





**UNLEASH YOUR
WEB SKILLS
ON NATIVE!**





WEB DEVELOPER MOOD COASTER

**WEB DEVELOPER
IN NATURAL HABITAT**



WEB DEVELOPER

- **HTML**
- **CSS**
- **JavaScript**
- **Sass**
- **Node Package Manager**

**WEB DEVELOPER
ON NATIVE IOS / ANDROID**



WEB DEVELOPER & NATIVE

- **App stores**
- **Provisioning files**
- **Java or Kotlin for Android**
- **Objective-C or Swift for iOS**

**WEB DEVELOPER
WITH NATIVESCRIPT**



WEB DEVELOPER & NATIVESCRIPT

- App stores
- Provisioning files
- NativeScript
- HTML
- CSS
- JavaScript
- Sass
- Node Package Manager

WEB DEVELOPER

♥ NATIVESCRIPT





WHOO?

ROWDY RABOUW

@rowdyrabouw

Gouda, The Netherlands

I ♥ superhero movies

Freelance web and app developer

Lead developer Nationale-Nederlanden Pension App

Progress Developer Expert for Nativescript

GOT QUESTIONS?

sli.do 🙋 event code **K100**

Ask Me Anything Corner on 2nd floor





**MOBILE APP
FRAMEWORK
DECISION GUIDE**

MOBILE APP FRAMEWORK DECISION GUIDE

Do you want/need a native User Interface and native performance?

No

Yes

MOBILE APP FRAMEWORK DECISION GUIDE

Do you want/need a native User Interface and native performance?

No

Yes

Phonegap / Cordova with Ionic

- WebView
- DOM to manipulate
- HTML **styled** like native

MOBILE APP FRAMEWORK DECISION GUIDE

Do you want/need a native User Interface and native performance?

No

Yes

Phonegap / Cordova with Ionic

continue

- WebView
- DOM to manipulate
- HTML **styled** like native

MOBILE APP FRAMEWORK DECISION GUIDE

Do you have too much money and time?

Yes

No

MOBILE APP FRAMEWORK DECISION GUIDE

Do you have too much money and time?

Yes

No

Native iOS and Android

- Twice the work

MOBILE APP FRAMEWORK DECISION GUIDE

Do you have too much money and time?

Yes

No

Native iOS and Android

continue

- Twice the work

MOBILE APP FRAMEWORK DECISION GUIDE

Do you potentially want/need to share code with the web?

Or do you want/need to use web technologies?

No

Yes

MOBILE APP FRAMEWORK DECISION GUIDE

Do you potentially want/need to share code with the web?

Or do you want/need to use web technologies?

No

Yes

Xamarin

- .NET or C#
- Cross compiling
- Bindings to access native APIs

MOBILE APP FRAMEWORK DECISION GUIDE

Do you potentially want/need to share code with the web?

Or do you want/need to use web technologies?

No

Yes

Flutter

- Dart
- Cross compiling
- Beta

MOBILE APP FRAMEWORK DECISION GUIDE

Do you potentially want/need to share code with the web?

Or do you want/need to use web technologies?

No

Yes

Flutter

continue

- Dart
- Cross compiling
- Beta

MOBILE APP FRAMEWORK DECISION GUIDE

Do you want to use modern JavaScript?

No

Yes

MOBILE APP FRAMEWORK DECISION GUIDE

Do you want to use modern JavaScript?

No

Yes

Titanium

- No ES6/ES2015 support
- Can't use NPM
- Old MVC framework (Alloy)

MOBILE APP FRAMEWORK DECISION GUIDE

Do you want to use modern JavaScript?

No

Yes

Titanium

continue

- No ES6/ES2015 support
- Can't use NPM
- Old MVC framework (Alloy)

MOBILE APP FRAMEWORK DECISION GUIDE

Do you know and like React?

Yes

No

MOBILE APP FRAMEWORK DECISION GUIDE

Do you know and like React?

Yes

No

React Native

- React
- Native code to access APIs
- Version 0.55

MOBILE APP FRAMEWORK DECISION GUIDE

Do you know and like React?

Yes


No

React Native

continue

- React
- Native code to access APIs
- Version 0.55



A dynamic action shot of Supergirl flying through a city. She is wearing her iconic blue and red suit with the 'S' shield on her chest. Her right arm is raised, and her hair is blowing in the wind. The background shows a blurred cityscape with tall buildings under a bright sky.

NO

NATIVESCRIPT



N

NATIVESCRIPT

WHAT IS NATIVESCRIPT?

- **Open source framework for building truly native mobile apps**
- **JavaScript, markup (XML/HTML) and CSS**
- **Native code inside your JavaScript if you want and dare**
- **Cross Platform: one codebase for iOS and Android**
- **Backed by software company Progress**
- **Android 4.2 or a later stable official release**
- **iOS 7.0 or later stable official release**



A vibrant movie poster for Avengers: Endgame. The background is a cosmic scene with a purple and blue nebula, a large planet, and a massive, glowing red and orange energy source. In the center, Iron Man stands prominently. Surrounding him are other Avengers: Thor, Hulk, Doctor Strange, Spider-Man, and the Guardians of the Galaxy (Star-Lord, Gamora, Rocket, and Groot). At the top, Thanos' face looms large. The text 'HOW TO START?' is overlaid in large white letters.

HOW TO START?

DOCS.NATIVESCRIPT.ORG

The screenshot shows the NativeScript documentation website. At the top, there is a dark navigation bar with the NativeScript logo and links for Docs, Showcases, Resources, Blog, About, a GitHub icon, a search icon, and a highlighted 'Get Started' button. Below the navigation bar is a dark blue header with the word 'Documentation' in white. Underneath, a horizontal menu lists 'NativeScript Core', 'NativeScript with Angular', 'NativeScript with Vue.js', 'API Reference', and 'NativeScript Sidekick'. The main content area has a white background. On the left, a light blue sidebar contains a table of contents with sections like 'Introduction', 'Tutorial', and 'Core concepts'. On the right, the main article content is displayed, starting with a large heading 'Welcome to NativeScript' and a paragraph describing the framework. A green-bordered button labeled 'Improve this article' is positioned above the main heading. At the bottom of the article, there is a link: 'New to NativeScript? Try out NativeScript on your phone to see what a truly native app feels like.'

NativeScript | Docs | Showcases | Resources | Blog | About | GitHub | Search | **Get Started**

Documentation

NativeScript Core | **NativeScript with Angular** | NativeScript with Vue.js | API Reference | NativeScript Sidekick

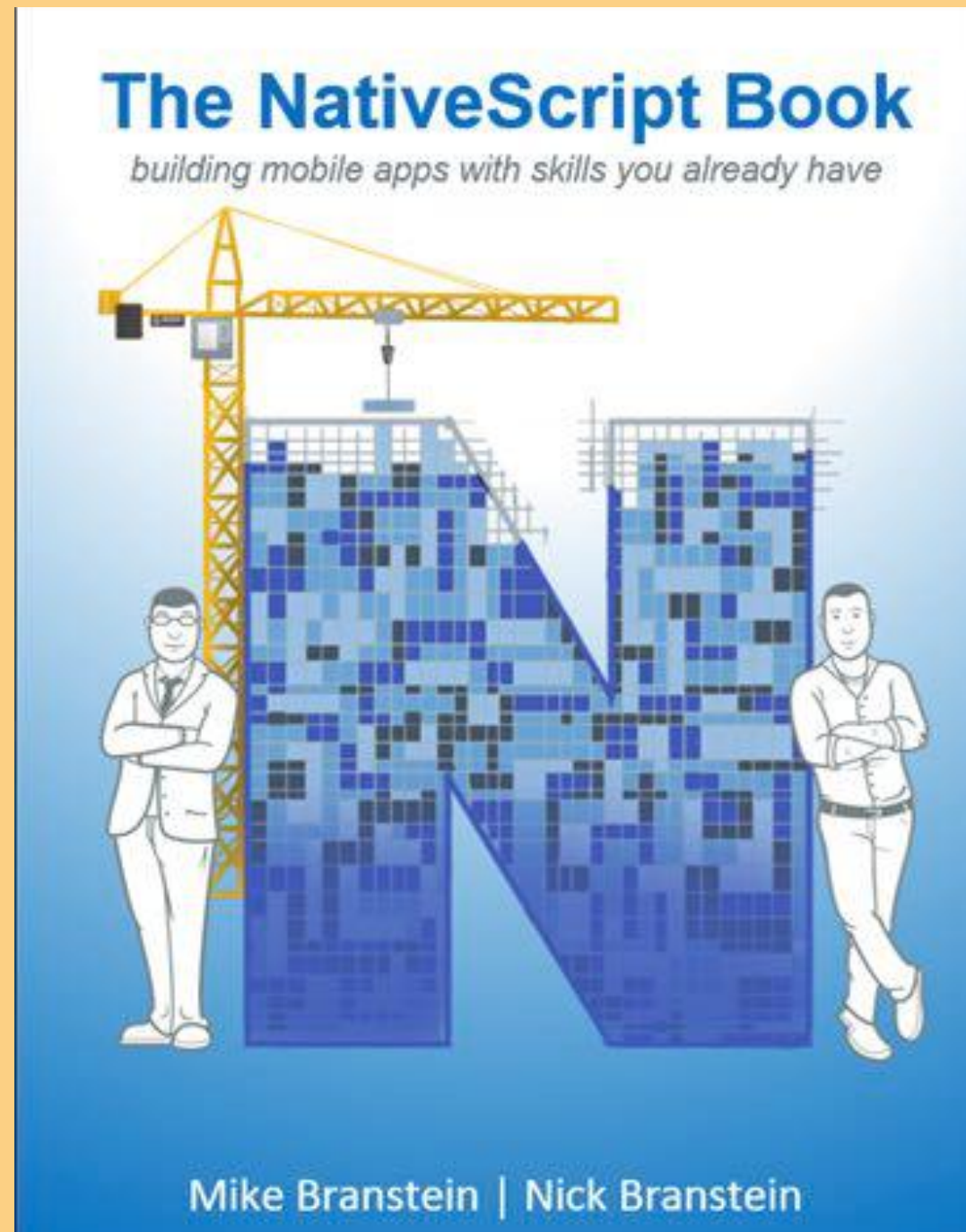
[Improve this article](#)

Welcome to NativeScript

NativeScript is how you build cross-platform, native iOS and Android apps without web views. Use Angular, TypeScript or modern JavaScript to get truly native UI and performance while reusing the skills and the code from your web projects. Get 100% access to native APIs via JavaScript and reuse of packages from npm, CocoaPods and Gradle. Open source and backed by Progress.

New to NativeScript? [Try out NativeScript on your phone](#) to see what a truly native app feels like.

NATIVESCRIPT.ORG/GET-THE-NATIVESCRIPT-BOOK



FORUM.NATIVESCRIPT.ORG

NativeScript		Sign Up	Log In	Q	☰
all categories ▾	Latest	Top	Categories		
Topic	Category	Users	Replies	Views	Activity
<p>🔔 Please update Sidekick to the latest version</p> <p>I'd like to notify you about an upcoming change in Sidekick. To grow the Sidekick cloud infrastructure, we are breaking the API compatibility with old Sidekick clients. How does this affect you? You will need to update ... read more</p>	Sidekick		1	33	2d
<p>🔔 🎁 Earn NativeScript Forum Rewards 🎁</p> <p>To thank those of you who put your time and energy into answering questions on the forum, we are kicking off the NativeScript Forum Rewards program! You may read the announcement blog post, but the tl;dr; is: Did some... read more</p>	Announcements		8	2.0k	13d
<p>🔔 Welcome to the NativeScript Community Forum!</p> <p>The NativeScript community forum is a resource for community interaction around the NativeScript framework. Learn more about NativeScript at http://www.nativescript.org. We have a code of conduct, please read it before... read more</p>			1	1.5k	Nov '17
How to create a new Component which is added to a StackLayout?	Angular		0	2	33m
☑️ frameModule.topmost() in The NativeScript Book (using v4.0.0)	Getting Started		2	11	3h
Sidedrawer in Vue	Vue.js		0	4	4h
TextField positive integer format / filter			1	6	4h
Create http request with WebWorker <small>nativescriptcore</small>	Angular		1	13	7h
☑️ Video picker delegate doesn't fire method <small>ios</small>	iOS		2	14	7h
☑️ Access to locationManager in Android	Android		2	28	9h

NATIVESCRIPTCOMMUNITY.SLACK.COM

The screenshot shows a Slack interface for the #general channel in the Nativescript Community. The left sidebar lists channels like #events, #ns-angular, #tutorials, #ui-for-nativescript, and #general (selected). It also shows direct messages with users like slackbot, rowdy, abhilash, anandv, brentonhouse, danwilson, elvismercado, emeka, sis0k0, walkerrunpdx, and wvegteren. The main chat area shows a conversation starting with a 'Yesterday' separator. A user named Michael says 'Thanks, Michael'. Yilmaz joins the channel at 8:37 AM. IFTTT posts a link to a Stack Overflow question about displaying local notifications in a NativeScript application with Angular, with a broken image placeholder. Bassie joins at 9:23 AM. Milad asks for help at 9:30 AM, reporting an error: 'Unable to apply changes on device: emulator-5554. Error is: Command ./gradlew failed with exit code 1.' mast3rd3mon suggests running 'tns run android'. Milad provides the error details: 'No manifest found in /home/milad/Public/MobileApp/app/App_Resources/Android/AndroidManifest.xml' and 'Could not find folder: /home/milad/Public/MobileApp/app'. mast3rd3mon suggests it might be a bad project creation. Milad clarifies they are using the 'nativescript vue' template. Cepheus joins at 11:25 AM. The bottom of the screen shows a message input field for #general.

NATIVESCRIPT.ORG/NATIVESCRIPT-SIDEKICK

Create App

App Name *

Project Folder *

 [Browse...](#)


Automatically set App ID



⚠ This value should match the App ID of your iOS provisioning profile [Need help?](#)



Project Type



JS NativeScript + JavaScript



TS NativeScript + TypeScript



 NativeScript + Angular & TypeScript

 **Blank** 
Blank template for NativeScript apps using Angular

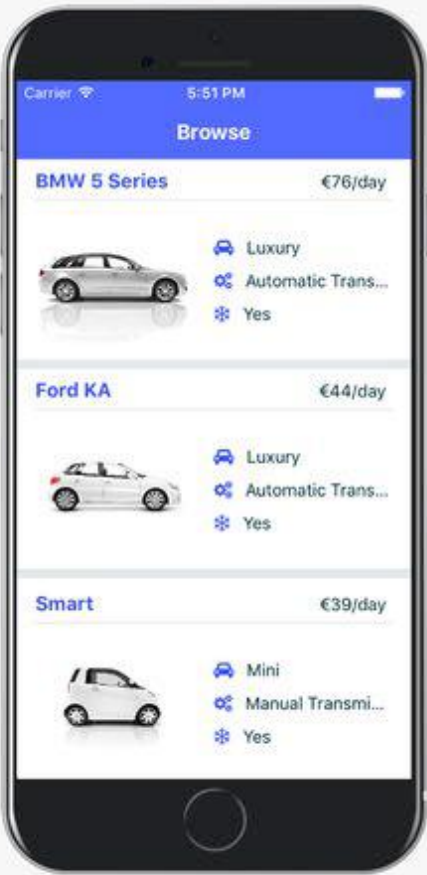
 **Navigation Drawer** 
Side navigation template

 **Tabs** 
Tabbed interface template

 **Master-Detail with Firebase** 
Master-detail interface to display collection of items from Firebase and inspect and edit selected item properties.

 **Master-Detail with Kinvey** 
Master-detail interface to display collection of items from Kinvey and inspect and edit selected item properties.

iOS Android



[Create App](#)


PLAY.NATIVESCRIPT.ORG

The screenshot displays the Play.Nativescript.Org web application editor. The interface is divided into several sections:


- Browser Address Bar:** Shows the URL `https://play.nativescript.org`.
- Navigation Bar:** Includes a 'New Playground' button and menu items for 'New', 'QR Code', 'Share', 'Download', and 'Preview'.
- Explorer:** A file tree on the left showing the project structure, including folders for 'app' and 'home', and files like `home.component.html`.
- Code Editor:** The central area showing the XML code for `home.component.html`. The code defines an ActionBar with the title 'Home' and a ScrollView containing a StackLayout with three labels: 'Play with NativeScript!', 'Write code in the editor or drag and drop components to build a NativeScript mobile application.', and 'Scan the QR code with your mobile device and watch the changes sync live while you play with the code.'.
- Components Panel:** A panel at the bottom left showing a list of UI components: Button, Image, Label, Switch, and Slider.
- Preview:** A mobile device simulation on the right showing the rendered application. The title bar says 'Home', and the content area displays the text from the code editor.
- Logs/Errors:** A panel at the bottom of the editor area for viewing logs and errors.

MARKET.NATIVESCRIPT.ORG





Verified vs. unverified plugins. Want to know the difference? ×

 NativeScript | Marketplace Authors | NativeScript.org





Plugins Templates

 Search for plugins


Recently Verified

-  **Telerik Reporting**
by Peter Staev | Version 1.0.2
VERIFIED A helper library for accessing Telerik Reporting REST API
-  **UI Sidedrawer**
by tns-bot | Version 4.0.0
VERIFIED Add additional space to your app. Use it for navigation or custom content. Slides in from all four sides of the screen.
-  **UI Chart**
by tns-bot | Version 3.5.0
VERIFIED Create beautiful and flexible charts with smooth interaction and zooming - area, line, pie, scatter and more.
-  **UI Calendar**
by tns-bot | Version 3.5.2
VERIFIED Month, year, week and day views. Single, multiple and range date Selection. Special and disabled dates.

Recently Updated

-  **Localize**
by Ludovic Fabrèges | Version 2.3.2
VERIFIED Native internationalization plugin for NativeScript using native capabilities of each platform
-  **Headset Detection**
by Eddy Verbruggen | Version 1.0.0
Detect headset (dis)connection.
-  **Wikitude**
by Brendan Ingham | Version 7.2.1-1.5.0
Wikitude Augmented Reality in Nativescript
-  **Cv Plugin Ssi**
by dnelson-simplec | Version 0.0.22

NATIVESCRIPTING.COM

 **NativeScripting** Training About Login








Turn up your NativeScript training

Are you ready to start learning NativeScript? Get the FREE getting started guides for NativeScript Core and NativeScript with Angular.

Do you already know the basics and want to go deeper? Our NativeScript Pro courses will take you to a finished and polished product that you can launch in the app stores. Courses can be purchased on-demand, or save money with our bundles! Only 100 of each bundle are made available for the special pre-launch price. Grab them while we have them.

[NativeScript Core](#) [NativeScript with Angular](#)

Courses for the NativeScript Core minded folks. MVVM, TypeScript, and no other UI frameworks.

 NativeScript Plugins: Creating Custom View Components Nathan Walker   NEW	 NativeScript Core Getting Started Guide Alex Ziskind FREE COURSE  NEW	 NativeScript Core Pro Alex Ziskind  PRESALE
LEARN MORE	FREE COURSE	LEARN MORE



A dynamic action scene featuring Spider-Man in his iconic red and blue suit, flying through a cityscape. He is positioned in the upper center, with his right arm extended forward. The background shows tall buildings and a cloudy sky. In the lower right foreground, a large, dark tank is visible, with a red star emblem on its side. The overall atmosphere is intense and cinematic.

MAR-KUP
LIKE ON THE WEB

MARKUP

<http://2xr.nl/markup>

<https://docs.nativescript.org/ui/components>

```
<ActionBar title="Native elements"/>
<StackLayout>
  <Button text="Button" tap="{{ onButtonTap }}" />
  <Switch checked="false" />
  <SegmentedBar items="{{ segmentedBarItemItems }}" />
  <Progress value="0" maxValue="100" />
  <Slider value="0" minValue="0" maxValue="100" />
  <DatePicker year="2018" month="1" day="1"
    minDate="1970-01-01" maxDate="2100-12-31" />
</StackLayout>
```

Native elements



ITEM 1

ITEM 2

ITEM 3



31

Dec

2017

01

Jan

2018

02

Feb

2019

Native elements

Button



Item 1

Item 2

Item 3



29

October

2015

30

November

2016

31

December

2017

1

January

2018

2

February

2019

3

March

2020

4

April

2021

TEXTFIELD

https://docs.nativescript.org/api-reference/modules/_ui_text_field_.textfield

```
<TextField/>
```

```
<TextField text="" />
```

```
<TextField hint="Enter your name" />
```

TEXTFIELD: AUTOCAPITALIZATION

https://docs.nativescript.org/api-reference/modules/_ui_text_field_.textfield

```
<TextField autocapitalizationType="allCharacters" />
```

```
<TextField autocapitalizationType="sentences" />
```

```
<TextField autocapitalizationType="words" />
```


TEXTFIELD: AUTOCAPITALIZATION

https://docs.nativescript.org/api-reference/modules/_ui_text_field_.textfield

```
<TextField autocapitalizationType="allCharacters" />
```

```
<TextField autocapitalizationType="sentences" />
```

```
<TextField autocapitalizationType="words" />
```

```
<TextField autocapitalizationType="none" />
```

TEXTFIELD: AUTOCORRECT

https://docs.nativescript.org/api-reference/modules/_ui_text_field_.textfield

```
<TextField autocorrect="true" />
```

```
<TextField autocorrect="false" />
```

TEXTFIELD: KEYBOARDTYPE

<http://2xr.nl/keyboardType>

https://docs.nativescript.org/api-reference/modules/_ui_enums_.keyboardtype

```
<TextField keyboardType="number" />
```

```
<TextField keyboardType="datetime" />
```

```
<TextField keyboardType="phone" />
```

```
<TextField keyboardType="email" />
```

```
<TextField keyboardType="url" />
```

keyboardType

datetime

number

phone

email

url

default

keyboardType

datetime

number

phone

email

url

default

TEXTFIELD: MORE ATTRIBUTES

https://docs.nativescript.org/api-reference/modules/_ui_text_field_.textfield

```
<TextField textAlignment="" />
```

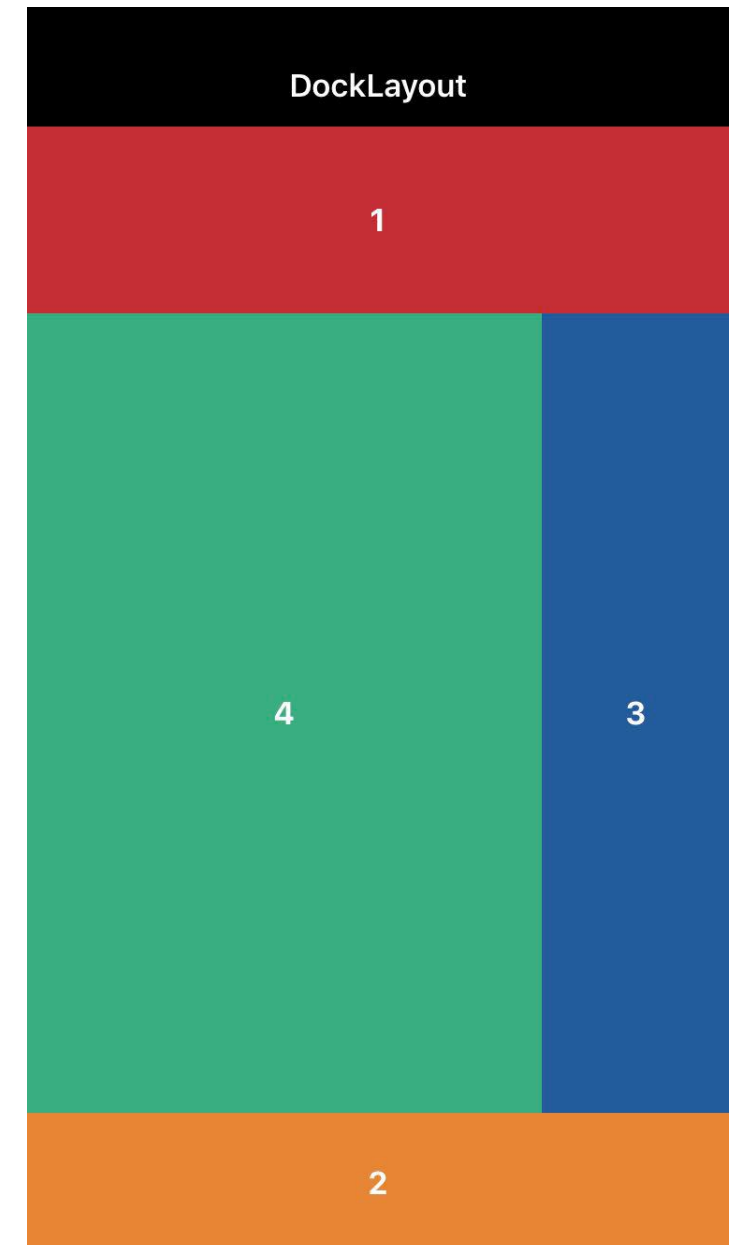
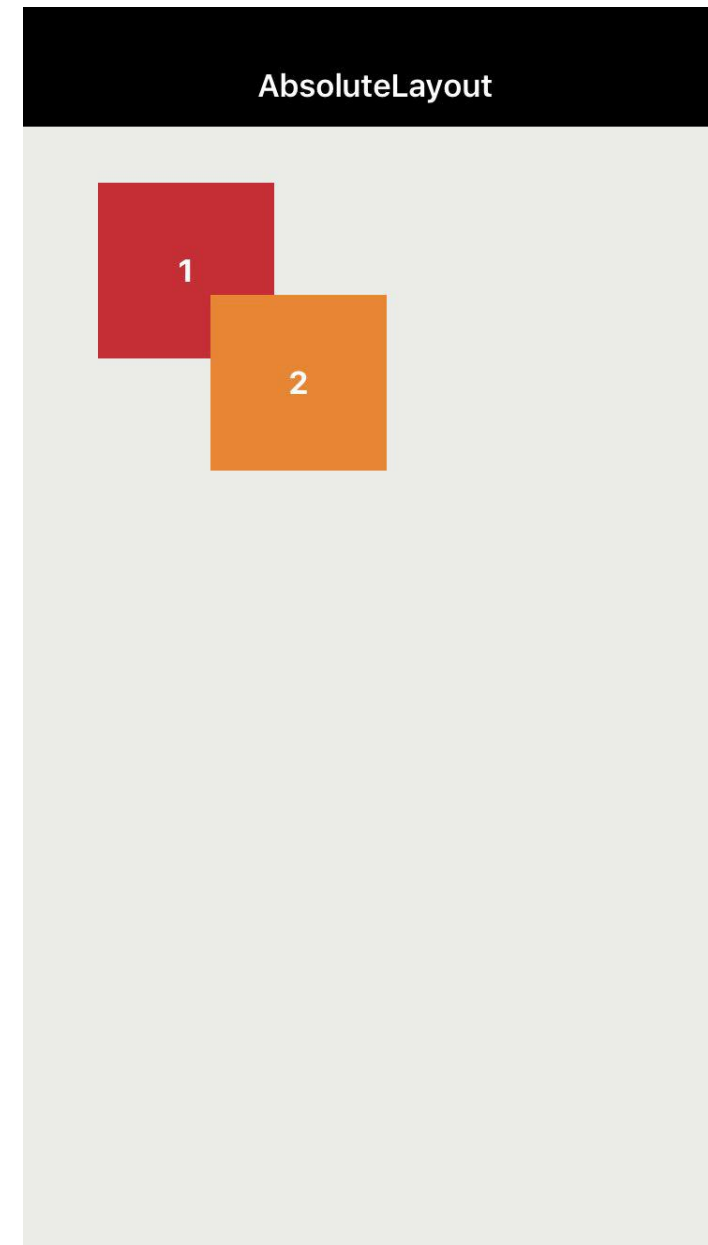
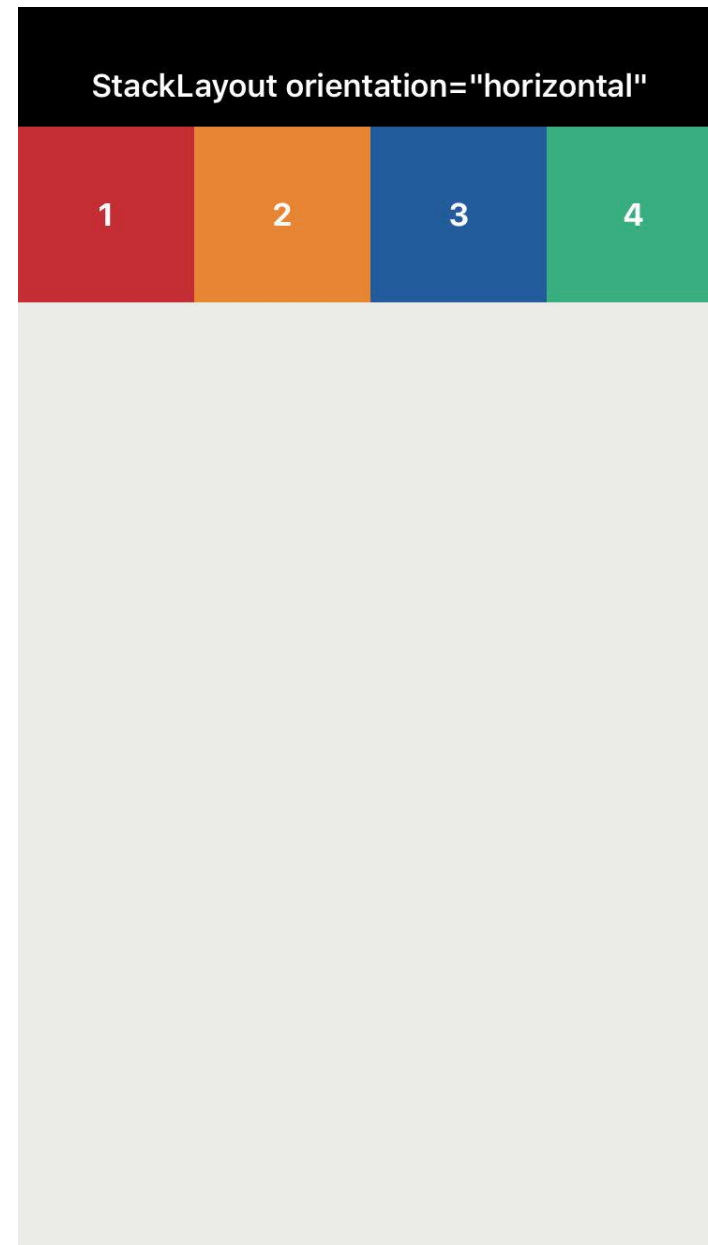
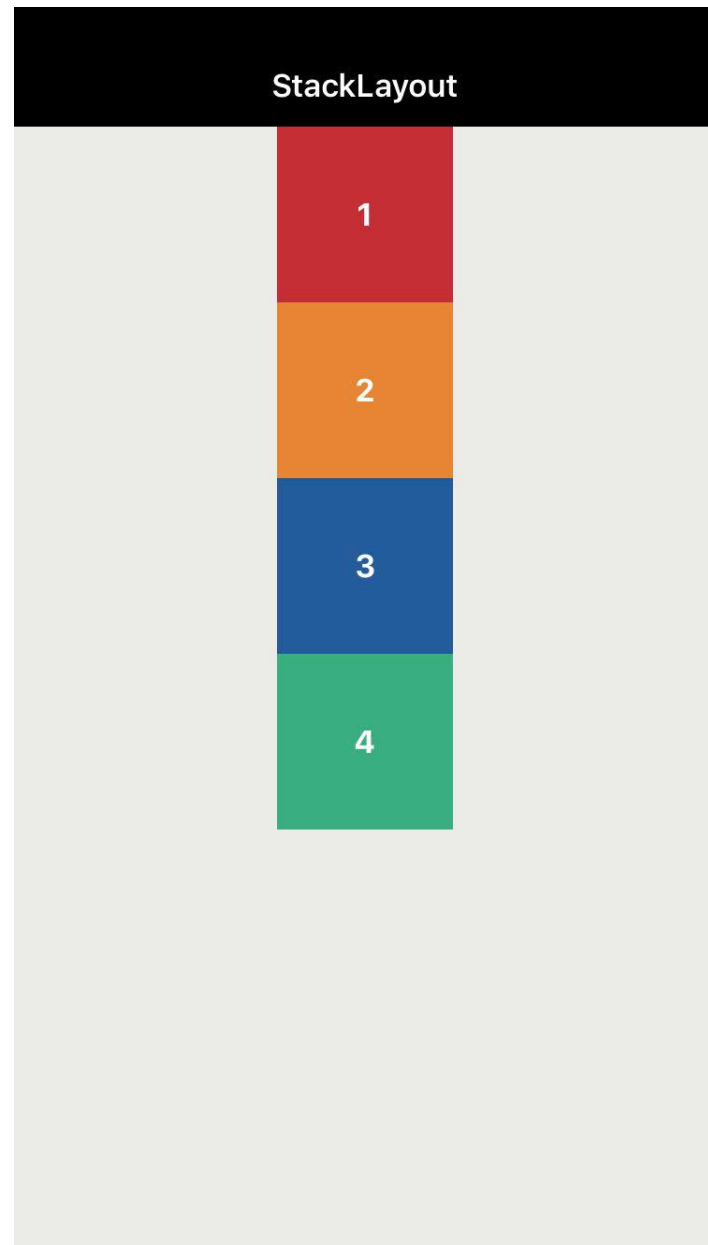
```
<TextField visibility="" />
```

```
<TextField width="" />
```

```
<TextField maxLength="" />
```

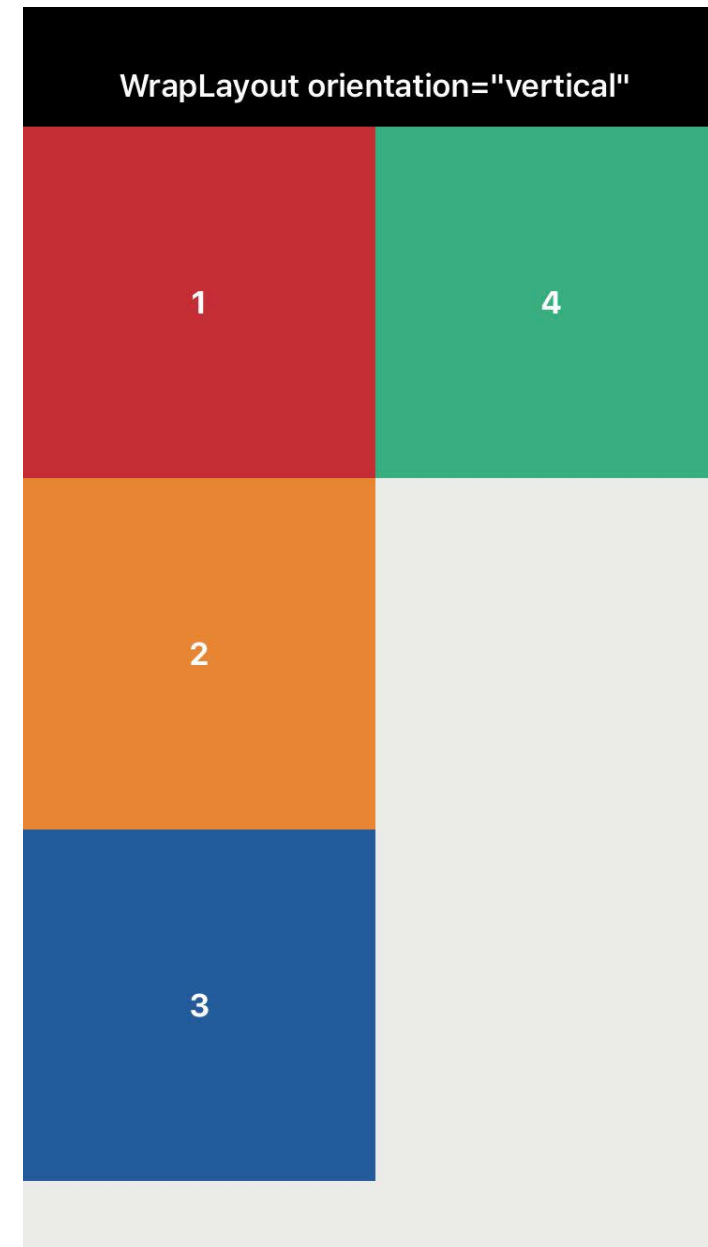
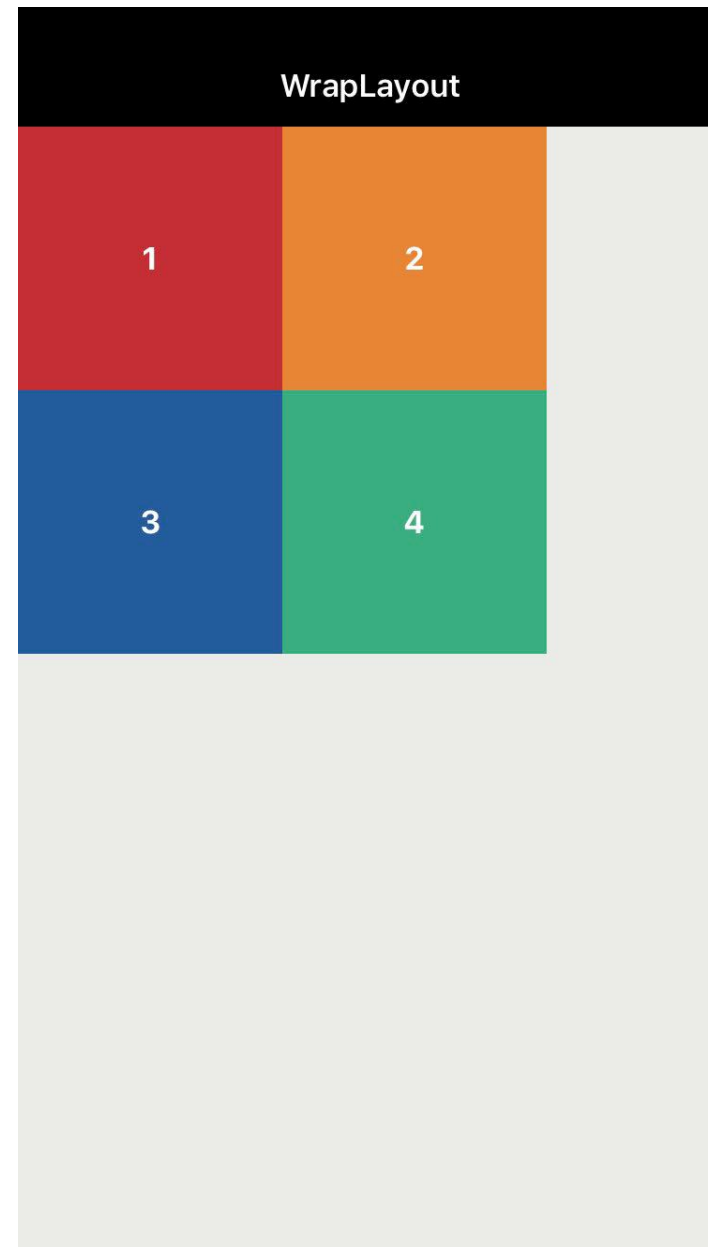
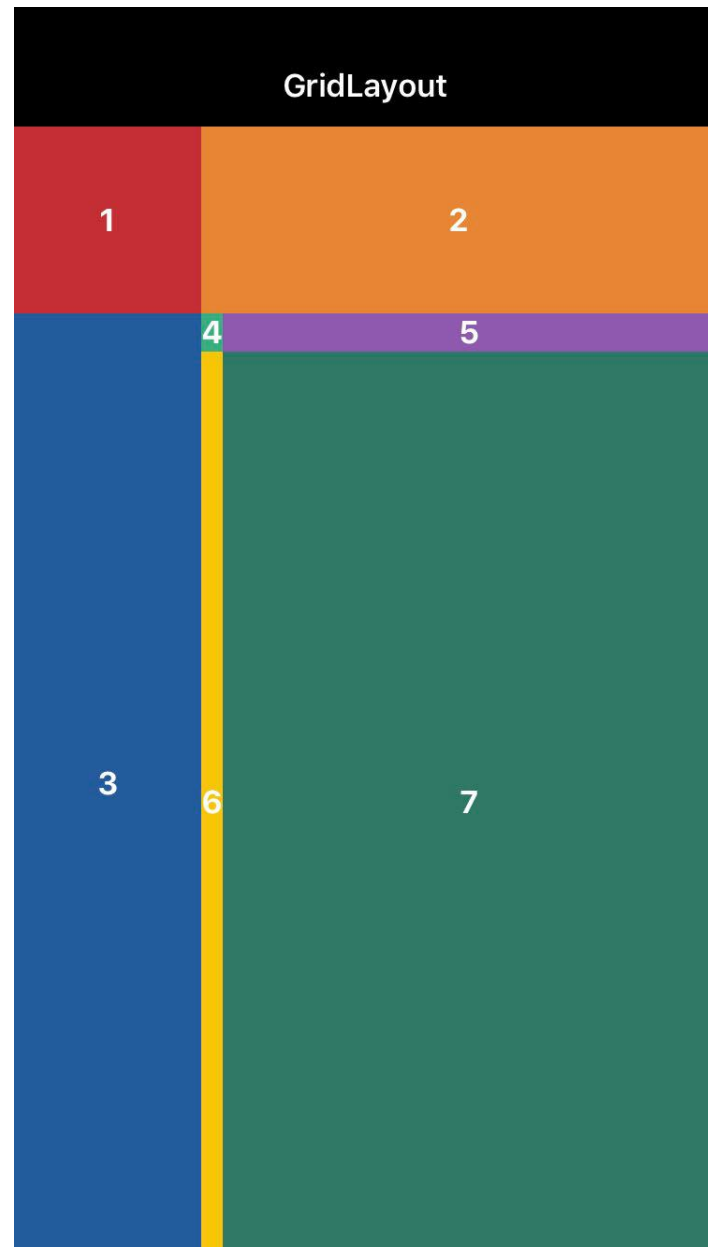
LAYOUTS

<https://docs.nativescript.org/ui/layouts>



LAYOUTS

<https://docs.nativescript.org/ui/layouts>



DOCKLAYOUT

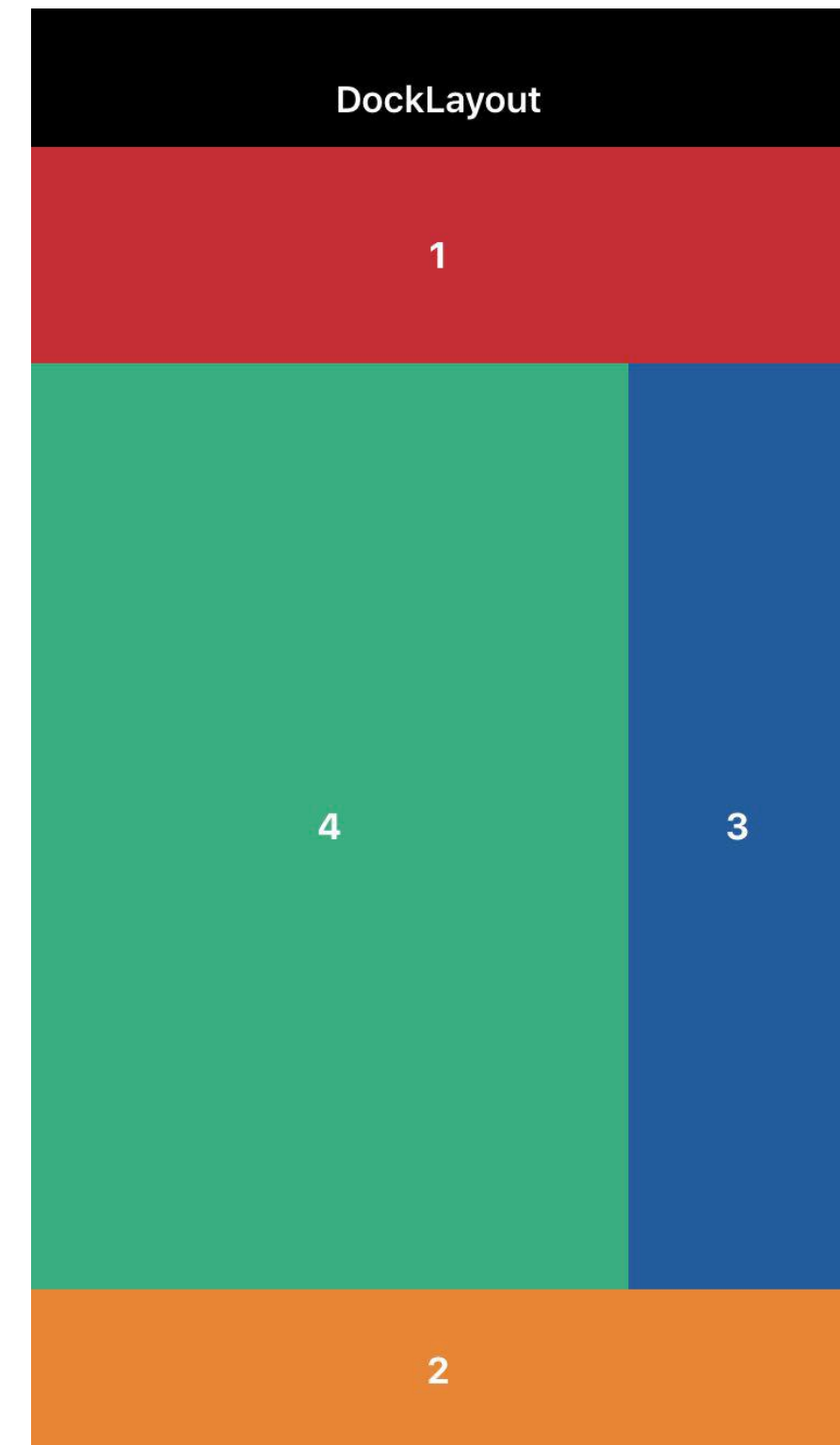
<https://docs.nativescript.org/ui/layouts>

```
<DockLayout height="100%"
  stretchLastChild="true">

  <Label text="1" dock="top" />
  <Label text="2" dock="bottom" />
  <Label text="3" dock="right" />
  <Label text="4" dock="left" />

</DockLayout>
```

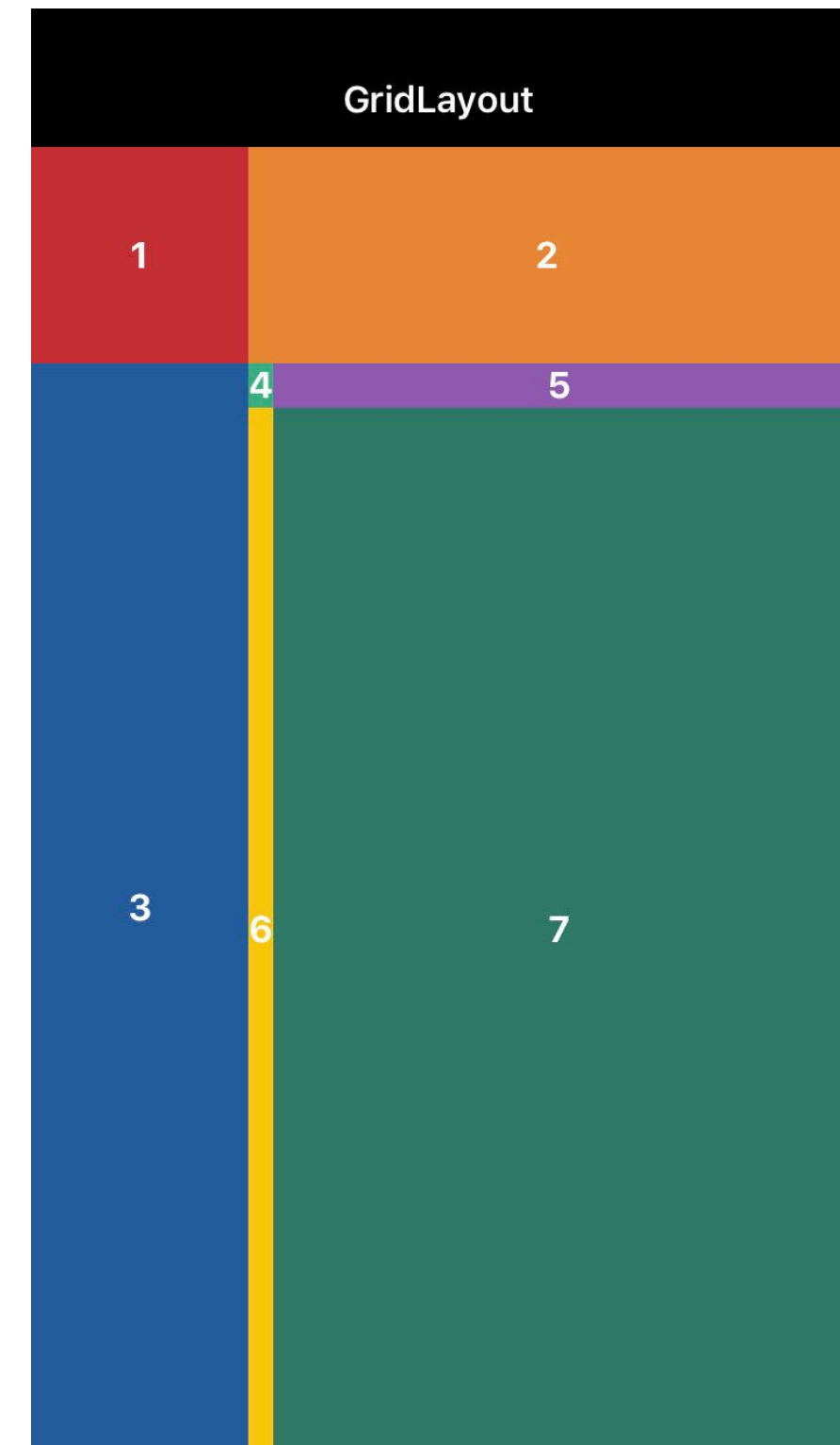
```
<!--
  1 + 2 have fixed height
  3 has fixed width
  4 will get all remaining space
-->
```



GRIDLAYOUT

<https://docs.nativescript.org/ui/layouts>

```
<GridLayout
  rows="100, auto, *"
  columns="100, auto, *">
  <Label text="1" row="0" col="0">
  <Label text="2" row="0" col="1"
    colspan="2"/>
  <Label text="3" row="1" col="0"
    rowspan="2"/>
  <Label text="4" row="1" col="1"/>
  <Label text="5" row="1" col="2"/>
  <Label text="6" row="2" col="1"/>
  <Label text="7" row="2" col="2"/>
</GridLayout>
```



CASCADING STYLE SHEETS

CASCADING STYLE SHEETS

<https://docs.nativescript.org/ui/styling>

- **a large subset of CSS properties is supported**
- **device-independent pixels**
- **application-wide, page-specific or inline**
- **platform-specific possible**

CASCADING STYLE SHEETS

```
button,  
.btn,  
button[btn-type="primary"] {  
  height: 40;  
  font-size: 16;  
  color: rgb(197, 46, 54);  
  background-color: #f6c600;  
  text-transform: uppercase;  
  opacity: 0.5;  
}
```

CSS ANIMATIONS

<https://docs.nativescript.org/ui/animation-css>

- **opacity**
- **background-color**
- **transform: translate**
- **transform: scale**
- **transform: rotate**

CSS ANIMATIONS

```
@keyframes example {  
  0%    { background-color: red; transform: translate(0, 0); }  
  25%   { background-color: yellow; transform: translate(200, 0); }  
  50%   { background-color: blue; transform: translate(200, 200); }  
  75%   { background-color: green; transform: translate(0, 200); }  
  100%  { background-color: red; transform: translate(0, 0); }  
}  
  
.view {  
  animation-name: example;  
  animation-duration: 4s;  
  animation-fill-mode: forwards;  
}
```

SASS (CSS WITH SUPERPOWERS)

<https://docs.nativescript.org/ui/theme#sass-usage>

- **variables**

```
$dark: #022734;  
.button-primary { background-color: $dark; }
```

- **nested rules**

```
StackLayout.error {  
  Label { color: red; }  
}
```


TABVIEW

```
<TabView height="100%">  
  <StackLayout *tabItem="{title: 'Rocket Raccoon'}" class="full rocket"/>  
  <StackLayout *tabItem="{title: 'Harley Quinn'}" class="full harley"/>  
  <StackLayout *tabItem="{title: 'Hulk'}" class="full hulk"/>  
</TabView>
```

TABVIEW

```
.full {  
  background-size: cover;  
  background-position: center;  
  background-repeat: no-repeat;  
}  
  
.rocket { background-image: url("~/images/rocket-raccoon.jpg"); }  
  
.harley { background-image: url("~/images/harley-quinn.jpg"); }  
  
.hulk { background-image: url("~/images/hulk.jpg"); }
```

TabView

ROCKET
RACCOON

HARLEY QUINN

HULK



TabView



Rocket Raccoon

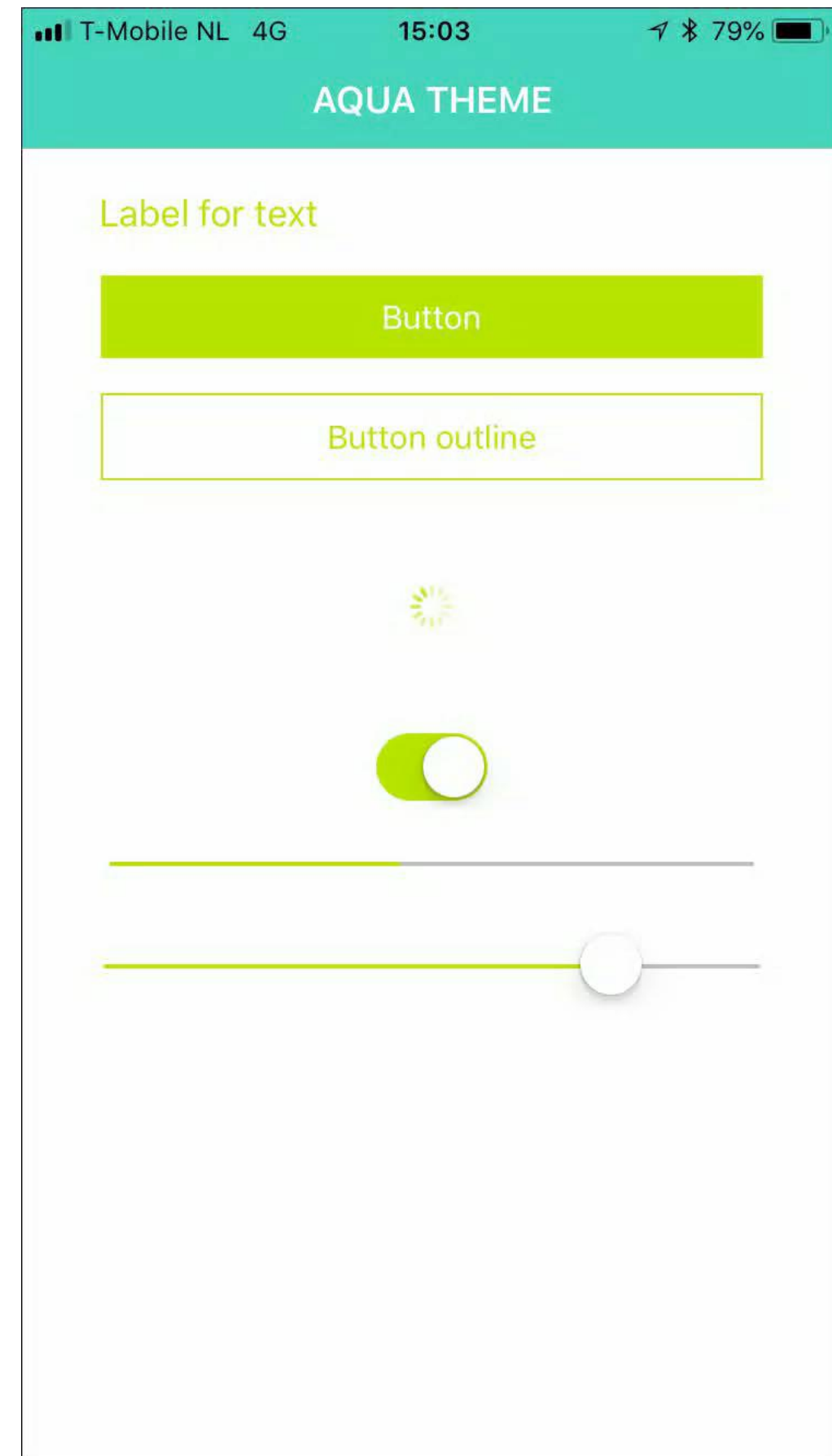
Harley Quinn

Hulk

{N} CORE THEMES

<https://docs.nativescript.org/ui/theme>

- **ready to use color schemes**
- **tailored for iOS and Android**



NATIVESCRIPT THEME BUILDER

<https://www.nativescriptthemebuilder.com>

The screenshot displays the NativeScript Theme Builder web application. The interface is divided into a left sidebar and three main mobile device simulators.

Left Sidebar:

- Header: NativeScript Theme Builder
- Navigation: DOWNLOAD THEME (button)
- GLOBAL: Simulator View (dropdown: iOS), Action Bar Color (color picker), View Background Color (color picker), Text Color (color picker)
- UI WIDGETS
- LISTVIEWS
- TEXT
- BUTTONS
- FORM ELEMENTS
- TABS AND DRAWER
- Footer: Contribute some ❤️ on GitHub

Mobile Simulators:

- UI Widgets:** Segmented Bar (Item One, Item Two, Item Three), Switch (iOS, toggle on), Activity Indicator (iOS, sun icon), Slider (hearts, slider), Progress Indicator
- ListViews:** List of items with avatars and text: Arcade Fire (Funeral), Bon Iver (For Emma, Forever Ago), Daft Punk (Random Access Memories), Elbow (Build a Rocket Boy!), LCD Soundsystem (This is Happening), Lucius
- Text:** Heading .h1, Heading .h2, Heading .h3, Heading .h4, Heading .h5, Heading .h6, text-primary, .text-danger, text-muted, bg-primary, .bg-danger, lowercase text .text-lowercase, UPPERCASE TEXT .text-uppercase

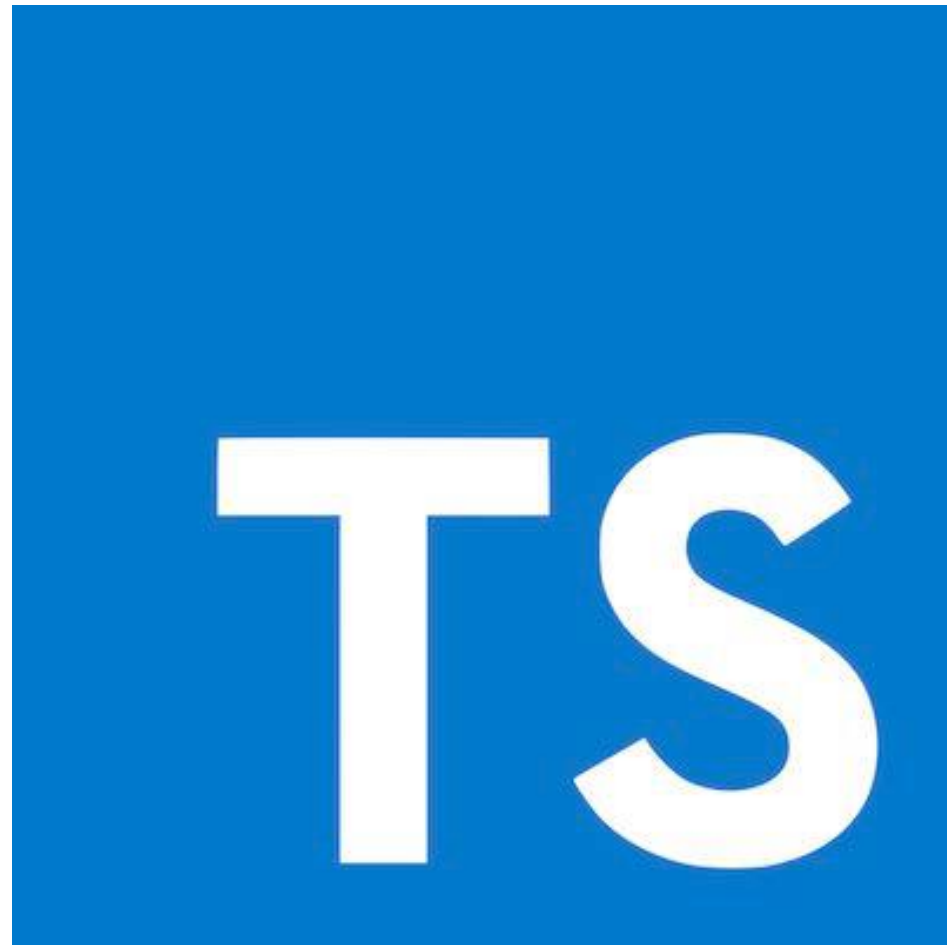




4 FANTASTIC CHOICES

JS

JAVASCRIPT



TYPESCRIPT



VUE.JS



ANGULAR

ANGULAR

- **Opinionated JavaScript framework**
- **Typescript**
- **Full-featured routing**
- **Dependency injection**
- **Data binding**

ANGULAR

```
import { LanguageService } from "../../services/language.service";  
  
export class HomeComponent {  
  
    constructor(private languageService: LanguageService) {}  
  
    changeLanguage(lang: string) {  
        this.languageService.setLanguage(lang);  
    }  
  
}
```

ANGULAR

one-way data binding

```
<Label [text]="text"></Label>
```

```
<Label text="{{text}}"></Label>
```

```
text: string = "Hello Vilnius!";
```

ANGULAR

two-way data binding 🍌 🍌 🎁

```
<TextField
  keyboardType="number"
  (focus)="OnInputFocus($event)"
  (blur)="OnInputBlur($event)"
  [maxLength]="maxLengthSalary"
  [(ngModel)]="salary">
</TextField>
```



CATWOMAN (2004)

A close-up photograph of Halle Berry as Catwoman. She is wearing a dark, textured cat mask that covers her eyes and nose, leaving only her mouth and chin visible. Her hair is dark and styled in a way that frames her face. She is looking upwards and to the right with a slight, enigmatic smile. The background is dark and out of focus.

“ I WANT TO THANK WARNER BROS. FOR CASTING ME IN THIS PIECE-OF-SH*T, GOD-AWFUL MOVIE. ”

HALLE BERRY



AFV

ANGULAR: PERFORMANCE

- **Uglify**
 - **code minification**
 - **reduces names of local variables**
- **Webpack**
 - **traverses your source tree via module imports**
 - **only include modules that are used**

ANGULAR: PERFORMANCE

- **Ahead-of-Time compilation**
 - **pre-compiles application components and templates**
 - **Angular compiler not included in bundle**
- **Lazy-Load modules**
 - **not all modules are needed at startup**
 - **pre-load in background**



Damaged

NATIVE CODE

{N} ANGULAR DIRECTORY STRUCTURE

```
app/components/slider/
```

```
  slider.component.html
```

```
  slider.component.ts
```

```
  slider.component.css
```

```
  slider-routing.module.ts
```

```
  slider-module.ts
```

SLIDER.COMPONENT.HTML

```
<ActionBar title="Slider"></ActionBar>
```

```
<StackLayout>
```

```
    <Slider value="70"></Slider>
```

```
</StackLayout>
```


SLIDER.COMPONENT.TS

```
import { Component } from "@angular/core";

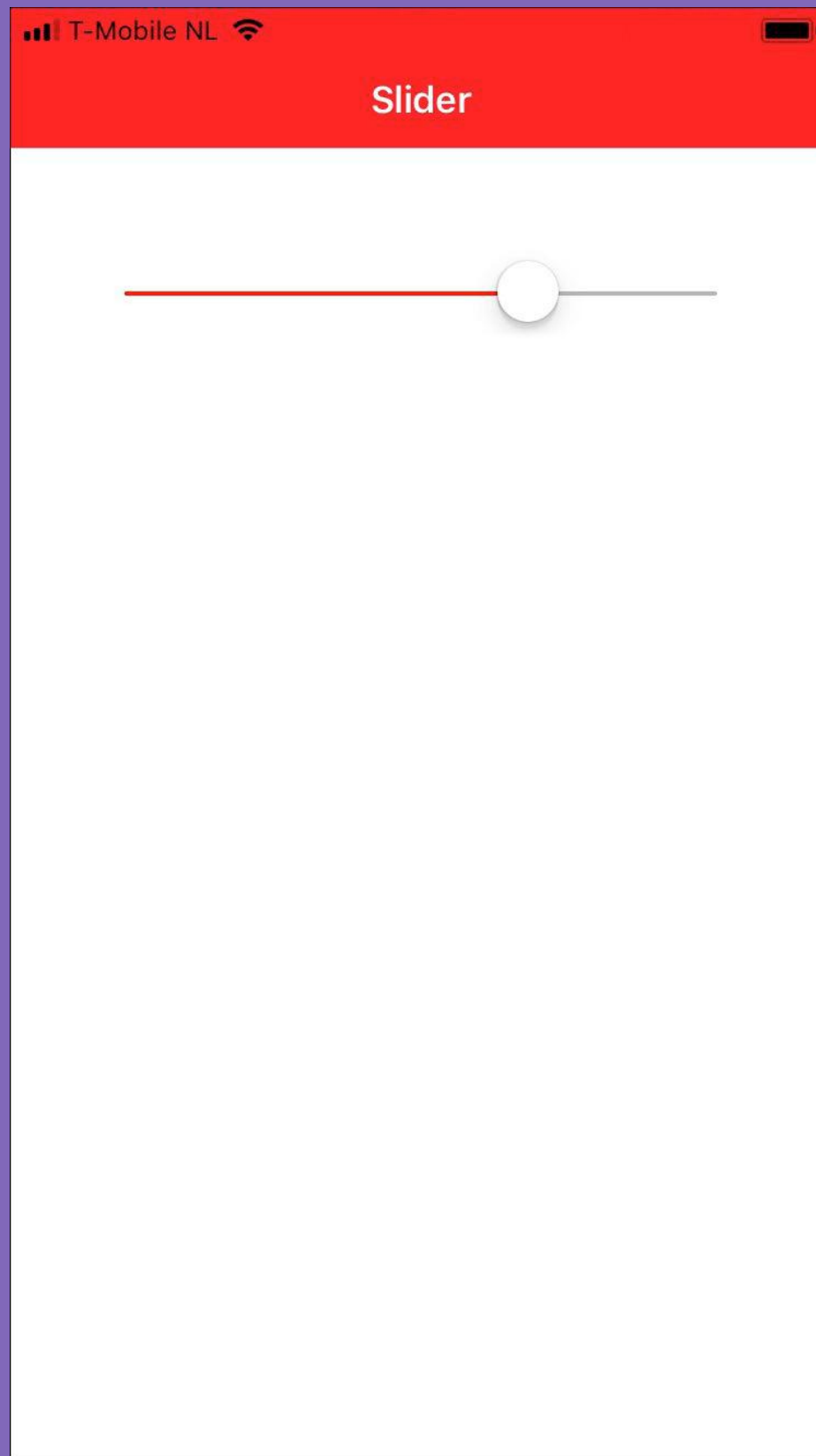
@Component({
  selector: "app-slider",
  moduleId: module.id,
  templateUrl: "slider.component.html",
  styleUrls: ["slider.component.css"]
})
export class SliderComponent {
  constructor() {}
}
```

SLIDER.COMPONENT.CSS

```
ActionBar {  
  color: white;  
  background-color: red;  
}
```

```
StackLayout {  
  padding: 50;  
}
```

```
Slider {  
  background-color: red;  
}
```



SLIDER.COMPONENT.HTML

```
<ActionBar title="Slider"></ActionBar>
```

```
<StackLayout>  
  <Slider slider-icon value="70"></Slider>  
</StackLayout>
```

- **attribute directive**
- **changes the appearance or behavior of an element**

SLIDER.DIRECTIVE.TS

```
import { Directive, ElementRef } from "@angular/core";
import { isIOS } from "platform";

@Directive({
  selector: "[slider-icon]"
})
export class SliderIconDirective {
  constructor(private el: ElementRef) {
    if (isIOS) {
      let uiSlider = this.el.nativeElement.ios;
      uiSlider.setThumbImageForState(
        UIImage.imageNamed("image.png"), UIControlState.Normal);
    }
  }
}
```

SLIDER.DIRECTIVE.TS

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import { Directive, ElementRef } from "@angular/core";
import { isIOS } from "platform";

@Directive({
  selector: "[slider-icon]"
})
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SLIDER.DIRECTIVE.TS

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  constructor(private el: ElementRef) {
    if (isIOS) {
      let uiSlider = this.el.nativeElement.ios;
      uiSlider.setThumbImageForState(
        UIImage.imageNamed("image.png"), UIControlState.Normal);
    }
  }
}
```

SLIDER.MODULE.TS

```
import { NgModule, NO_ERRORS_SCHEMA } from "@angular/core";
import { NativeScriptModule } from "nativescript-angular/nativescript.module";

import { SliderIconDirective } from "./slider.directive";

import { SliderRoutingModule } from "./slider-routing.module";
import { SliderComponent } from "./slider.component";

@NgModule({
  imports: [NativeScriptModule, SliderRoutingModule],
  declarations: [SliderComponent, SliderIconDirective],
  schemas: [NO_ERRORS_SCHEMA]
})
export class SliderModule {}
```


Hello DevDays Vilnius!

It's great to be here
and introduce
NativeScript to you.

Slider

English

Lithuanian

Machine Learning

Speech Recognition





PACKAGES & LIBRARIES

NODE PACKAGE MANAGER

- commonly known as npm
- ready to use JavaScript modules
- about 650.000 packages of free, reusable code
- npm install **packagename** --save
- package.json

NODE PACKAGE MANAGER

CRYPTO-JS

Cryptography standards (AES-256)

ACCOUNTING.JS

Number, money and currency formatting

EMAIL-VALIDATOR

Email syntax validator

ANDROID ARSENAL

- **libraries for Android (Java / Kotlin)**

COCOPODS

- **libraries for iOS (Objective-C / Swift)**





MULTILINGUAL: NGX-TRANSLATE

MULTILINGUAL: NGX-TRANSLATE

- **internationalization library for Angular 2+**
- **define translations in different languages**
- **switch between them easily**
- **no hardcoded text/labels, all in one place**
- **start directly, even with one language**

MULTILINGUAL: NGX-TRANSLATE

```
{
  "HOME": {
    "TITLE": "Hello DevDays Vilnius!",
    "TEXT": "It's great to be here and introduce NativeScript to you.",
    "SLIDER": "Slider",
    "ENGLISH": "English",
    "FOREIGN": "Lithuanian",
    "MACHINE_LEARNING": "Machine Learning",
    "SPEECH_RECOGNITION": "Speech Recognition"
  }
}
```

MULTILINGUAL: NGX-TRANSLATE

```
<ActionBar  
  [title]=" 'HOME.TITLE' | translate">  
</ActionBar>
```

```
<Button  
  [text]=" 'HOME.ENGLISH' | translate"  
  [tap]="changeLanguage( 'en' )">  
</Button>
```

[] = one way data binding in Angular

| = display-value transformations

Hello DevDays Vilnius!

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A promotional image for the X-Men movie franchise, featuring the main cast members in their iconic costumes. The background is a dark, moody blue with a wet, reflective surface. The characters are arranged in a line, looking forward with serious expressions. The text 'NATIVE SCRIPT' and 'PLUGINS' is overlaid in large, white, bold, sans-serif font across the center of the image.

NATIVE SCRIPT
PLUGINS

A promotional image for the X-Men movie franchise. It features a group of characters from the series, including Wolverine, Storm, Jean Grey, Cyclops, and others, standing in a line against a dark, blue-toned background. The characters are dressed in their iconic costumes. Overlaid on the image is large, bold, white text that reads "X-MEN PLUGINS ANATOMY". The text is split into two lines: "X-MEN PLUGINS" on the top line and "ANATOMY" on the bottom line. The font is a clean, sans-serif typeface.

**X-MEN PLUGINS
ANATOMY**

VERSION-NUMBER.IOS.TS

```
export class VersionNumber {  
  get() {  
    let version = NSBundle.mainBundle.objectForInfoDictionaryKey("CFBundleShortVersionString");  
    return version;  
  }  
}
```

VERSION-NUMBER.ANDROID.TS

```
import * as application from "application";

export class VersionNumber {
  get() {
    let PackageManager = android.content.pm.PackageManager;
    let pkg = application.android.context
      .getPackageManager()
      .getPackageInfo(application.android.context.getPackageName(), PackageManager.GET_META_DATA);
    return pkg.versionName;
  }
}
```

VERSION-NUMBER.D.TS

```
export declare class VersionNumber {  
    get(): any;  
}
```

INSTALL

```
tns plugin add nativescript-version-number
```

USE

```
import { VersionNumber } from "nativescript-version-number";  
  
let version = new VersionNumber().get();
```

market.nativescript.org









Verified vs. unverified plugins. Want to know the difference?

NativeScript | Marketplace NativeScript.org

FEATURED

Discover high quality plugins, templates and tools for your NativeScript app

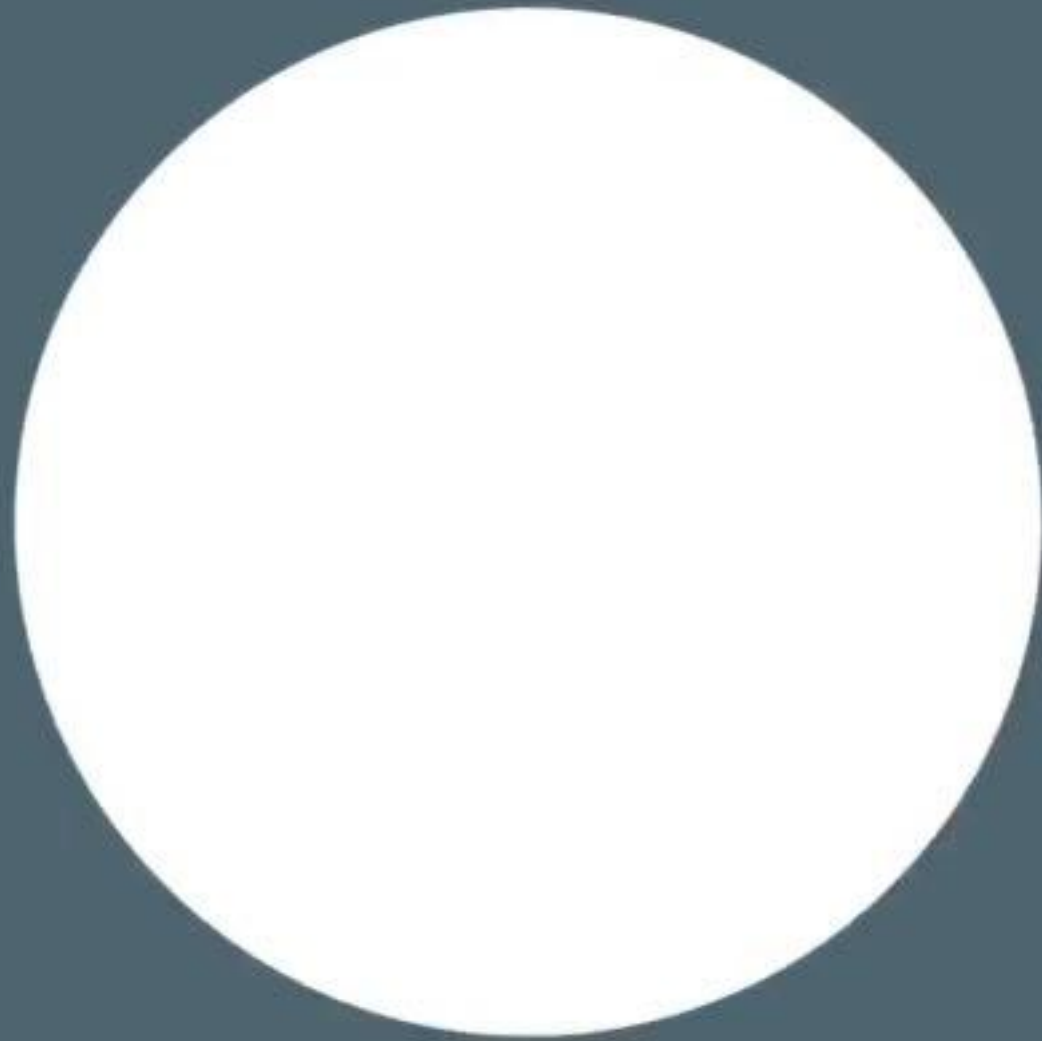
Search for plugins

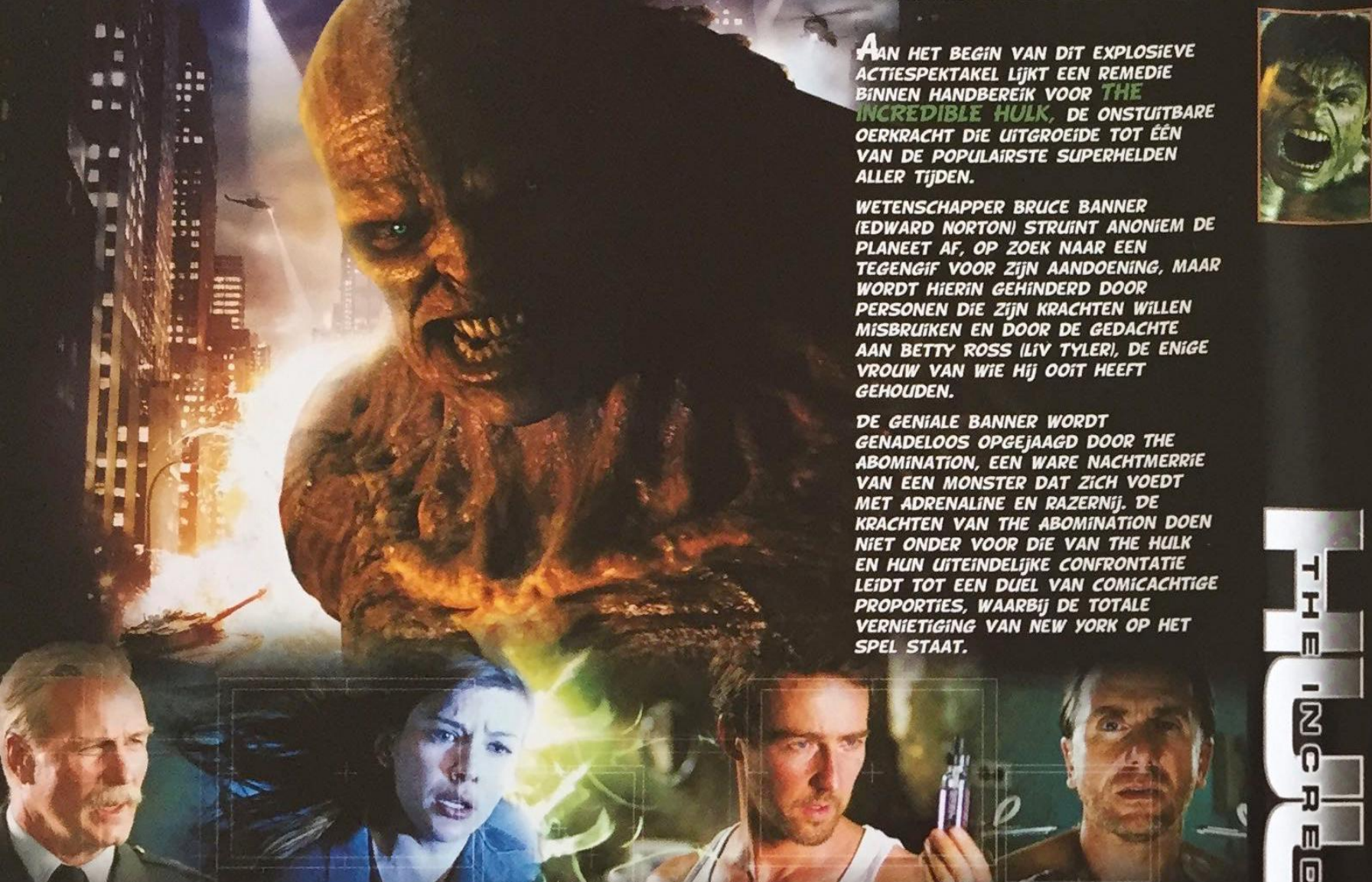
 <p>Image Picker by NativeScript Team Version 3.0.6 A plugin for the NativeScript framework implementing multiple image picker</p>	 <p>Fingerprint Auth by Eddy Verbruggen Version 4.0.1 A fingerprint authentication plugin for use in NativeScript apps</p>
 <p>Facebook by NativeScript Team Version 2.0.1 NativeScript plugin, wrapper of native Facebook SDK for Adroid and iOS.</p>	 <p>Pro UI by Progress Version 3.1.2 Progress NativeScript Pro UI is a suite of rich user interface components based on the native iOS and Android implementations.</p>
 <p>Plugin Firebase by Telerik / Eddy Verbruggen Version 4.1.1 Fire. Base. Firebase!</p>	 <p>Google Maps SDK by Dan Prietti Version 2.3.2 Google Maps SDK plugin for Nativescript</p>
 <p>Permissions by Nathanael Anderson Version 1.2.3 A NativeScript plugin to deal with Android permissions</p>	 <p>Unit Test Runner by Telerik Version 0.3.4 NativeScript unit test runner component.</p>



A cinematic scene from the Iron Man franchise showing Tony Stark in his workshop. He is standing in the center, looking at a glowing circular platform on the floor. The room is filled with various Iron Man suits in display cases. The lighting is dramatic, with blue and white highlights.

MANAGING LEARNING





AAN HET BEGIN VAN DIT EXPLOSIEVE ACTIESPEKTAKEL LIJKT EEN REMEDIE BINNEN HANDBEREIK VOOR **THE INCREDIBLE HULK**, DE ONSTUITBARE OERKRACHT DIE UITGROEIDE TOT EEN VAN DE POPULAIRSTE SUPERHELDEN ALLER TIJDEN.

WETENSCHAPPER BRUCE BANNER (EDWARD NORTON) STRUIJNT ANONIEM DE PLANEET AF, OP ZOEK NAAR EEN TEGENGIF VOOR ZIJN AANDOENING, MAAR WORDT HIERIN GEHINDERD DOOR PERSONEN DIE ZIJN KRACHTEN WILLEN MISBRUIKEN EN DOOR DE GEDACHTE AAN BETTY ROSS (LIV TYLER), DE ENIGE VROUW VAN WIE HIJ OIT HEeft GEHOUDEN.

DE GENIALE BANNER WORDT GENADELOOS OPGEJAAGD DOOR THE ABOMINATION, EEN WARE NACHTMERRIE VAN EEN MONSTER DAT ZICH VOEDT MET ADRENALINE EN RAZERNIJ. DE KRACHTEN VAN THE ABOMINATION DOEN NIET ONDER VOOR DIE VAN THE HULK EN HUN UITEINDELIJKE CONFRONTATIE LEIDT TOT EEN DUEL VAN COMICACHTIGE PROPERTIES, WAARBIJ DE TOTALE VERNIETIGING VAN NEW YORK OP HET SPEL STAAT.



THE INCREDIBLE HULK

THE INCREDIBLE HULK™



EXTRA'S: FILMCOMMENTAAR MET REGISSEUR LOUIS LETERRIER EN TIM ROTH

UNIVERSAL PICTURES AND MARVEL ENTERTAINMENT PRESENT A MARVEL STUDIOS PRODUCTION A VALHALLA MOTION PICTURES PRODUCTION
 EDWARD NORTON "THE INCREDIBLE HULK" LIV TYLER TIM ROTH TIM BLAKE NELSON TY BURRELL AND WILLIAM HURT CASTING BY LARAY MAYFIELD MUSIC BY CRAIG ARMSTRONG
 MUSIC SUPERVISOR DAVE JORDAN VISUAL EFFECTS SUPERVISOR KURT WILLIAMS EDITORS JOHN WRIGHT ACE RICK SHAINÉ ACE PRODUCTION DESIGNER KIRK M. PETRUCCELLI DIRECTOR OF PHOTOGRAPHY PETER MENZIES, JR., ACS
 EXECUTIVE PRODUCERS STAN LEE DAVID MAISEL JIM VAN WYCK PRODUCED BY AVI ARAD GALE ANNE HURD KEVIN FEIGE SCREEN STORY AND SCREENPLAY BY ZAK PENN DIRECTED BY LOUIS LETERRIER
 A UNIVERSAL RELEASE



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ONDERTITELING:
 English* (for the hearing impaired)
 Nederlands*
 Dansk
 Islenska
 Magyar
 Norsk

AUDIO:
 English 5.1 Dolby Digital
 English 2.0 Dolby Digital
 Magyar 5.1 Dolby Digital

Deze dist is kopieerbeveiligd



www.dvdlogo.nl



2.35:1

ANAMORPHIC WIDESCREEN

Stemra nvp

UITSLUITEND BESTEMD VOOR VERKOOP





TEXT RECOGNITION

- Dutch synopsis
- Translate to English with Yandex

EDWARD NORTON LIV TYLER TIM ROTH EN WILLIAM HURT

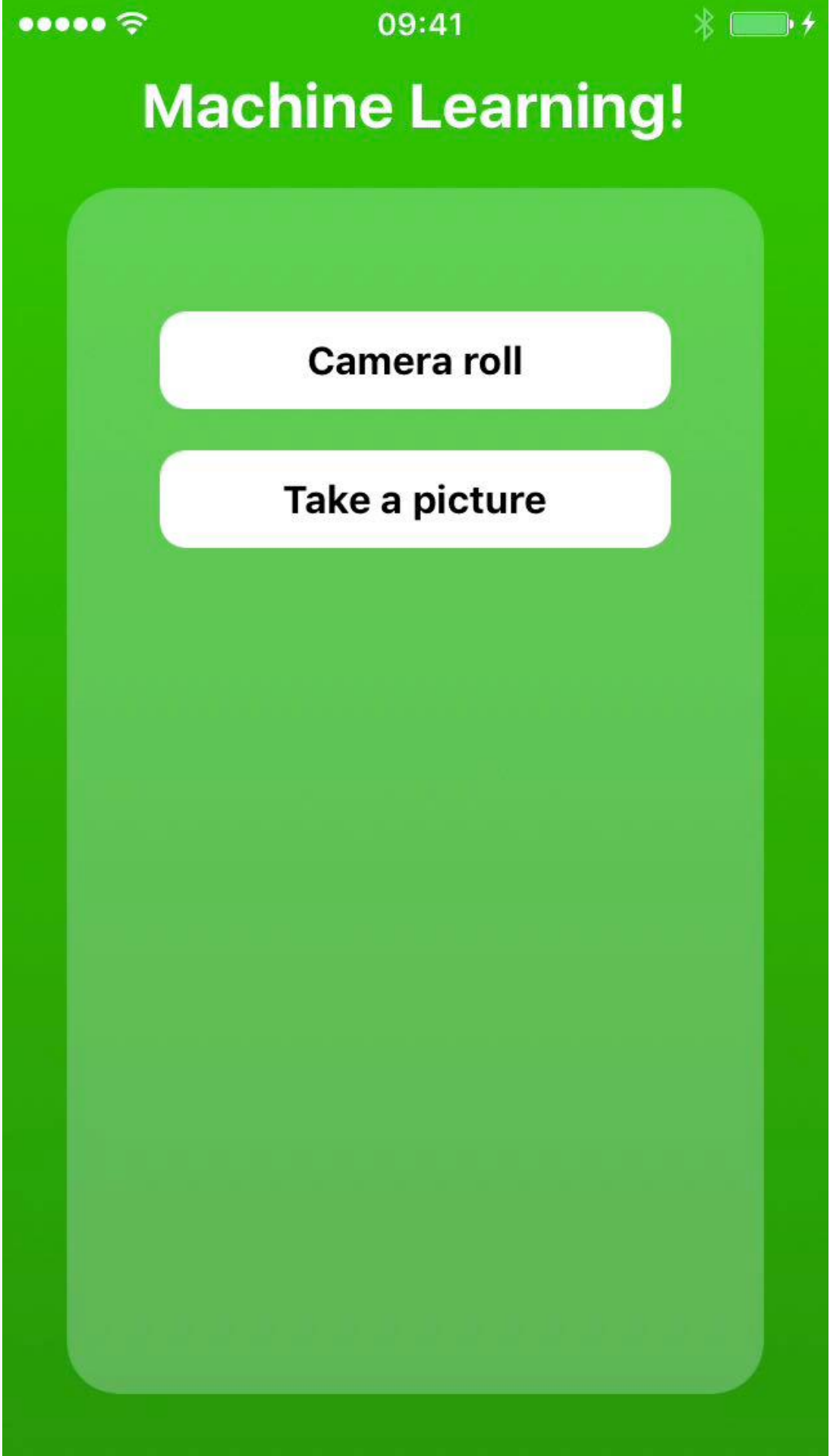
THE INCREDIBLE HULK



WETENSCHAPPER BRUCE BANNER (EDWARD NORTON) STRUIJT ANONIEM DE PLANEET AF, OP ZOEK NAAR EEN TEGENGIF VOOR ZIJN AANDOENING, MAAR WORDT HIERIN GEHINDERD DOOR PERSONEN DIE ZIJN KRACHTEN WILLEN MISBRUIKEN EN DOOR DE GEDACHTE AAN BETTY ROSS (LIV TYLER), DE ENIGE VROUW VAN WIE HIJ OOI T HEEFT GEHOUDEN.

DVD VIDEO

12



Machine Learning!

Camera roll

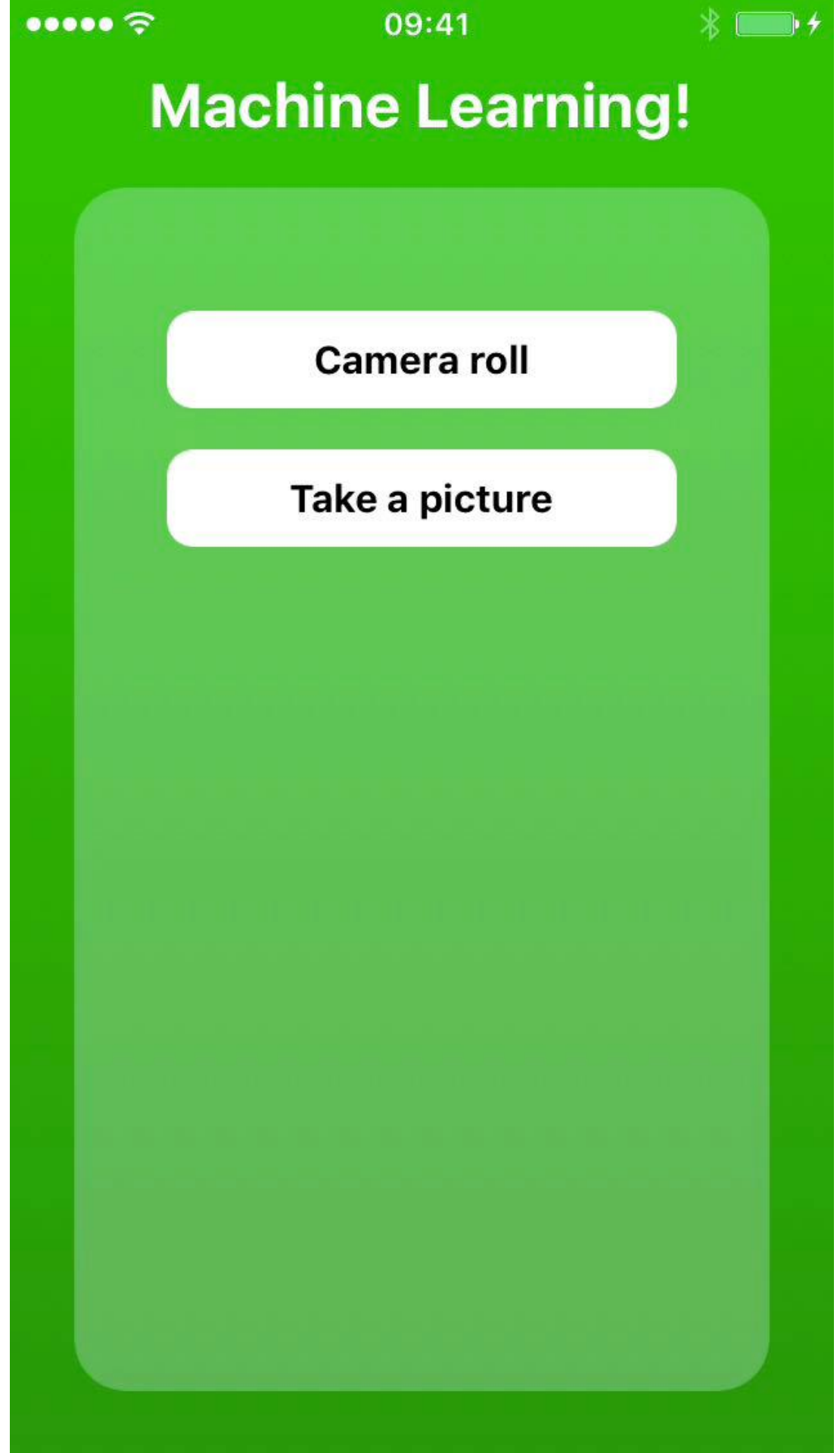
Take a picture



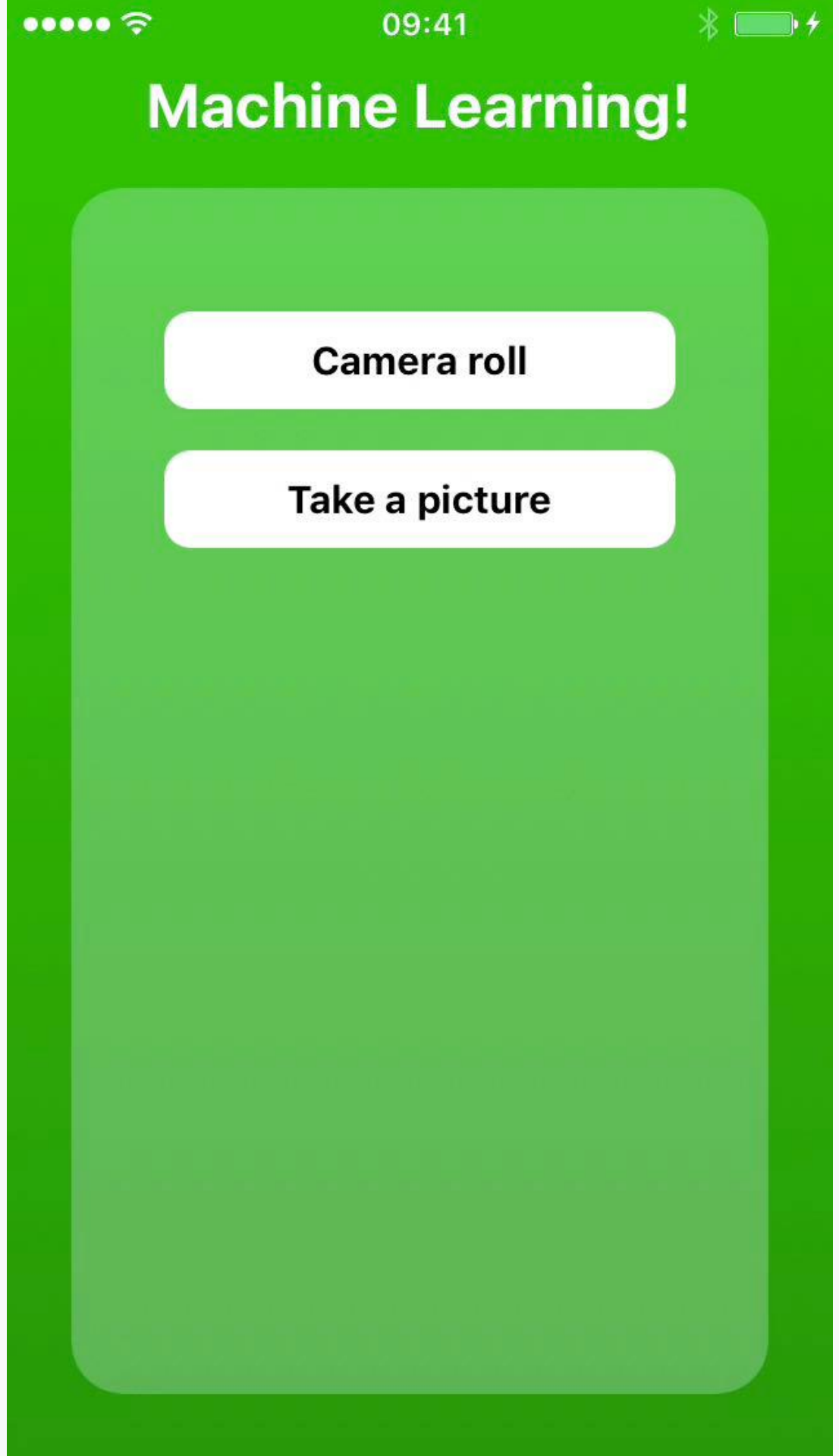


LANDMARK RECOGNITION

- **Bridge in London**
- **Near St Paul's Cathedral**









The background of the image is a movie poster for 'X-Men: Days of Future Past'. It features a group of X-Men characters in a dark, stormy environment. In the center, Wolverine (Hugh Jackman) is the most prominent figure, looking intensely forward with his adamantium claws extended. To his left is Storm (Alexandra Scopus), and to his right is Kitty Pryde (Emmy Rossum). Other characters like Iceman and Jean Grey are partially visible in the background. The overall color palette is dark and moody, dominated by blues and greys.

UNPLUGGING LIVEDEMO

NATIVESCRIPT PLUGINS

- **nativescript-bluetooth**
- **nativescript-camera**
- **nativescript-social-share**
- **nativescript-speech-recognition**
- **nativescript-texttospeech**
- **nativescript-videoplayer**

NATIVESCRIPT-BLUETOOTH

```
import * as bluetooth from "nativescript-bluetooth";

bluetooth.isBluetoothEnabled()
  .then(function(enabled) {
    alert("Enabled? " + enabled);
  });
```

NATIVESCRIPT-BLUETOOTH

```
private uuid = "CA9F644C-1920-4572-8833-1D137A6T2A05";

bluetooth.startScanning({
  seconds: 4,
  onDiscovered: peripheral => {
    if (peripheral.UUID == this.uuid) {
      bluetooth.connect({
        UUID: peripheral.UUID,
        onConnected: peripheral => {
          bluetooth.stopScanning();
          // do stuff
        }
      });
    }
  }
});
```

NATIVESCRIPT-CAMERA

```
import * as camera from "nativescript-camera";
import { ImageSource } from "tns-core-modules/image-source";

camera.requestPermissions();

camera.takePicture({
  width: 1000,
  height: 1000
})
.then(imageAsset => {
  new ImageSource().fromAsset(imageAsset).then(imageSource => {
    // do something with the image
  });
});
```

NATIVESCRIPT-SOCIAL-SHARE

```
import * as camera from "nativescript-camera";
import { ImageSource } from "tns-core-modules/image-source";
import * as SocialShare from "nativescript-social-share";

camera.requestPermissions();

camera.takePicture({
  width: 1000,
  height: 1000
})
.then(imageAsset => {
  new ImageSource().fromAsset(imageAsset).then(imageSource => {
    SocialShare.shareImage(imageSource);
  });
});
```

NATIVESCRIPT-SPEECH-RECOGNITION

```
import { SpeechRecognition, SpeechRecognitionTranscription }
  from "nativescript-speech-recognition";

private speechRecognition = new SpeechRecognition();

this.speechRecognition.available().then(
  [available: boolean] => console.log(available ? "YES!" : "NO"),
  [err: string] => console.log(err)
);

this.speechRecognition.requestPermission().then([granted: boolean] => {
  console.log("Granted? " + granted);
});
```


NATIVESCRIPT-SPEECH-RECOGNITION

```
this.speechRecognition.startListening({  
  locale: "en-US",  
  returnPartialResults: true,  
  onResult: (transcription: SpeechRecognitionTranscription) => {  
    console.log(`User said: ${transcription.text}`);  
  }  
});
```

```
this.speechRecognition.stopListening().then(() => {  
  // do something with the recognized text  
});
```

NATIVESCRIPT-TEXTTOSPEECH

```
import { TNSTextToSpeech, SpeakOptions }  
  from "nativescript-texttospeech";  
  
let textToSpeech = new TNSTextToSpeech();  
let speakOptions: SpeakOptions = {  
  text: "Hello world!",  
  locale: "en-GB",  
  speakRate: 0.5,  
  pitch: 0.8  
};  
  
textToSpeech.speak(speakOptions);
```

NATIVESCRIPT-VIDEOPLAYER

```
<VideoPlayer  
  src="video.mp4"  
  controls="true"  
  loop="true"  
  autoplay="false">  
</VideoPlayer>
```



WIN A PAIR OF SOCKS!

@ROWDYRABOUW



AUGUST!

2XR.NL/DEV DAY SVILNIUS

LINKS

Native elements playground: <http://2xr.nl/markup>

keyboardType playground: <http://2xr.nl/keyboardType>

TabView playground: <http://2xr.nl/TabView>

Plugin demo app: <http://2xr.nl/DevDaysVilnius2018code>