple engineering culture and the diverse contributions from its open-source community. The compiler is optimized for performance and the language is optimized for development, without compromising on either.

Swift is friendly to new programmers. It's an industrial-quality programming language that's as expressive and enjoyable as a scripting language. Writing Swift code in a playground lets you experiment with code and see the results immediately, without the overhead of building and running an app.

Native apps, Android: Java



Hybride Apps

Geschreven met andere technieken (meestal : HTML, CSS en JavaScript) en daarna gecompileerd, of gewrapt in een blanco native iOS/Java-applicatie

Opties:

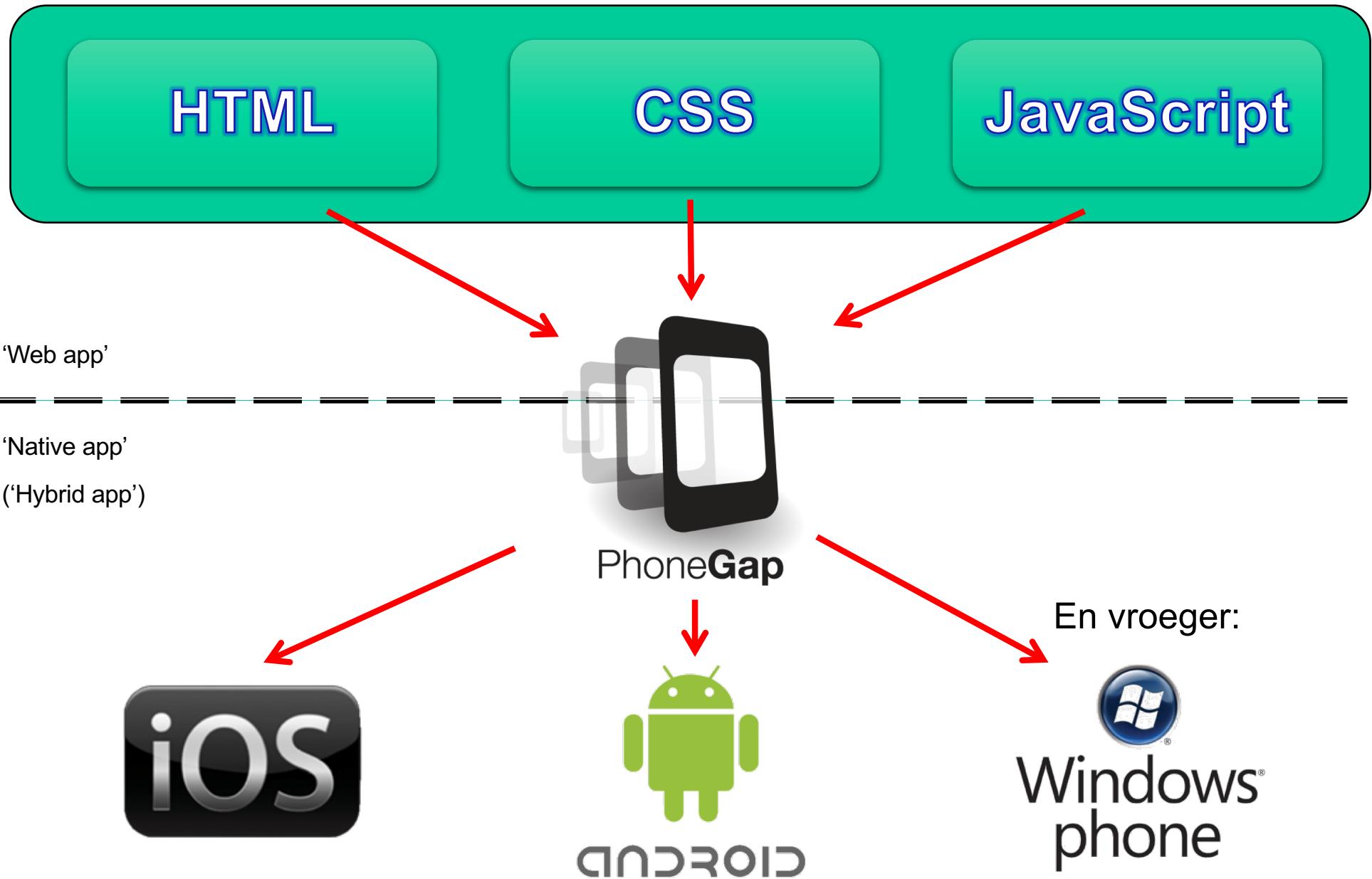
PhoneGap/Cordova (HTML, CSS, JavaScript)

NativeScript (Angular)

Xamarin Studio (C#)

Ionic Framework (Angular)

...



App Tooling

Gewone HTML-editor: Visual Studio Code

The screenshot shows the official website for Visual Studio Code. At the top, there's a navigation bar with links to 'Visual Studio Code', 'Docs', 'Updates', 'Blog', 'Community', 'Extensions', and 'FAQ'. To the right of the navigation is a search bar labeled 'Search Docs' and a green 'Download' button. A message at the top of the main content area says 'Version 1.22 is now available! Read about the new features and fixes from March.' Below this, the main headline reads 'Code editing. Redefined.' followed by the subtext 'Free. Open source. Runs everywhere.' A large green 'Download for Windows' button is prominently displayed, with a smaller link below it for 'Other platforms and Insiders Edition'. A note below the download buttons states: 'By using VS Code, you agree to its license and privacy statement.' To the right of the download section is a screenshot of the Visual Studio Code interface showing an open file named 'app.ts' with some TypeScript code. The interface includes tabs for 'app.ts', 'www.ts', 'package.json', and 'README.md'. The bottom of the interface shows status information like 'Ln 9, Col 21' and 'TypeScript'. Below the main content area are four cards with icons and text: 'IntelliSense' (with a double arrow icon), 'Debugging' (with a gear and wrench icon), 'Built-in Git' (with a Git logo icon), and 'Extensions' (with a square icon). The entire page has a dark blue background.

code.visualstudio.com/download

Meestal – framework

- Maar – dat is een keuze. Je mag letterlijk ook alles zelf schrijven, alle CSS-regels opstellen, JavaScript schrijven, enzovoort.
- Wij doen dat niet.
- Tal van *mobile optimized* frameworks beschikbaar
 - JQuery Mobile
 - Onsen UI
 - Ionic
 - Framework 7 (!)

The image shows a comparison of three popular UI frameworks: Topcoat, Bootstrap, and Kendo UI, displayed in separate browser windows.

Topcoat (topcoat.io):

- Header:** "Topcoat" logo, "CSS for clean and fast web apps." menu bar with links for "Demo", "Benchmarks", "Blog", and a large blue "Download" button.
- Content:** A screenshot of a tablet displaying a clean, modern UI design for a beauty product.
- Performance Section:** A small graphic of a mountain range with the text "Soooo Fast!" and a brief description about performance benchmarks.

Bootstrap (getbootstrap.com):

- Header:** "Bootstrap" logo, navigation menu with links for "Getting started", "CSS", "Components", "JavaScript", and "Customize".
- Content:** Large white text "Bootstrap" on a purple background, followed by a description: "Sleek, intuitive, and powerful mobile first front-end framework for faster and easier web development."
- Buttons:** Two prominent buttons: "Download Bootstrap" and "Download source".

Kendo UI (www.kendoui.com):

- Header:** "telerik" logo, "Kendo UI THE WAY OF HTML5" logo, and a navigation bar with links for "Products", "Demos", "Purchase", and a large "Download" button.
- Content:** A large orange banner featuring a collage of devices (laptop, tablet, smartphone) displaying various data visualizations. Text: "Deliver a responsive experience. The Q3 2013 Release is here!" and a bulleted list: "Kendo UI widgets get 'responsive'", "Mapping and spatial visualization in Kendo UI DataViz", and "Major Scheduler improvements; new Web and DataViz widgets".
- Bottom Section:** Text: "Comprehensive HTML5/JavaScript framework for modern web and mobile app development".

Keuze: Framework 7

The image shows the Framework7 website on the left and a mobile application interface on the right.

Framework7 Website:

- Header:** The title "Framework7" is displayed in large white font, with a red circular icon containing a white "7" to its right.
- Text:** Below the title, the text "Full featured HTML framework for building iOS & Android apps" is shown.
- Buttons:** Two prominent buttons: "Download" and "Get Started".
- Navigation:** A horizontal menu with links to "Docs", "Templates", "Apps Showcase", and "Forum".
- Advertisement:** An advertisement for PhpStorm, described as a "Lightning-smart PHP IDE". It includes a "Try FREE now" button and mentions "ads via Carbon".
- Footer:** MIT Licensed, v3.2.1 released on August 31, 2018. GitHub stats: 12,933 stars, 2,781 forks. A "Support Framework7" button.

Mobile Application Interface:

- Header:** Shows the device is connected to "BELL" with full signal strength, the time is 4:21 PM, and the battery level is 100%.
- Title Bar:** The title "Framework7" is at the top, with a search icon to the right.
- Search Results:** A list of components, each preceded by a red circular icon with a white "7":
 - About Framework7
 - Accordion
 - Action Sheet
 - Autocomplete
 - Badge
 - Buttons
 - Calendar / Date Picker
 - Cards
 - Checkbox

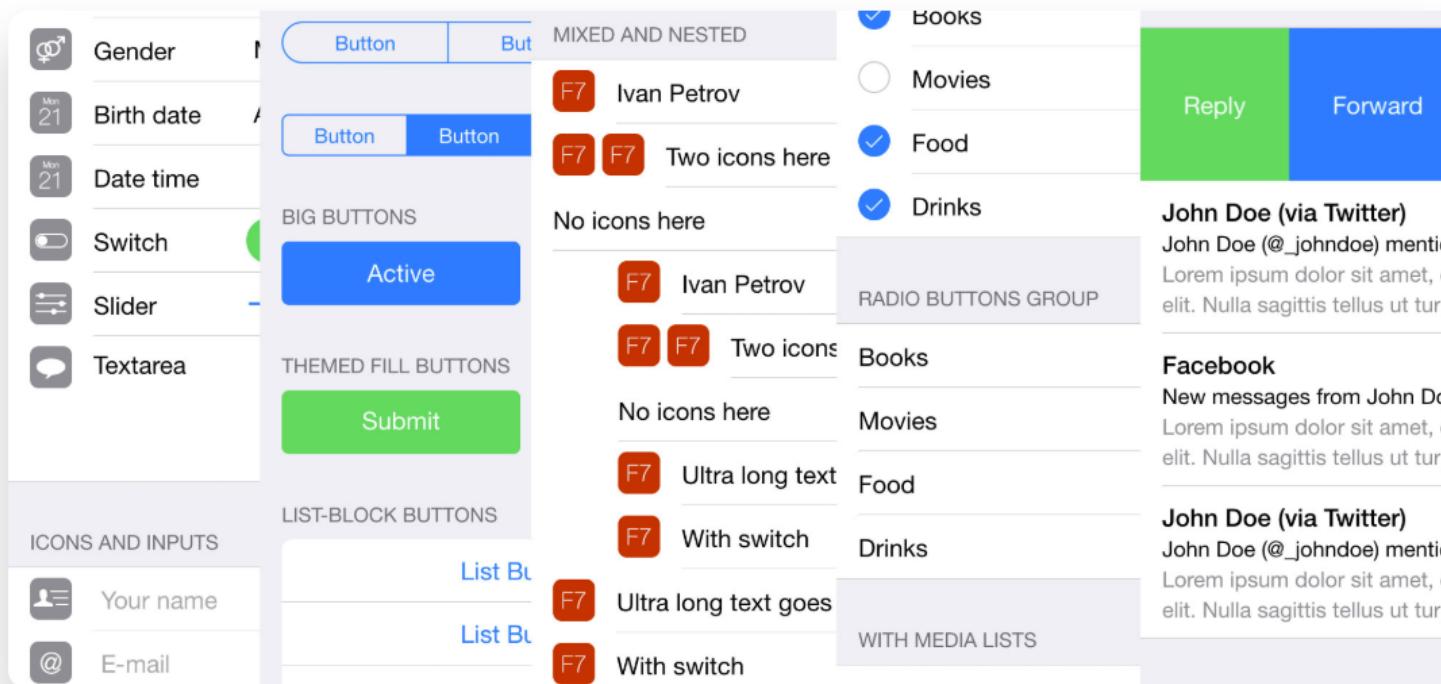
Waarom Framework 7?

- Op basis van de bekende technieken HTML, CSS en JavaScript
- Specifieke stijlen voor Android en iOS
- Automatische detectie van het platform
- Tal van mobiele componenten
 - Buttons
 - Date picker
 - Dialogs
 - Lijsten
 - Sliders, Aan/Uit-knoppen
 - Pull-to-refresh
- Relatief weinig JavaScript nodig voor werkende app
 - In de praktijk: je kunt niet zonder (!)

<https://framework7.io/>

UI Components

Framework7 comes with a bunch of ready to use UI elements and widgets like modals, popup, action sheet, popover, list views, media lists, tabs, side panels, layout grid, preloader (activity indicator), form elements, etc. The awesome point is that you don't need JavaScript at all for the most of mentioned widgets.



Oefening

- Ga naar <https://framework7.io/>
- Lees de introductie
 - iOS Specific
 - Material Theme
 - UI Components
- Bekijk de 'Killer features'

Killer Features

Swipe Back Swipe Actions Dynamic Navbar Pull To Refresh Messages

Framework7

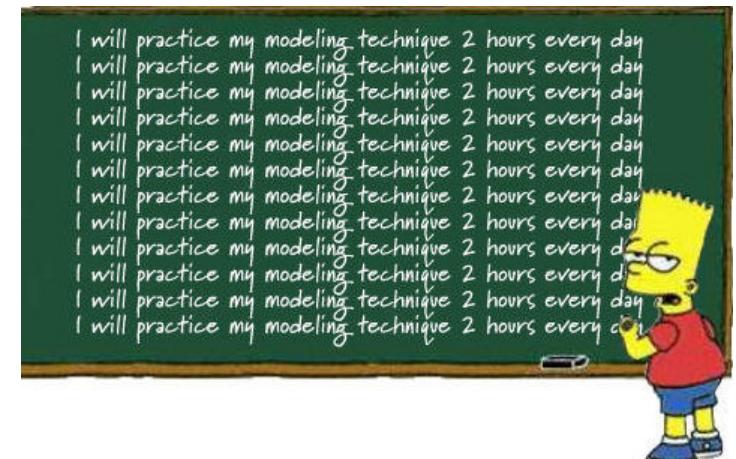
WELCOME TO FRAMEWORK7
Read About Framework7

FRAMEWORK7 KITCHEN SINK

- F7 Modals
- F7 Popover
- F7 Tabs
- F7 Side Panels
- F7 List View

Swipe Back

One of Framework7's killing feature is supporting of iOS well known swipe back gesture from left border of screen when you want to get to the previous page. It simply works, and works perfectly as you expect it to do. Just swipe from left (or drag with mouse) area of the page to see smooth transition to the previous page. It is not just A-B transition. It really follows your finger



- Bekijk een aantal Showcase apps :
<https://framework7.io/showcase/>

Framework7 Apps Showcase

If you released Framework7 app on AppStore or GooglePlay, or you have interesting Framework7 web app, don't hesitate to [send PR](#) to this section with information about your app

We are for the good usability and user experience of apps made with Framework7. So the Framework7 apps released for Android on Google Play should be made with Material or custom theme to get into Showcase, but not with iOS theme.



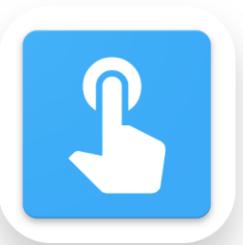
Maple Point of Sale
by [David Kagiri](#)



Greety
by [Mukhamedkarimova Aneliya](#)



Tripline - Your maps are your stories
by [Tripline, Inc.](#)



Cool Websites
by [Alapan Das](#)



EzTrip.io - Trip management
by [Carlos Duarte](#)



Strong's Dict – Strongsdict App
Strong's Greek and Hebrew Dictionary



Tabela Fipe Brasil
by [Shark Tech Apps](#)



Ratings Dekhe Kya?
by [Kapil Prabhudessai](#)

Tooling: NodeJS

- NodeJS: een runtime engine voor JavaScript
- “JavaScript buiten de browser”
- Twee manieren:
 - Zelf NodeJS packages schrijven
 - Node gebruiken als *Package Manager*
 - *NPM* wordt automatisch geïnstalleerd
- Node is standaard tool in de front-end development-wereld
- Je bedient Node via de DOS-prompt of MacOS-Terminal

<https://nodejs.org/en/>

Aanbevolen: NodeJS 8.0+

The screenshot shows the official Node.js website. At the top, there's a dark header bar with the Node.js logo and a navigation menu with links: HOME, ABOUT, DOWNLOADS, DOCS, GET INVOLVED, SECURITY, NEWS, and FOUNDATION. The FOUNDATION link is highlighted with a green background. Below the header, a main content area features a dark banner with white text: "Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine." Underneath, a green callout box says "Important June 2018 security upgrades now available". A large section below is titled "Download for Windows (x64)" and offers two options: "8.11.3 LTS" (labeled "Recommended For Most Users") and "10.6.0 Current" (labeled "Latest Features"). Below these are links to "Other Downloads | Changelog | API Docs" for each version. Further down, there's a link to the "Long Term Support (LTS) schedule" and a call to sign up for the "Node.js Everywhere" newsletter. The footer contains links to "Report Node.js issue | Report website issue | Get Help", the "LINUX FOUNDATION" logo, and a copyright notice: "© Node.js Foundation. All Rights Reserved. Portions of this site originally © Joyent."

Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine.

Important June 2018 security upgrades now available

Download for Windows (x64)

8.11.3 LTS
Recommended For Most Users

10.6.0 Current
Latest Features

Other Downloads | Changelog | API Docs Other Downloads | Changelog | API Docs

Or have a look at the [Long Term Support \(LTS\) schedule](#).

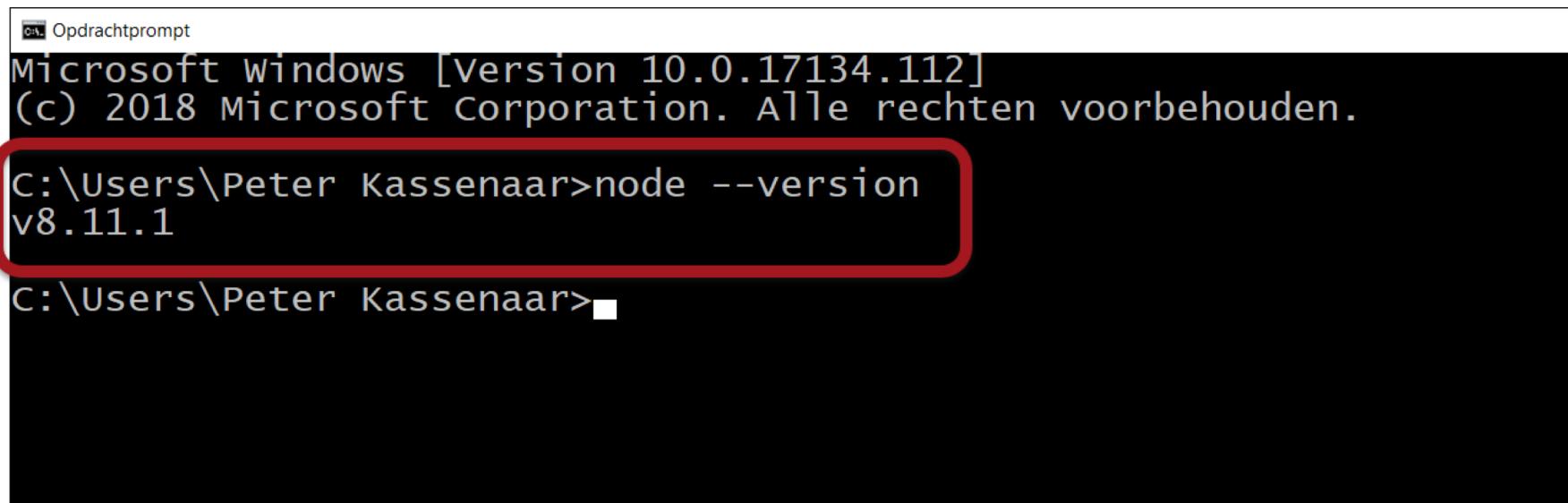
Sign up for [Node.js Everywhere](#), the official Node.js Weekly Newsletter.

LINUX FOUNDATION COLLABORATIVE PROJECTS

Report Node.js issue | Report website issue | Get Help

© Node.js Foundation. All Rights Reserved. Portions of this site originally © Joyent.

Node – check your version



A screenshot of a Windows Command Prompt window titled "Opdrachtprompt". The window shows the following text:

```
Microsoft windows [Version 10.0.17134.112]
(c) 2018 Microsoft Corporation. Alle rechten voorbehouden.

c:\Users\Peter Kassenaar>node --version
v8.11.1

c:\Users\Peter Kassenaar>
```

The command "node --version" and its output "v8.11.1" are highlighted with a red rectangular box.

Voorbeelden opdrachten

- npm install <mijn-package-naam>
- **Bijvoorbeeld**
 - npm install framework7 – framework wordt in huidige project geplaatst.
 - De standaardmap is node_modules
 - npm install cordova -g – Cordova wordt *globaal* geïnstalleerd .
- NodeJS maakt zelf de map node_modules.
 - Ga hier niet handmatig in zitten rommelen!

Bottomline : NodeJS hoeft alleen maar op je systeem *aanwezig* te zijn. Je hoeft er verder niet veel mee te doen.

NPM wordt automatisch mee-geïnstalleerd.

NodeJS is nodig voor:

- Installatie NPM packages
- Installatie PhoneGap/Cordova
- Installatie van plugins
- Installatie van *platforms* (iOS, Android, Browser) in je Cordova-project
- Testen van project in de ontwikkelingsfase

NodeJS is NIET nodig voor

- Ontwikkeling en design van de app
- Vaststellen van de user interface
- Gebruik van features
 - Swipe to delete
 - Pull to refresh
 - Etc.
- in een productie-omgeving
- ...