



ODESSAJS 2018 - @ROWDYRABOUW

**UNLEASH YOUR
WEB SKILLS
ON NATIVE!**



SINGLE RIDERS

ENTRANCE

A photograph of a roller coaster track at night, illuminated by green lights. The track is curved and elevated, with a large circular structure visible in the background. In the foreground, there's a metal structure and some signage.

**WEB DEVELOPER
MOD 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
LOVES
NATIVE JAVASCRIPT





WEEKEND

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



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

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No

Yes

Phonegap / Cordova with Ionic

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

MOBILE APP FRAMEWORK DECISION GUIDE

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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

Native iOS and Android

- Twice the work

No

continue

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

Flutter

- Dart
- Cross compiling
- Beta

Yes

continue

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

Titanium

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

Yes

continue

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

React Native

- React
- Native code to access APIs
- Version 0.55

No

continue



A dynamic image of a superhero woman with orange hair and a red and blue suit flying through a city. She is positioned behind the large, bold text.

NATIVE JAVASCRIPT

3D

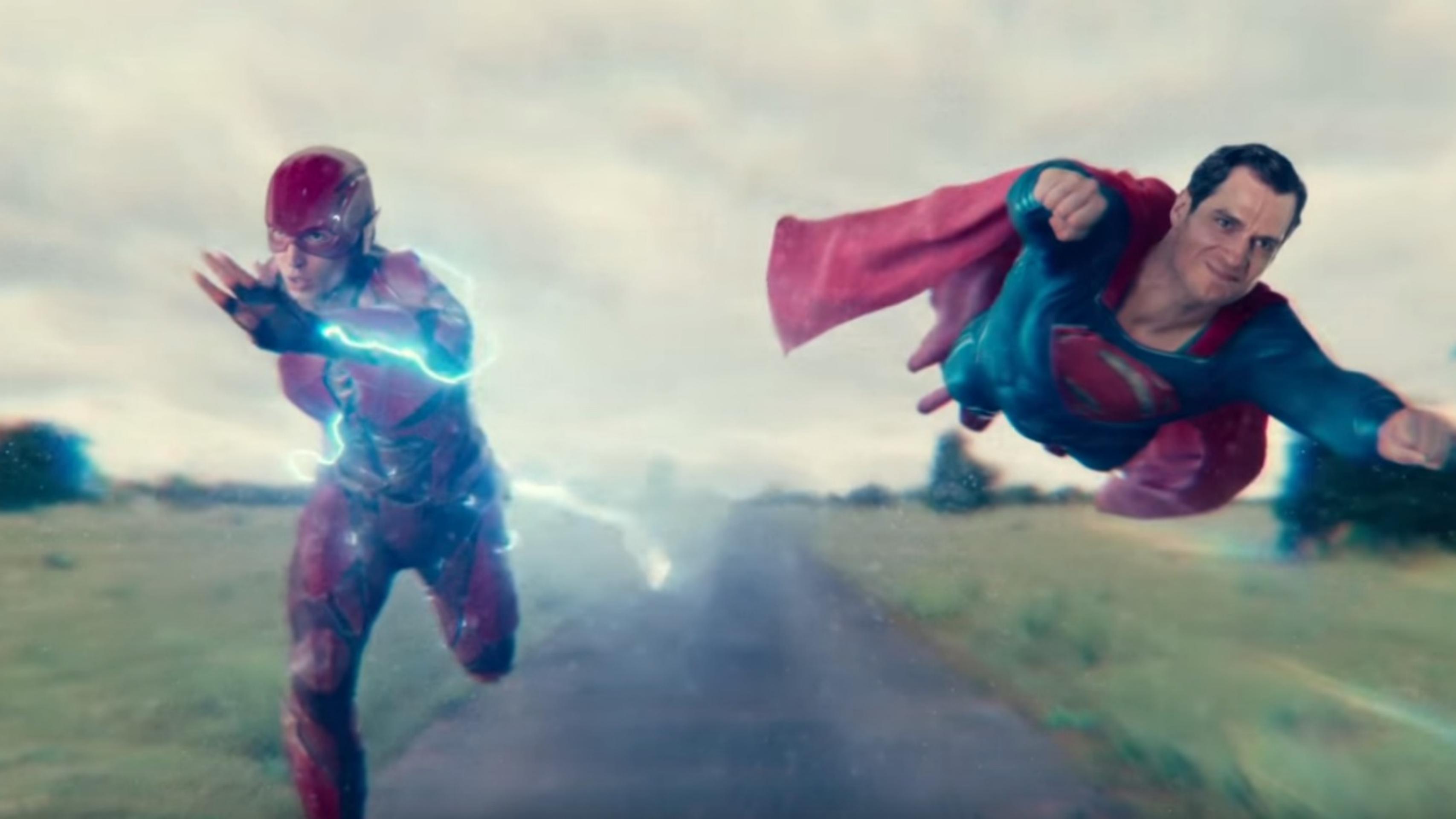
A black and white photograph of a woman with blonde hair tied back, wearing a light-colored tank top and dark leggings, running towards the right. The background is blurred, suggesting motion, and shows city buildings.

NATIVESCRIPT

BN

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 man in a superhero costume, resembling Captain America, is shown flying through a cloudy sky. He is wearing a red and white suit with a blue cape. The background consists of a green field and a cloudy sky.

NICE GIFT
BUT GET ME UP TO SPEED

```
# install Homebrew  
/usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"  
  
# install Node.js  
brew install node  
  
# install NativeScript CLI  
npm install -g nativescript  
  
# install iOS and Android requirements  
  
# Windows  
@powershell -NoProfile -ExecutionPolicy Bypass -Command  
"iex ((new-object net.webclient).DownloadString('https://www.nativescript.org/setup/win'))"  
  
# macOS  
ruby -e "$(curl -fsSL https://www.nativescript.org/setup/mac)"
```

```
# NativeScript CLI (tns = Telerik NativeScript)
tns <Command> [Command Parameters] [--command <Options>]

tns create <app-name>
tns create <app-name> --tsc
tns create <app-name> --ng
vue init nativescript-vue/vue-cli-template <app-name>

tns create <app-name> --template <template-url>

tns platform add ios
tns platform add android

tns build ios
tns build android

tns run ios
tns run android
```

DOCS.NATIVESCRIPT.ORG

 NativeScript

Docs Showcases Resources Blog About   Get Started

Documentation

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

- ▼ Introduction
 - General requirements
 - Welcome
 - How NativeScript Works
 - Installation
 - Troubleshooting
- ▶ Tutorial
- ▼ Core concepts
 - Architecture and

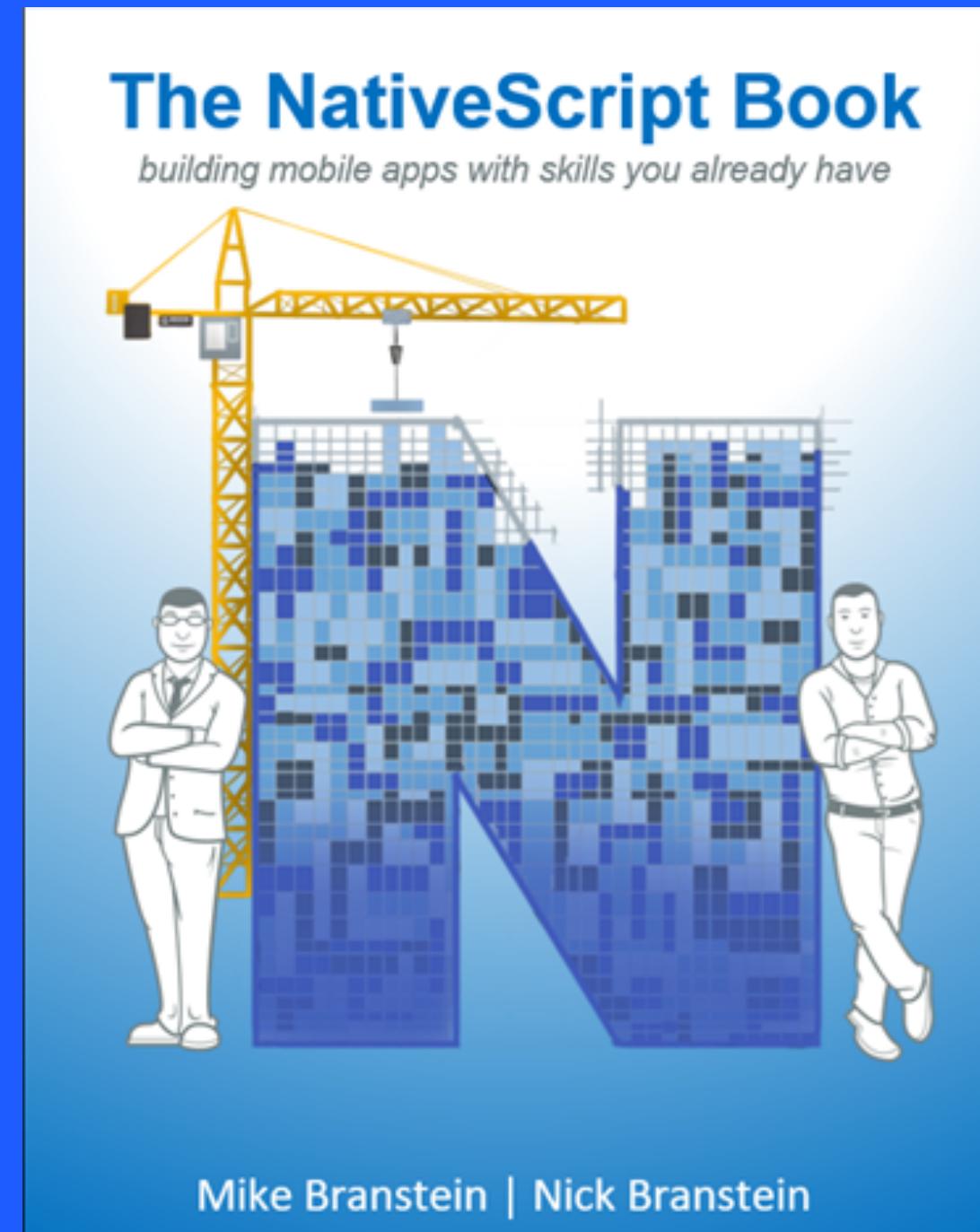
[Improve this article](#)

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



NATIVESCRIPTING.COM

The screenshot shows the homepage of [Nativescripting.com](https://nativescripting.com). The header features a logo with a play button icon and the text "NativeScripting". The top navigation bar includes links for "Training", "About", and "Login". The main headline reads "Turn up your NativeScript training". Below it, text encourages users to start learning NativeScript with free guides and mentions NativeScript Pro courses. A call-to-action button says "Grab them while we have them.". Two large buttons are visible: "NativeScript Core" (green background) and "NativeScript with Angular" (white background). A section below highlights "Courses for the NativeScript Core minded folks. MVVM, TypeScript, and no other UI frameworks.". Three course cards are shown: "NativeScript Plugins: Creating Custom View Components" by Nathan Walker (NEW), "NativeScript Core Getting Started Guide" by Alex Ziskind (FREE COURSE), and "NativeScript Core Pro" by Alex Ziskind (PRESALE).

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

NativeScript Core Pro
Alex Ziskind
PRESALE

LEARN MORE

FREE COURSE

LEARN MORE

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

A NativeScript + Angular & TypeScript

Blank  Blank template for NativeScript apps using Angular

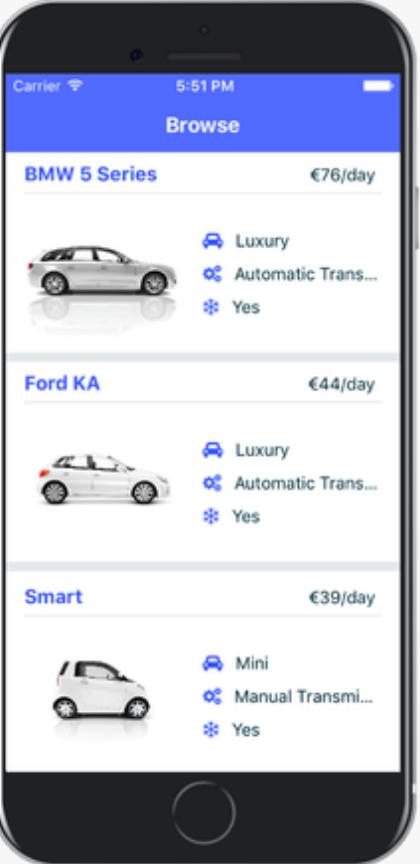
Navigation Drawer  Side navigation template

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**



The smartphone screen shows a car rental application. The top bar is blue with the text "Carrier" and "5:51 PM". Below it, the word "Browse" is visible. The main content area displays three car models with their details:

- BMW 5 Series** €76/day
 - Luxury
 - Automatic Trans...
 - Yes
- Ford KA** €44/day
 - Luxury
 - Automatic Trans...
 - Yes
- Smart** €39/day
 - Mini
 - Manual Transm...
 - Yes

Create App

PLAY.NATIVESCRIPT.ORG

The screenshot shows the NativeScript Play Playground interface. The top bar includes a back/forward button, a secure connection indicator, and a tab for 'Secure | https://play.nativescript.org'. The main header says 'New Playground'.

The left sidebar has an 'Explorer' section showing the project structure:

- app
 - app-routing.module.ts
 - app.component.html
 - app.component.ts
 - app.css
 - app.module.ts
 - home
 - home-routing.module.ts
 - home.component.css
 - home.component.html**
 - home.component.ts
 - home.module.ts
 - main.ts

The central area shows the code for `home.component.html`:

```
1 <ActionBar title="Home" class="action-bar">
2 </ActionBar>
3
4 <ScrollView class="page">
5   <StackLayout class="home-panel">
6     <!--Add your page content here-->
7     <Label textWrap="true" text="Play with NativeScript!" class="h2 description-label"></Label>
8     <Label textWrap="true" text="Write code in the editor or drag and drop components to build a NativeScript mobile application." class="h2 description-label"></Label>
9     <Label textWrap="true" text="Scan the QR code with your mobile device and watch the changes sync live while you play with the code." class="h2 description-label"></Label>
10    </StackLayout>
11  </ScrollView>
```

The right side features a preview window showing a mobile screen with the title 'Home' and three descriptive 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.' Below the preview is a component library with categories: Buttons, Images, Labels, Switches, and Sliders. Logs and Errors tabs are at the bottom.

FORUM.NATIVESCRIPT.ORG

 NativeScript

[Sign Up](#) [Log In](#)  

[all categories ▾](#) Latest [Top](#) [Categories](#)

Topic	Category	Users	Replies	Views	Activity
<p> Please update Sidekick to the latest version 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  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	 D G	8	2.0k	13d
<p> Welcome to the NativeScript Community Forum! 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
<input checked="" type="checkbox"/> 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
<input checked="" type="checkbox"/> Video picker delegate doesn't fire method <small>ios</small>	 iOS		2	14	7h
<input checked="" type="checkbox"/> Access to LocationManager in Android	 Android		2	28	9h

NATIVESCRIPTCOMMUNITY.SLACK.COM

The screenshot shows the Slack interface for the **#general** channel in the **Nativescript Community** Slack workspace. The channel has 6,606 members and 0 topics. The URL is <https://discourse.nativescript.org/>. The message list is sorted by **Yesterday**.

Messages:

- Yilmaz** 8:37 AM joined **#general**.
- IFTTT APP** 8:47 AM [Display Local Notifications In A NativeScript Application With Angular](#)
Display Local Notifications In A NativeScript Application With Angular
by Volodya Kurpita via Newest questions tagged nativescript - Stack Overflow <https://ift.tt/2HTtje>
- Bassie** 9:23 AM joined **#general**.
- Milad** 9:30 AM hi when i run npm run watch:android
i got `Unable to apply changes on device: emulator-5554. Error is: Command ./gradlew failed with exit code 1.` error
i searched a lot about that but nothing changes (edited)
- mast3rd3mon** 10:14 AM you should be running `tns run android`
- Milad** 10:15 AM No manifest found in /home/milad/Public/MobileApp/app/App_Resources/Android/AndroidManifest.xml
Could not find folder: /home/milad/Public/MobileApp/app
Unable to apply changes on device: emulator-5554. Error is: cp: no such file or directory: /home/milad/Public/MobileApp/app/App_Resources.
i'm using nativescript vue (edited)
- mast3rd3mon** 10:16 AM looks like a bad project creation, it should gen that folder when you create the project
- Milad** 10:18 AM i'm using nativescript vue template
- Cepheus** 11:25 AM

Bottom of the screen:

- Message #general** input field
- Send button with a smiley face icon



**MARVEL
MARK UP
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="{{ segmentedBarItems }}"/>
    <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

BUTTON



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: KEYBOARDDTYPE

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

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

```
<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="" />
```

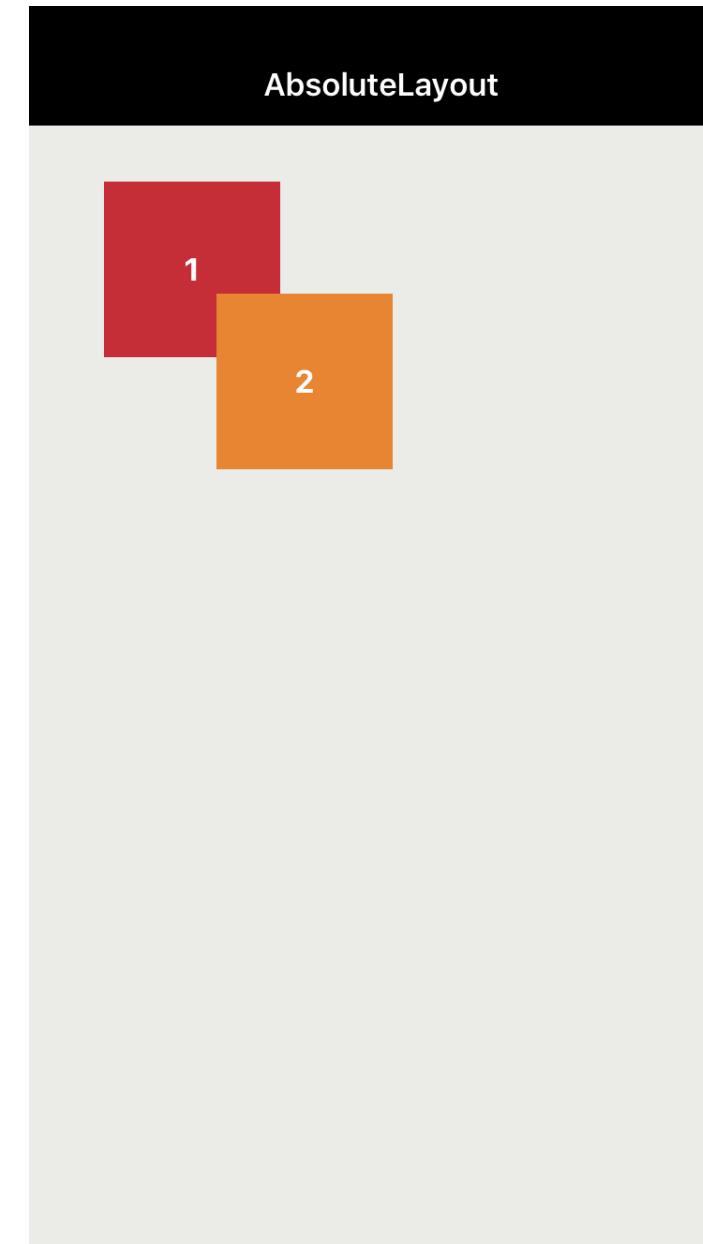
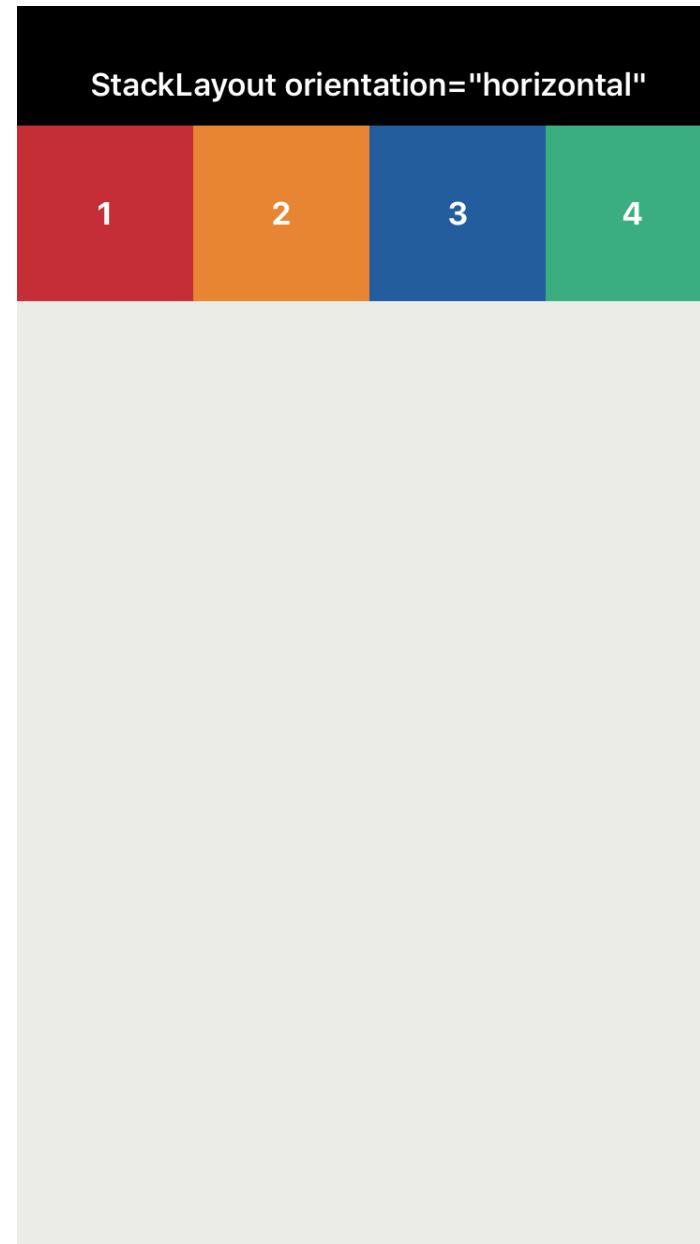
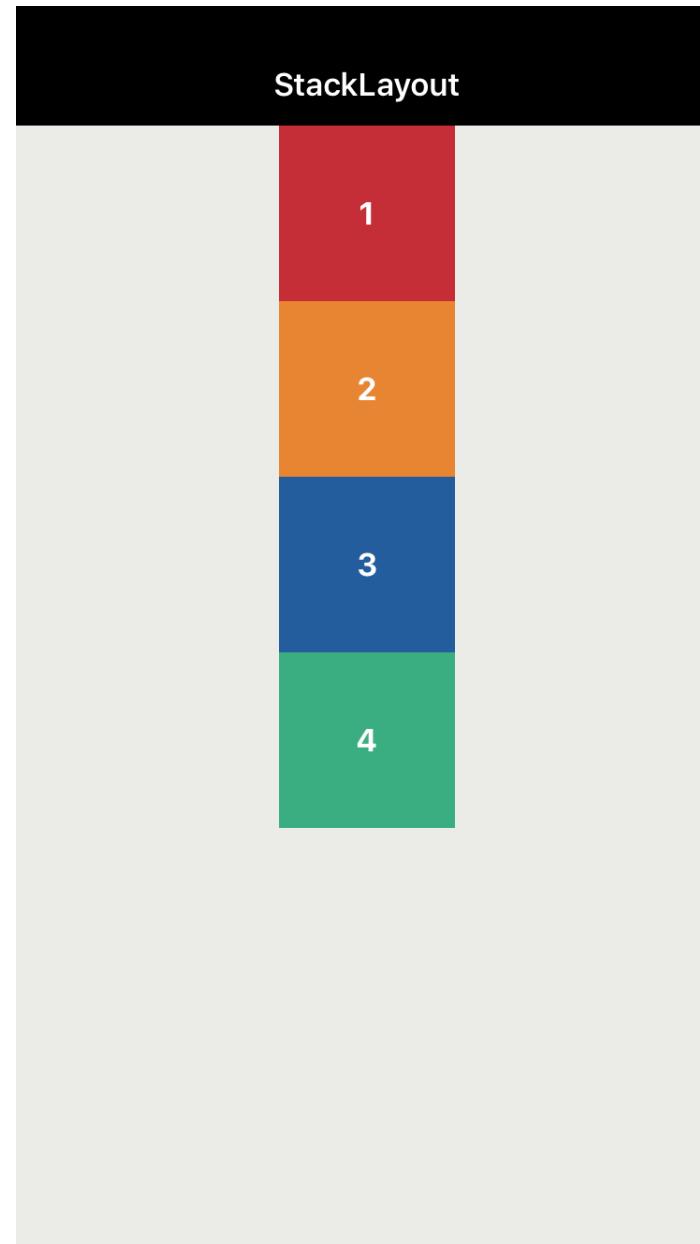
```
<TextField visibility="" />
```

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

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

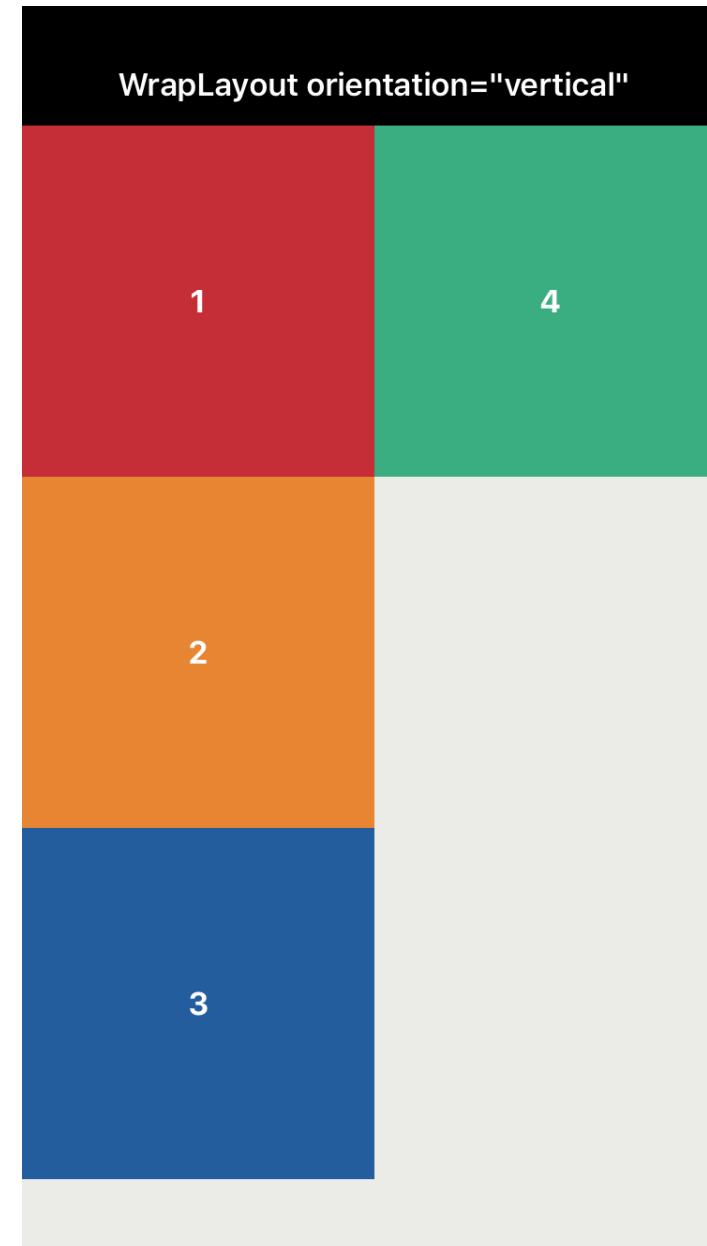
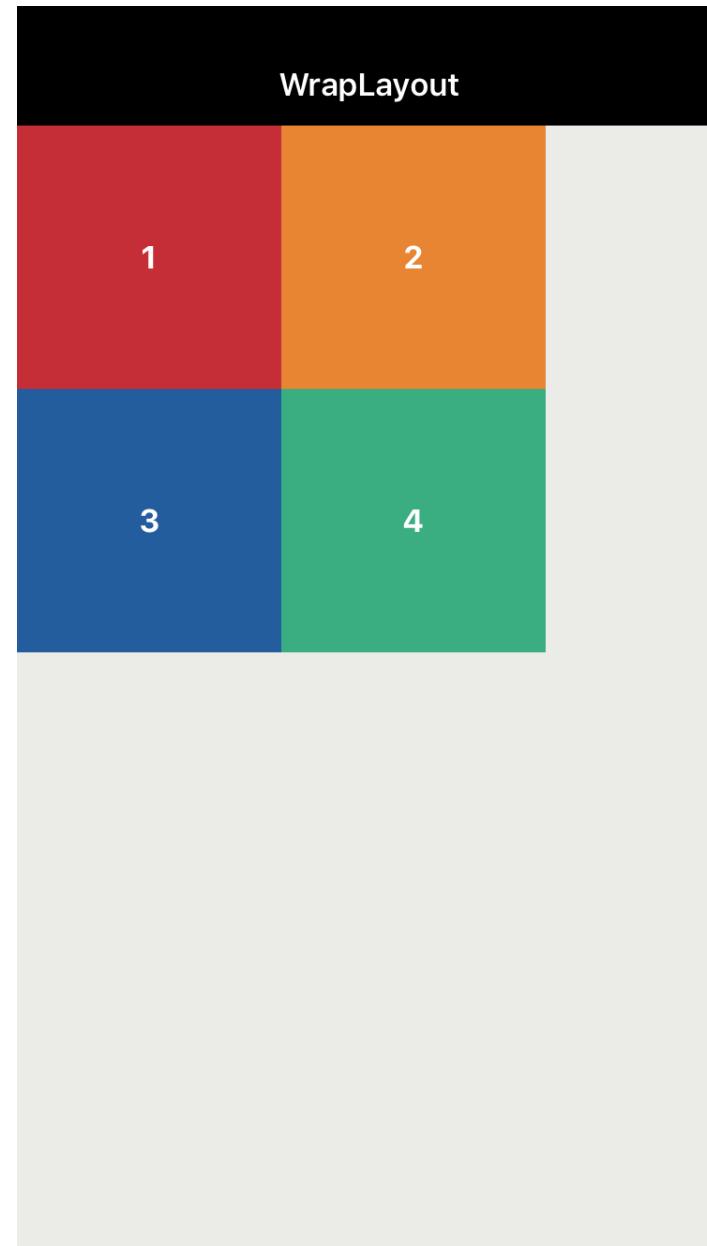
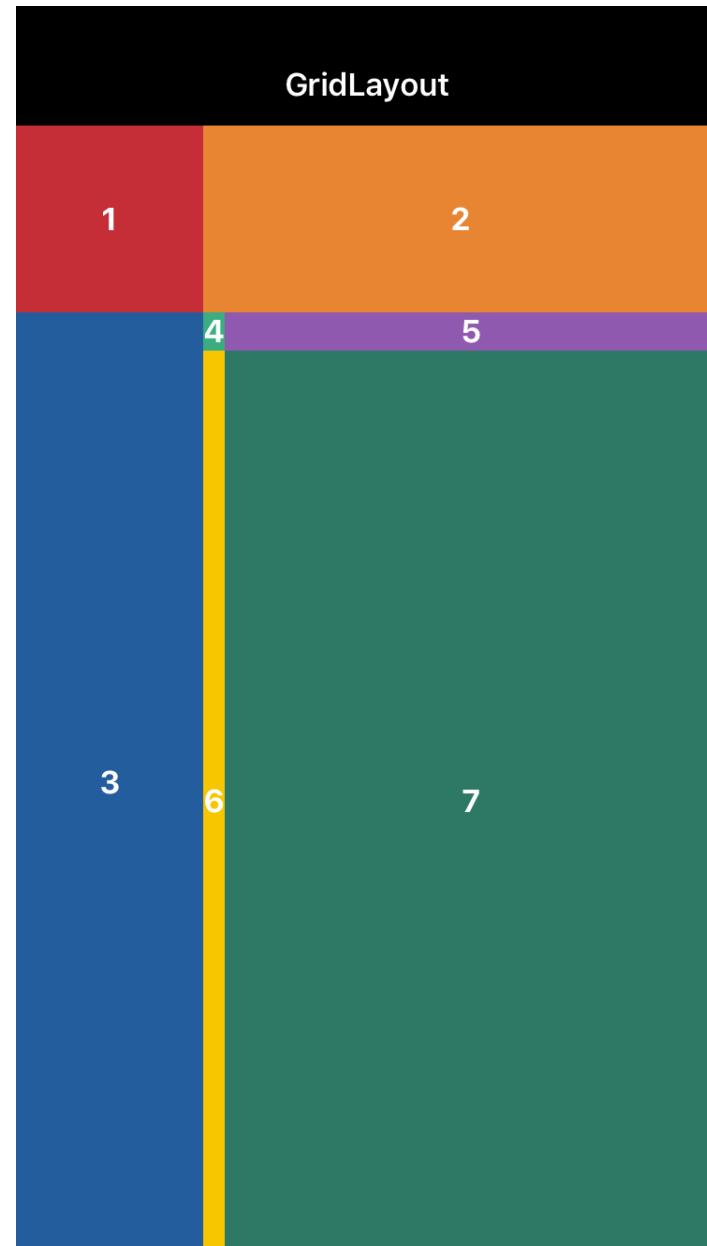
AYOUTS

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



AYOUTS

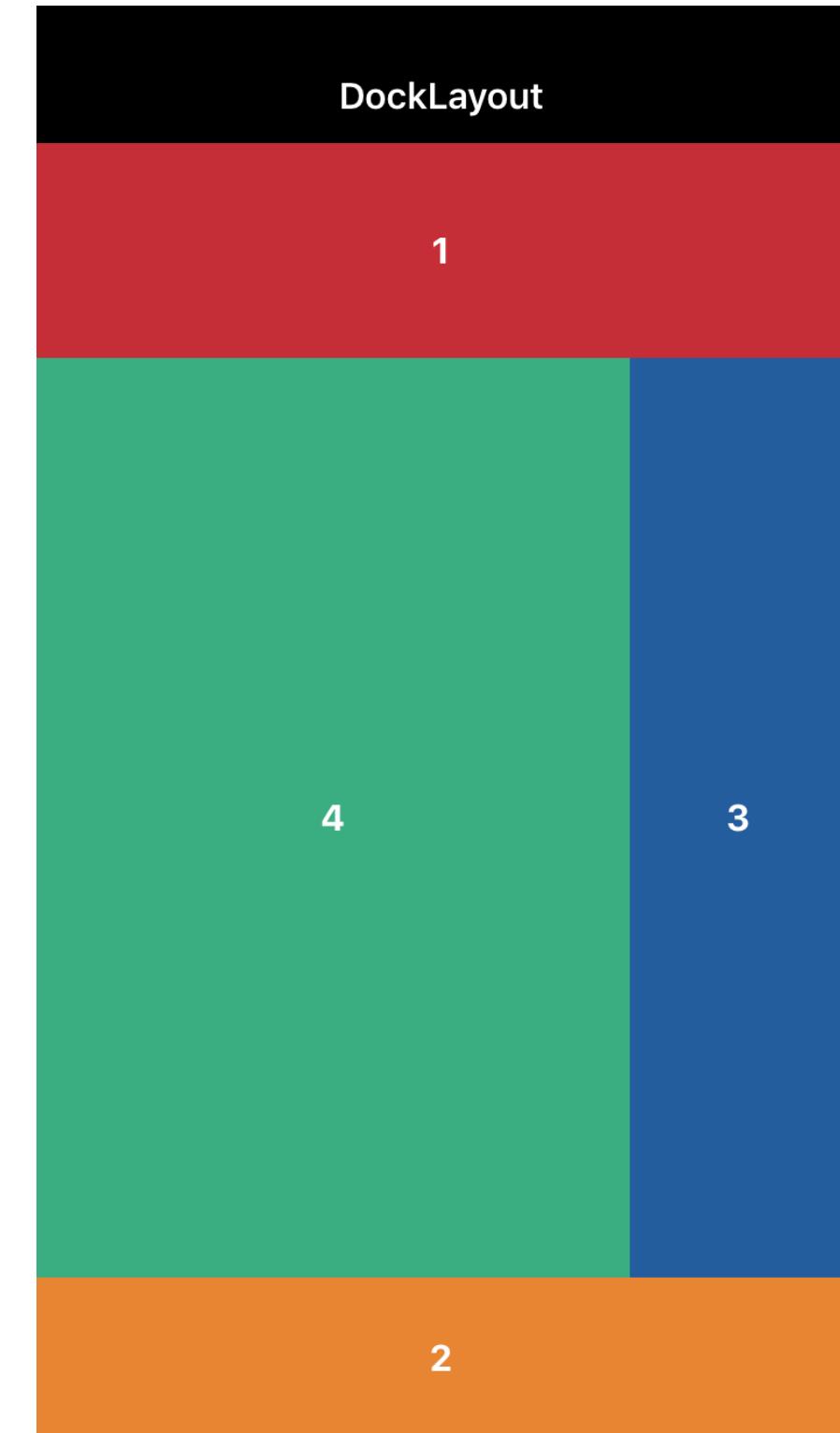
<https://docs.nativescript.org/ui/layouts>



DOCKLAYOUT

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

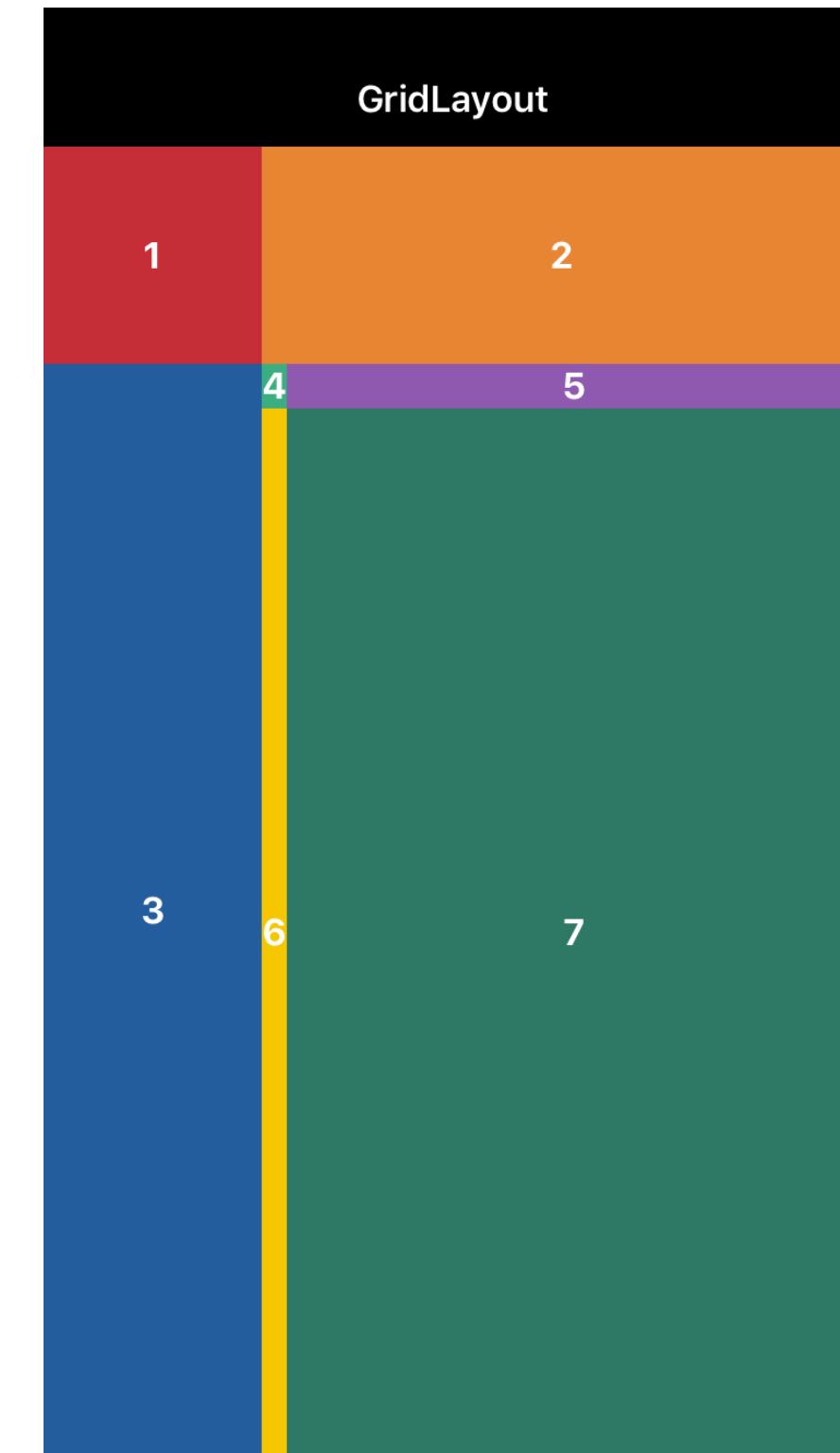
```
<DockLayout height="100%"  
stretchLastChild="true">  
  
    <Label text="1" dock="top"/>  
    <Label text="2" dock="bottom"/>  
    <Label text="3" dock="right"/>  
    <Label text="4" dock="left"/>  
  
</DockLayout>  
  
<!--  
    1 + 2 have fixed height  
    3 has fixed width  
    4 will 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>
```





A woman with blonde hair tied back in a ponytail is shown from the chest up. She is wearing a red top and is looking down at a laptop screen. The background is a blurred office environment.

CASCADING STYLE SHEETS

CASCADING STYLE SHEETS

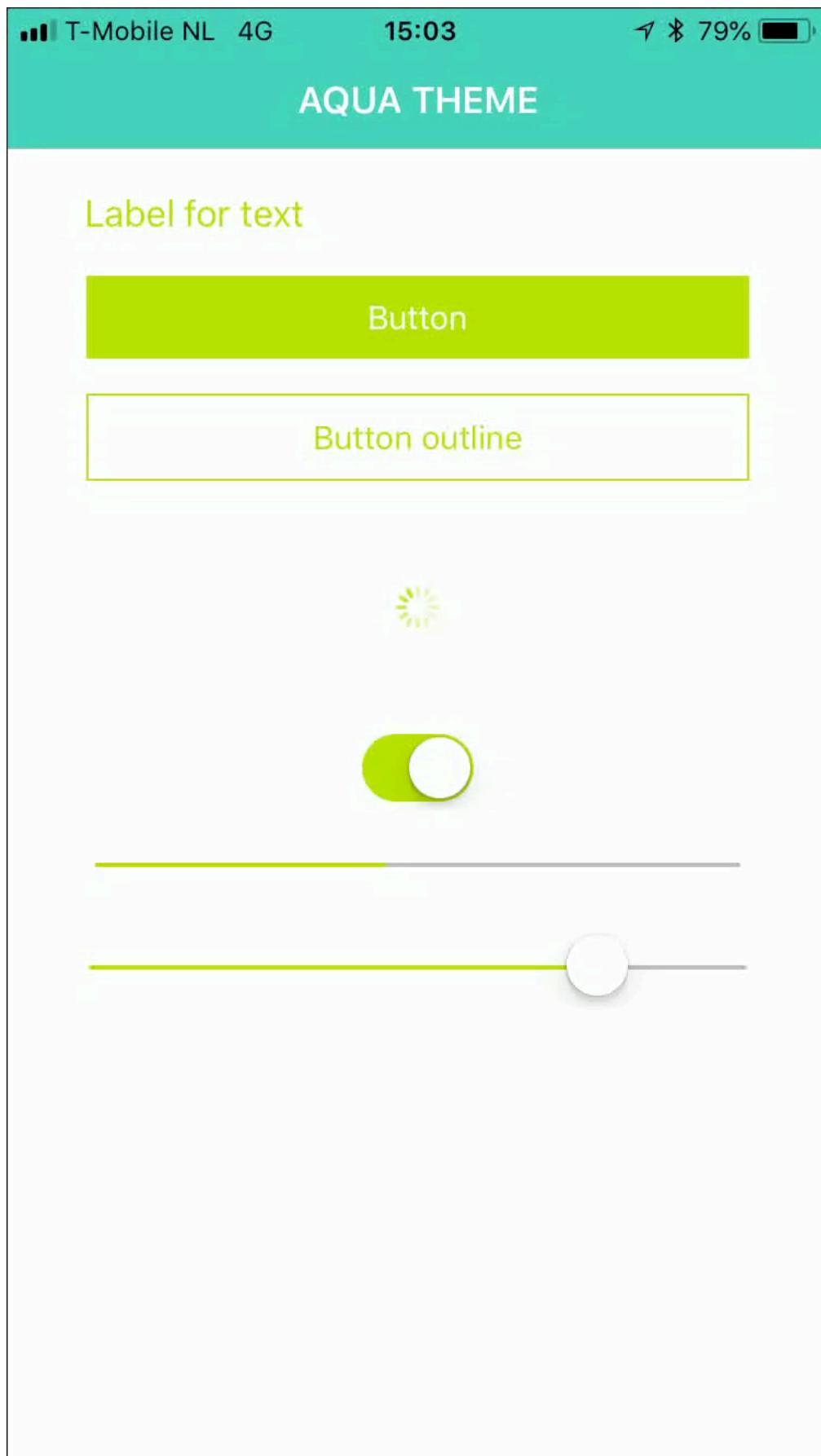
<https://docs.nativescript.org/ui/styling>

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

{N} CORE THEMES

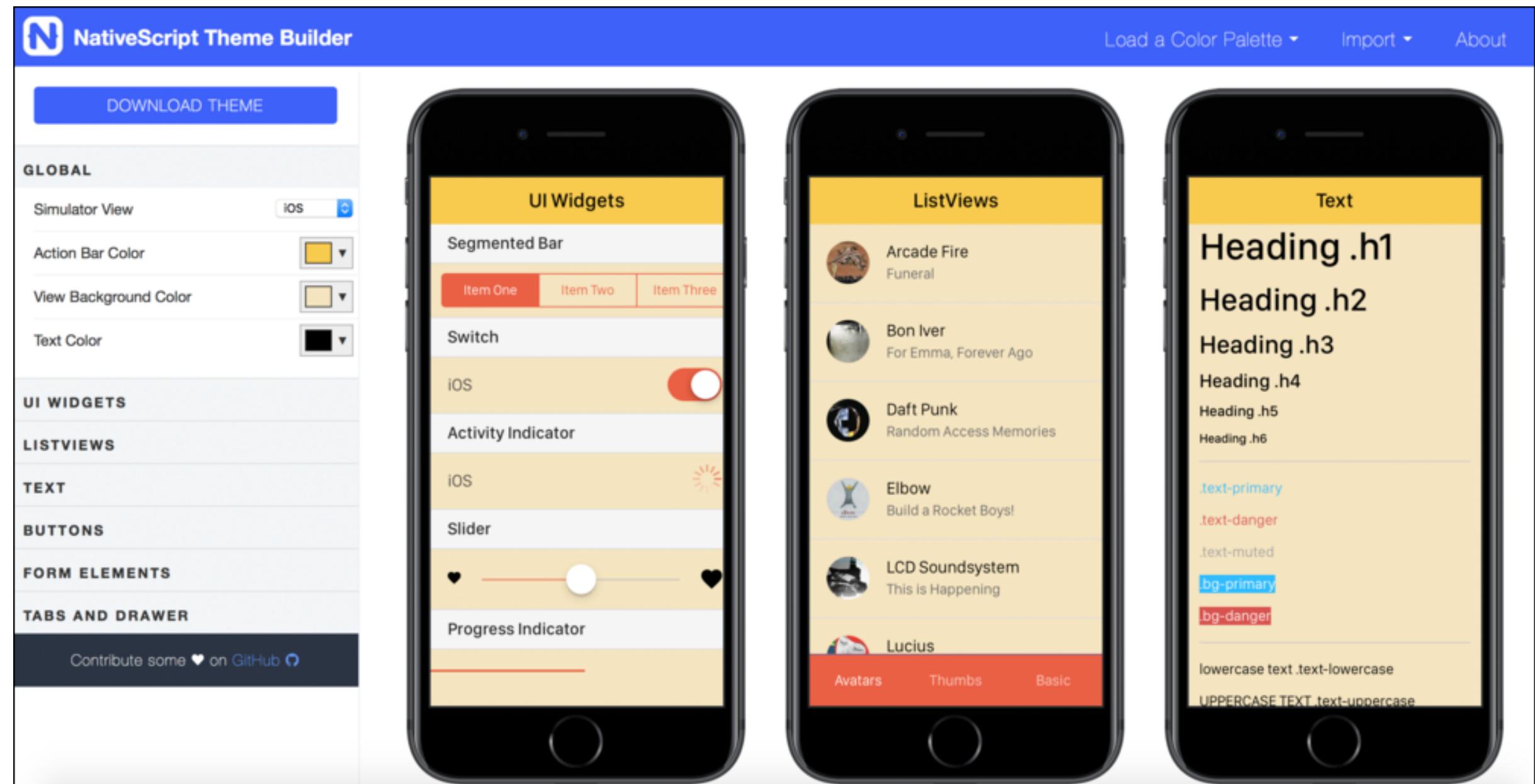
<https://docs.nativescript.org/ui/theme>

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



NATIVESCRIPT THEME BUILDER

<https://www.nativescriptthemebuilder.com>



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



TabView



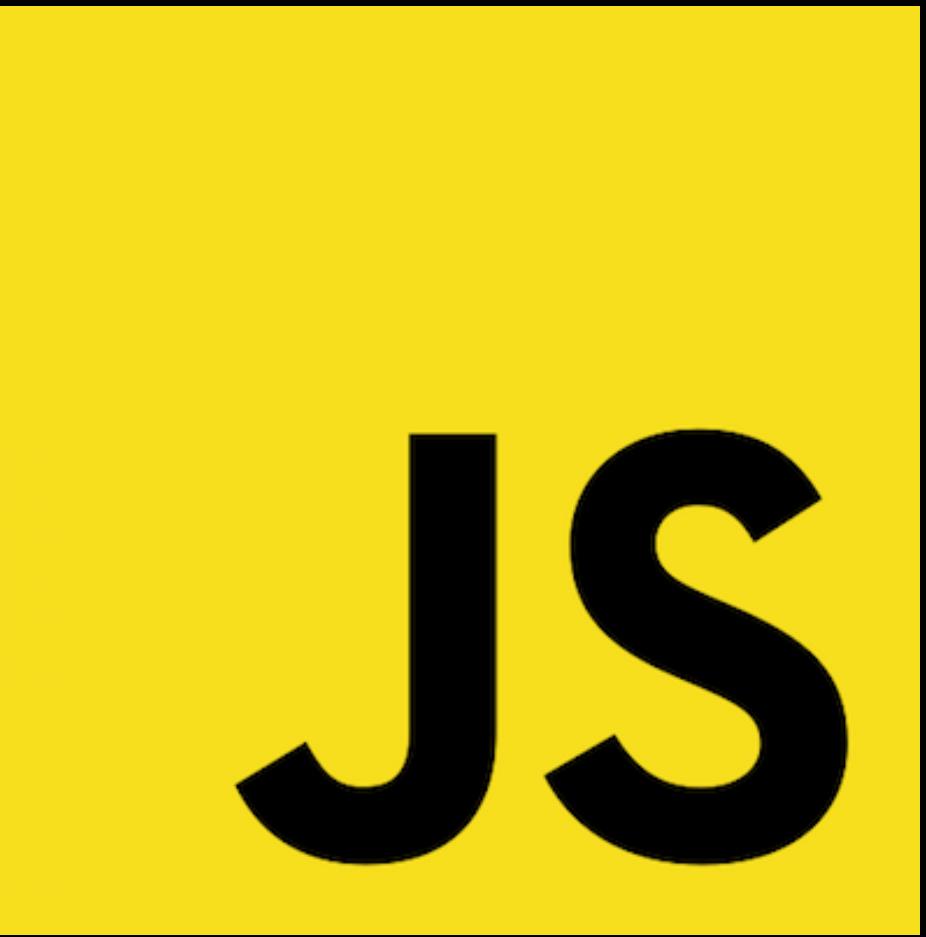


FANTASTIC CHOICES



4 FANTASTIC CHOICES





JAVASCRIPT



TYPESCRIPT



VUE.js



ANGULAR



Damaged

NATIVE CODE
OBJECTIVE

Damaged

{N} ANGULAR DIRECTORY STRUCTURE

app/components/slider/

 slider.component.html

 slider.component.css

 slider.component.ts

 slider-routing.module.ts

 slider.module.ts

SLIDER.COMPONENT.HTML

```
<StackLayout>
    <Slider></Slider>
</StackLayout>
```

SLIDER.COMPONENT.CSS

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

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.HTML

```
<StackLayout>
    <Slider slider-icon></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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        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 {}
```



09:41



SLIDER.COMPONENT.HTML

```
<StackLayout>
  <AbsoluteLayout>
    <StackLayout #background class="captain" top="0" left="0"></StackLayout>
    <FlexboxLayout class="flexcontainer" top="0" left="0">
      <Slider slider-icon (valueChange)="onSliderChange($event)"></Slider>
    </FlexboxLayout>
  </AbsoluteLayout>
</StackLayout>
```

SLIDER.COMPONENT.CSS

```
.captain {  
  background-image: url("~/assets/images/captain-america.jpg");  
  background-repeat: no-repeat;  
  background-position: center;  
  background-size: cover;  
  height: 100%;  
  width: 100%;  
  opacity: 0;  
}
```

SLIDER.COMPONENT.CSS

```
.flexcontainer {  
    justify-content: center;  
    align-items: center;  
    height: 100%;  
    width: 100%;  
}  
  
Slider {  
    width: 80%;  
    background-color: #BC1A0F;  
}  
  
ActionBar {  
    background-color: #FFFFFF;  
}
```

SLIDER.COMPONENT.TS

```
import { Component, OnInit, ViewChild, ElementRef } from "@angular/core";
import { Page } from "ui/page";
import { Slider } from "ui/slider";
import { StackLayout } from "ui/layouts/stack-layout";
import { TNSPlayer } from "nativescript-audio";

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

SLIDER.COMPONENT.TS

```
export class SliderComponent implements OnInit {
  @ViewChild("background") background: ElementRef;
  private viewStack: StackLayout;
  private player: TNSPlayer;

  constructor(private page: Page) {}

  ngOnInit() {
    this.page.actionBarHidden = true;
    this.viewStack = this.background.nativeElement;
    this.player = new TNSPlayer();
    this.player.initFromFile({
      audioFile: "~/assets/audio/captain.mp3",
      loop: false
    });
  }
}
```

SLIDER.COMPONENT.TS

```
onSliderValueChange(args) {
  let slider = <Slider>args.object;
  // opacity and volume range is 0 - 1
  let sliderValue = slider.value / 100;
  this.viewStack.opacity = sliderValue;
  if (Math.round(slider.value) > 0) {
    this.player.play();
    this.player.volume = sliderValue;
  } else {
    this.player.seekTo(0);
    this.player.pause();
  }
}
```



PACKAGINGS
ET BRARIES

NODE PACKAGE MANAGER

- commonly known as npm
- ready to use JavaScript modules
- about 650.000 packages of free, reusable code

ANDROID ARSENAL

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

COCOAPODS

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



MUETTU NGUAI
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 OdessaJS!",  
    "TEXT": "It's great to be here and introduce NativeScript to you.",  
    "SLIDER": "Slider",  
    "ENGLISH": "English",  
    "FOREIGN": "Ukrainian",  
    "MIP": "WowWee MiP",  
    "SPEECH_RECOGNITION": "Speech recognition!"  
  }  
}
```

MULTILINGUAL: NGX-TRANSLATE

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

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

[] = **one way data binding in Angular**

| = **display-value transformations**

Hello OdessaJS!

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

Slider

English

Ukrainian

WowWee MiP

Speech recognition!



**NATIVE JAVASCRIPT
PLUGINS**

WHAT ARE {N} PLUGINS?

When the NativeScript core modules do not provide the native device or platform capability that you need, you can use plugins.

- usually for both iOS and Android
- JavaScript interface to native platform code

market.nativescript.org

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

NativeScript | Marketplace NativeScript.org

FEATURED

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

Search for plugins

 VERIFIED	Image Picker by NativeScript Team Version 3.0.6 A plugin for the NativeScript framework implementing multiple image picker	 VERIFIED	Fingerprint Auth by Eddy Verbruggen Version 4.0.1 A fingerprint authentication plugin for use in NativeScript apps
 VERIFIED	Facebook by NativeScript Team Version 2.0.1 NativeScript plugin, wrapper of native Facebook SDK for Adroid and iOS.	 VERIFIED	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.
	Plugin Firebase by Telerik / Eddy Verbruggen Version 4.1.1 Fire. Base. Firebase!		Google Maps SDK by Dan Prietti Version 2.3.2 Google Maps SDK plugin for Nativescript
	Permissions by Nathanael Anderson Version 1.2.3 A NativeScript plugin to deal with Android permissions		Unit Test Runner by Telerik Version 0.3.4 NativeScript unit test runner component.

NATIVESCRIPT PLUGINS

- **nativescript-bluetooth**
- **nativescript-accelerometer**
- **nativescript-speech-recognition**
- **nativescript-texttospeech**

NATIVESCRIPT PLUGINS

- **nativescript-directions**
- **nativescript-camera**
- **nativescript-social-share**
- **nativescript-videoplayer**

**3RD PUGGINS
LIVEADHIMO**



NATIVESCRIPT-BLUETOOTH

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

bluetooth.startScanning({
    seconds: 4,
    onDiscovered: peripheral => {
        if (peripheral.UUID == "CA9F644C-1920-4572-8833-1D137A6T2A05") {
            bluetooth.connect({
                UUID: peripheral.UUID,
                onConnected: peripheral => {
                    bluetooth.stopScanning();
                    // do stuff
                }
            });
        }
    }
});
```

NATIVESCRIPT-ACCELEROMETER

```
import { startAccelerometerUpdates } from "nativescript-accelerometer";

startAccelerometerUpdates(data => {
    // lean left (0 to -1) / right (0 to 1)
    let leftOrRight = data.x;
    // lean forward (0 to -1) / back (0 to 1)
    let forwardOrBack = data.y;
    // do stuff
});
```

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);  
});
```

NATIVE JAVASCRIPT - 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-US",  
  speakRate: 0.5,  
  pitch: 0.8  
};  
  
textToSpeech.speak(speakOptions);  
.  
.
```

NATIVESCRIPT-DIRECTIONS

```
import { Directions } from "nativescript-directions";

let directions = new Directions();
directions.navigate({
    // optional, default "current location"
    from: {
        lat: 46.433131,
        lng: 30.7618338
    },
    // if an Array is passed, the last item is the destination,
    // the addresses in between are "waypoints"
    to: [
        {
            address: "Vorontsovs'kyi Ln, 4, Odessa", // Witch House
        },
        {
            address: "Potemkin Stairs, Odesa, Ukraine"
        ],
    ios: {
        preferGoogleMaps: true,
        allowGoogleMapsWeb: true
    }
})
```

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-VIDEOPLAYER

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



2XR.NL/ODESSAJS

PIRKYHO

LINKS

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

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

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

Plugin demo app:

<https://github.com/rowdyrabouw/NativeScriptTalk/tree/OdessaJS>