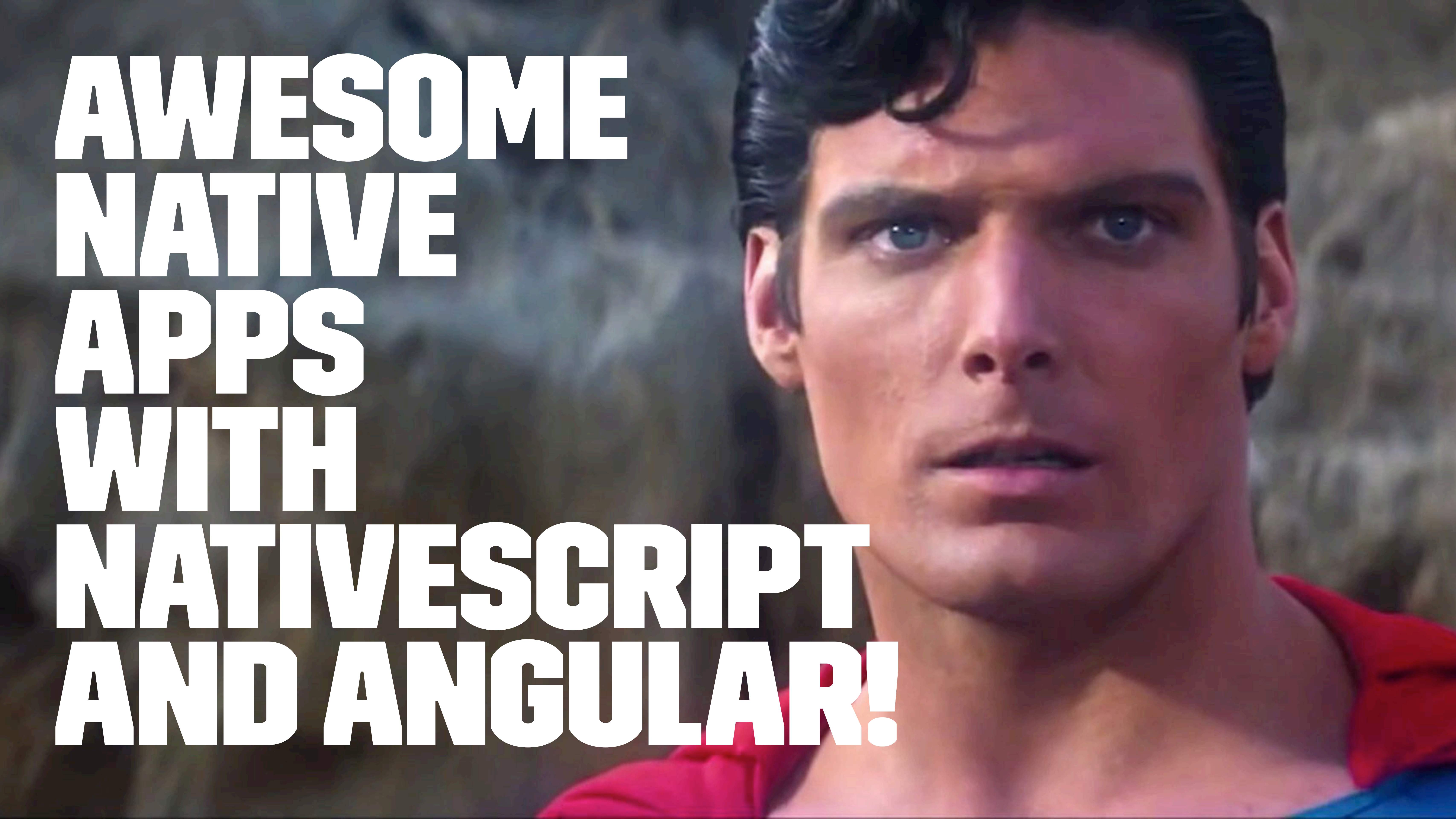
AWESOME NATIVE APPS WITH NATIVESCRIPT AND ANGULAR!



Fiesta Texas

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

WHO?

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

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 0.57

MOBILE APP FRAMEWORK DECISION GUIDE

Do you know and like React?

Yes	No
React Native	continue

- React
- Native code to access APIs
- Version 0.57

NATIVESCRIPT

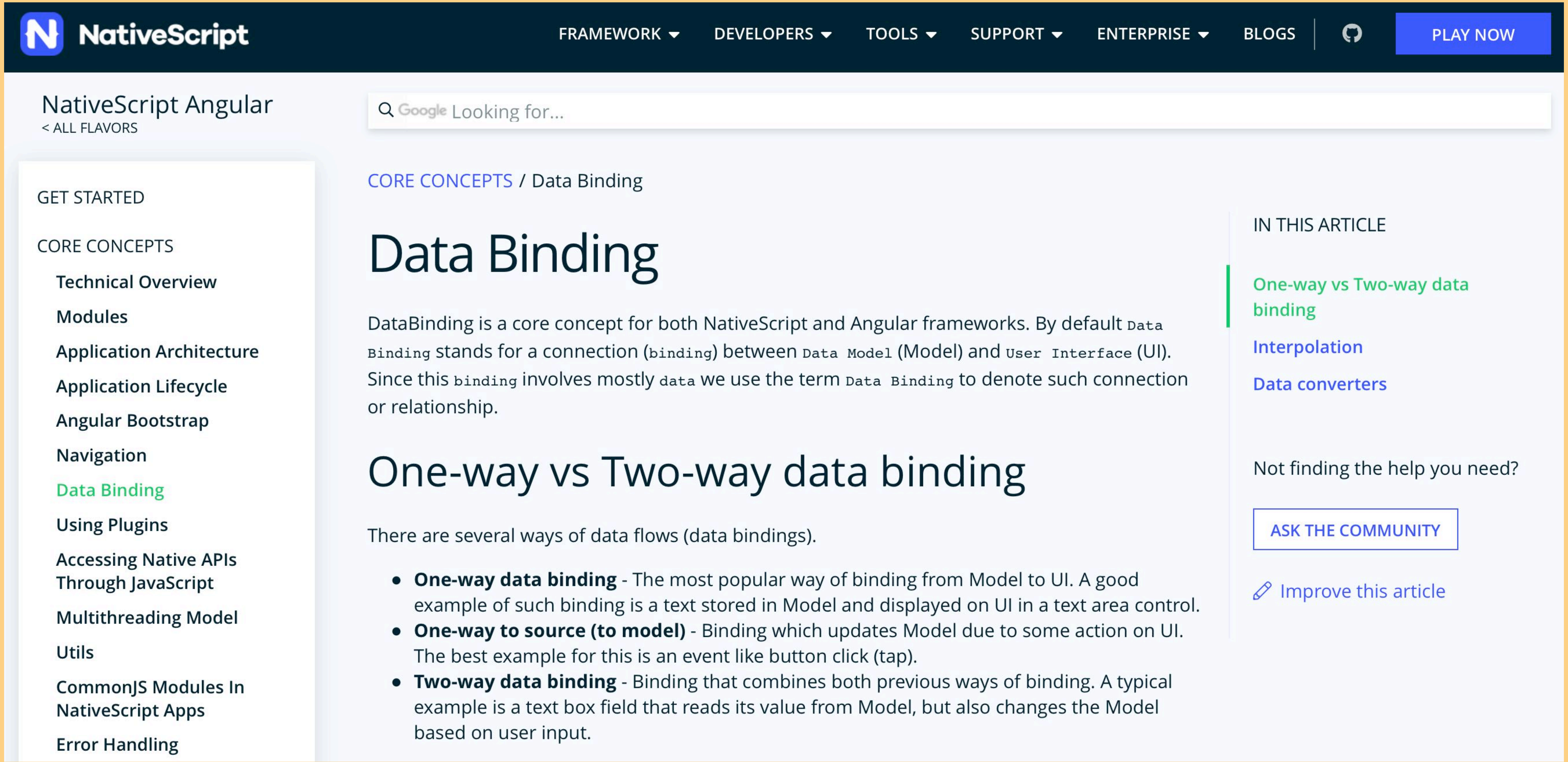
NATIVESCRIPT

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

HOW TO START?

DOCS.NATIVESCRIPT.ORG



CORE CONCEPTS / Data Binding

Data Binding

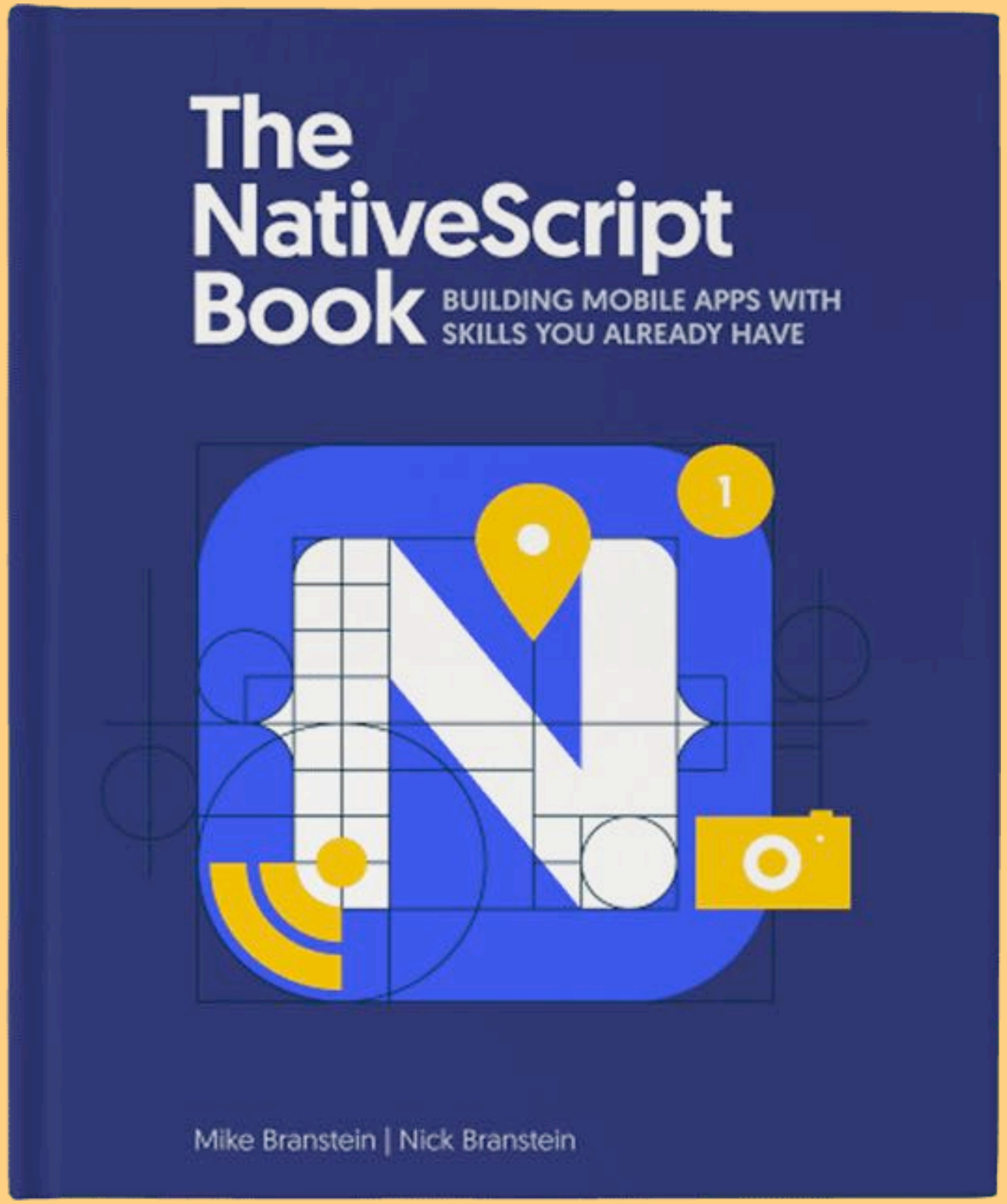
DataBinding is a core concept for both NativeScript and Angular frameworks. By default `Data Binding` stands for a connection (`binding`) between `Data Model` (Model) and `User Interface` (UI). Since this `binding` involves mostly `data` we use the term `Data Binding` to denote such connection or relationship.

One-way vs Two-way data binding

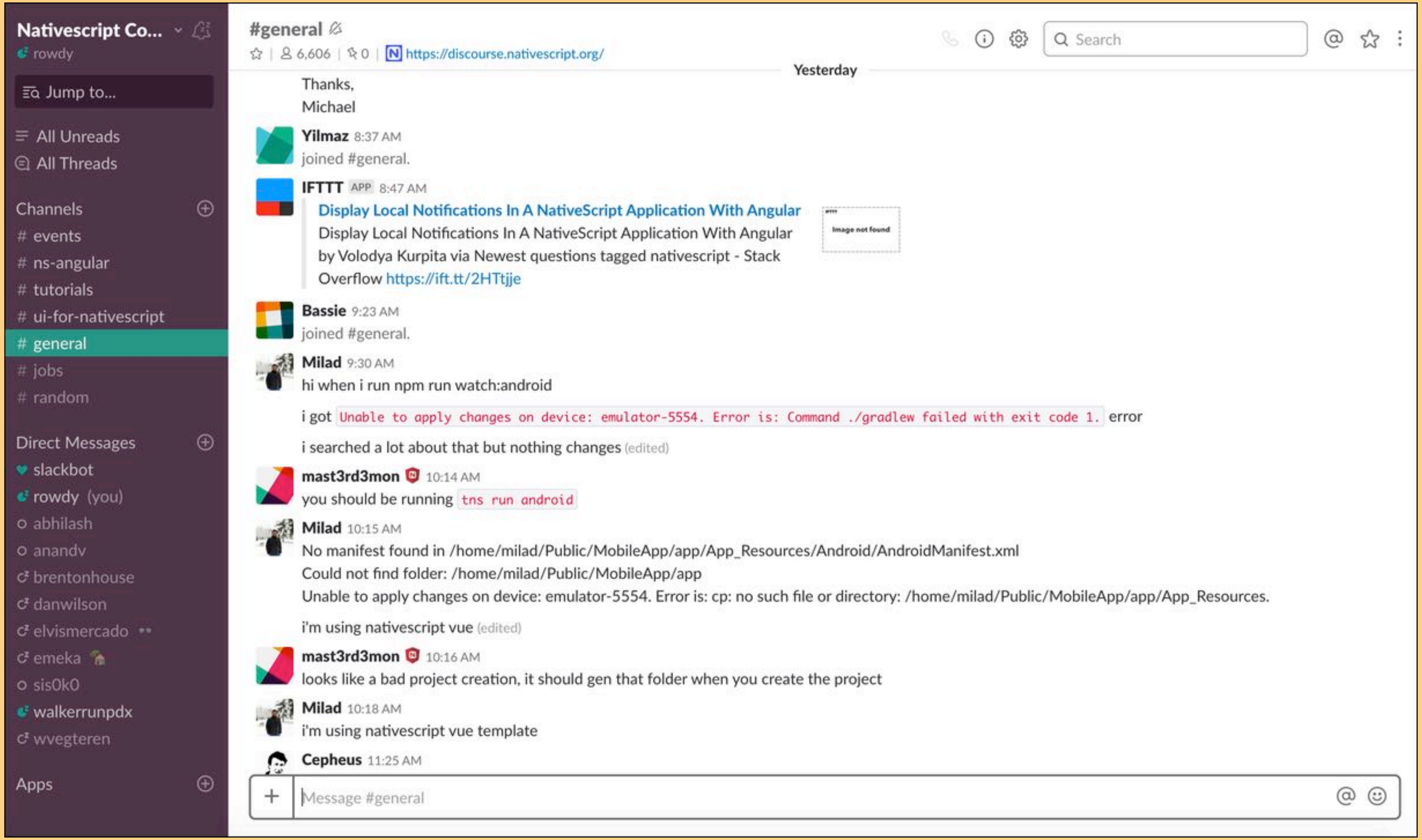
There are several ways of data flows (data bindings).

- **One-way data binding** - The most popular way of binding from Model to UI. A good example of such binding is a text stored in Model and displayed on UI in a text area control.
- **One-way to source (to model)** - Binding which updates Model due to some action on UI. The best example for this is an event like button click (tap).
- **Two-way data binding** - Binding that combines both previous ways of binding. A typical example is a text box field that reads its value from Model, but also changes the Model based on user input.

NATIVESCRIPT.ORG/GET-THE-NATIVESCRIPT-BOOK


The NativeScript Book
BUILDING MOBILE APPS WITH SKILLS YOU ALREADY HAVE
1
Mike Branstein | Nick Branstein

NATIVESCRIPTCOMMUNITY.SLACK.COM



Thanks,
Michael

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/2HTtjje

Image not found

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.

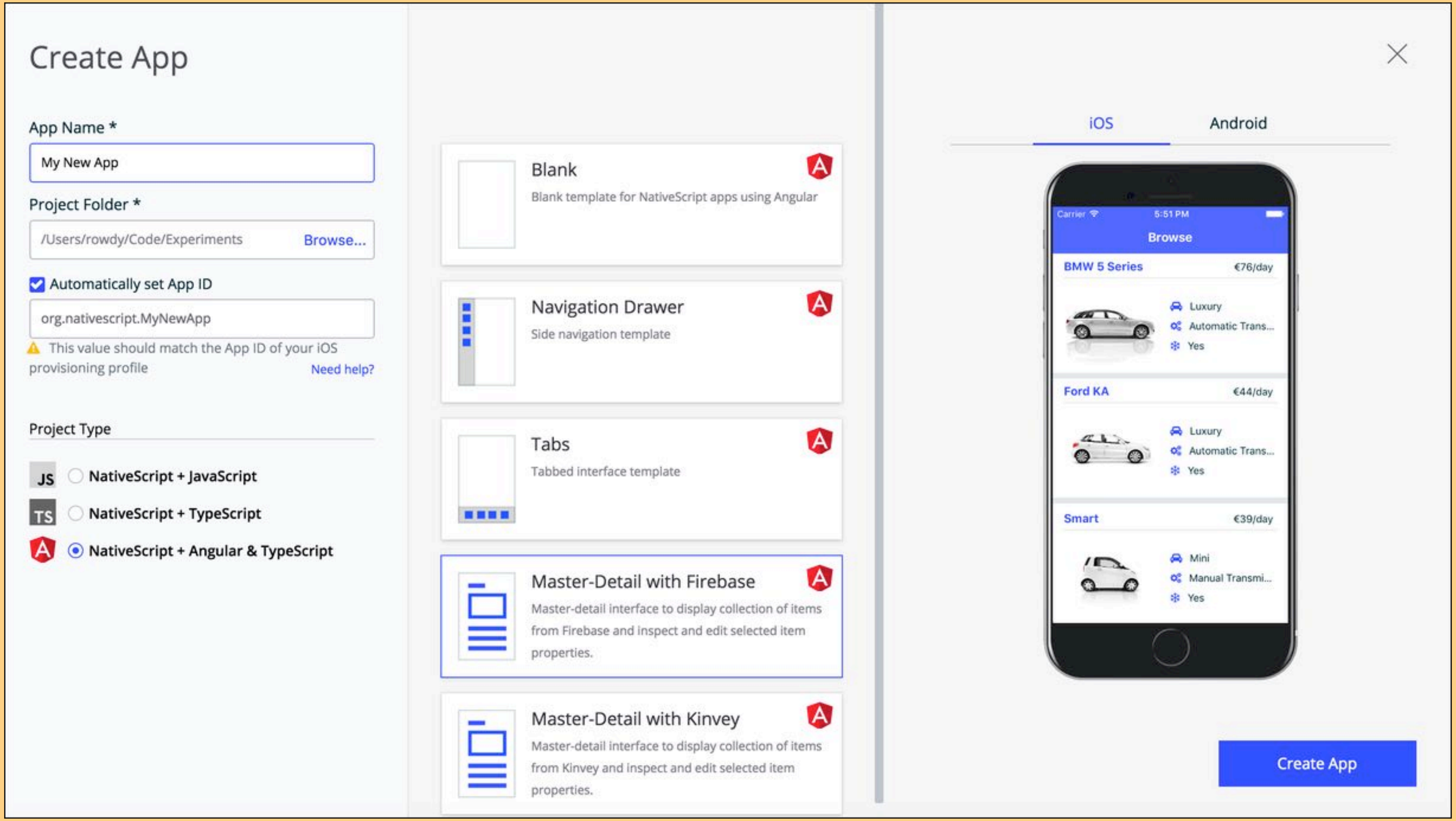
i'm using nativescript vue (edited)

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

NATIVESCRIPT.ORG/NATIVESCRIPT-SIDEKICK



Create App

App Name *

My New App

Project Folder *

/Users/rowdy/Code/Experiments Browse...

☑ Automatically set App ID

org.nativescript.MyNewApp

⚠ 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

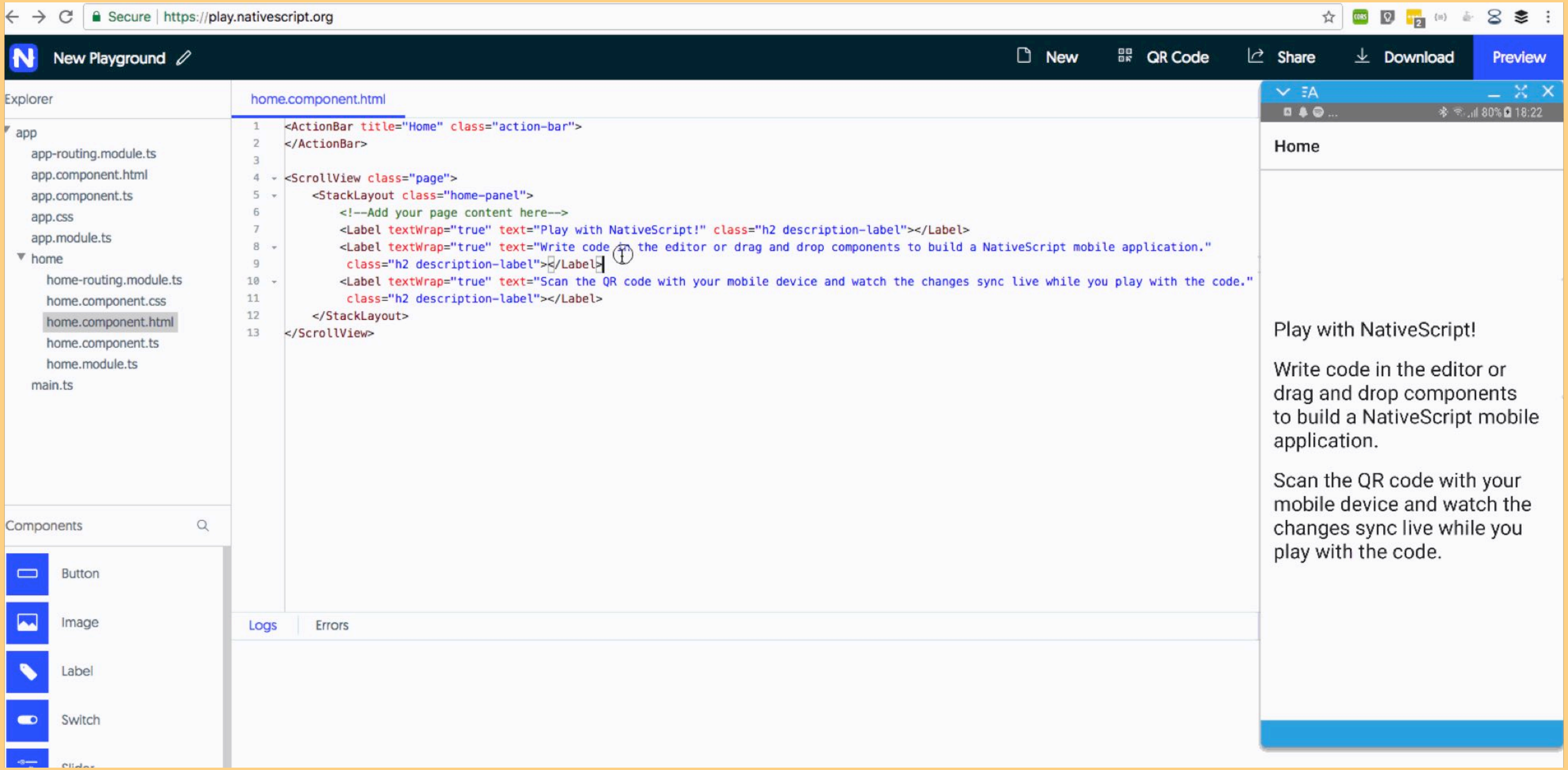
Navigation Drawer — Side navigation template

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.

PLAY.NATIVESCRIPT.ORG



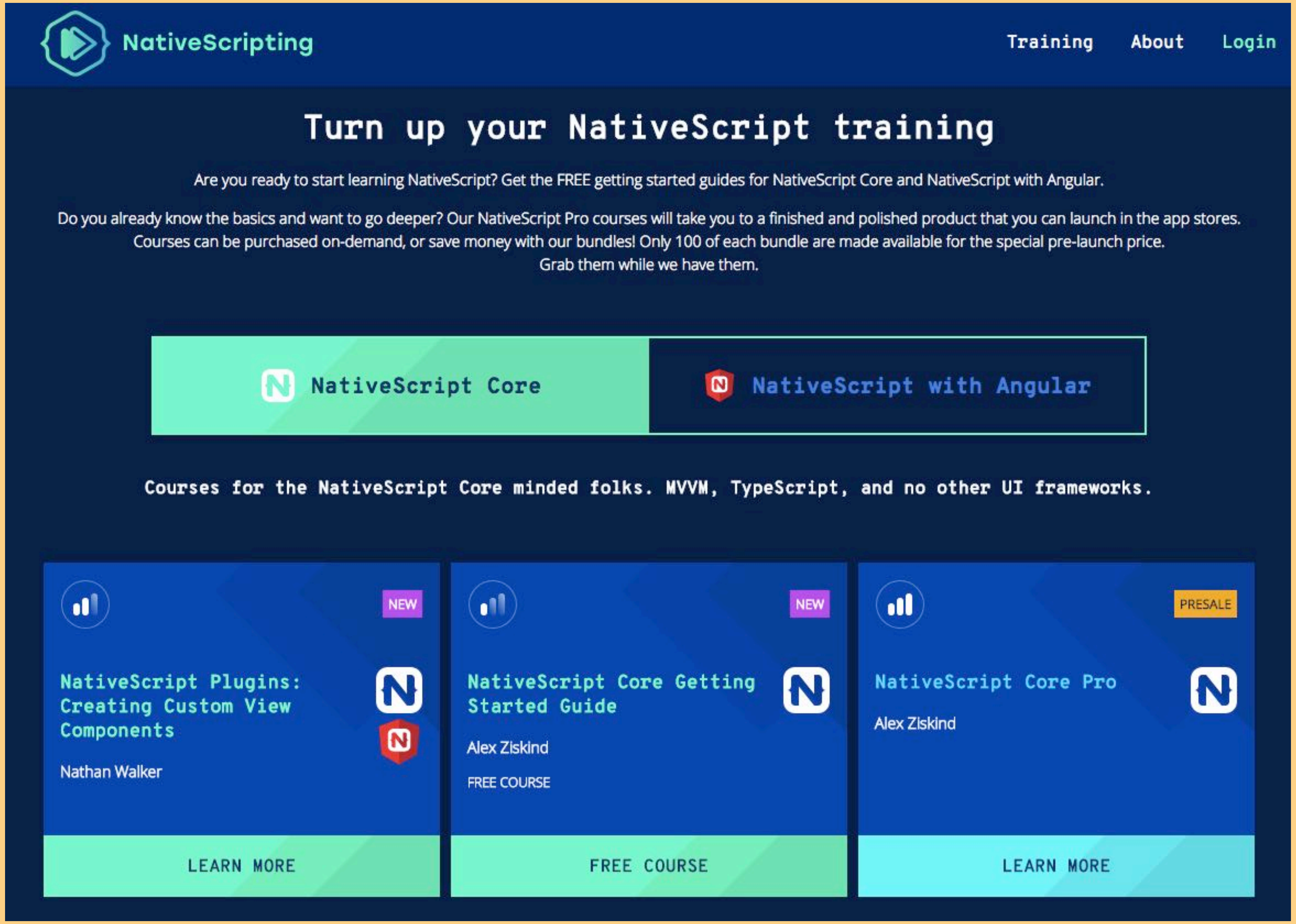
```
<ActionBar title="Home" class="action-bar">
</ActionBar>

<ScrollView class="page">
    <StackLayout class="home-panel">
        <!--Add your page content here-->
        <Label textWrap="true" text="Play with NativeScript!" class="h2 description-label"></Label>
        <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>
        <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>
    </StackLayout>
</ScrollView>
```

Play with NativeScript!

Write code in the editor or drag and drop components to build a NativeScript mobile application.

Scan the QR code with your mobile device and watch the changes sync live while you play with the code.

NATIVESCRIPTING.COM



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.

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

NEW
NativeScript Plugins: Creating Custom View Components
Nathan Walker
LEARN MORE

NEW
NativeScript Core Getting Started Guide
Alex Ziskind
FREE COURSE
FREE COURSE

PRESALE
NativeScript Core Pro
Alex Ziskind
LEARN MORE

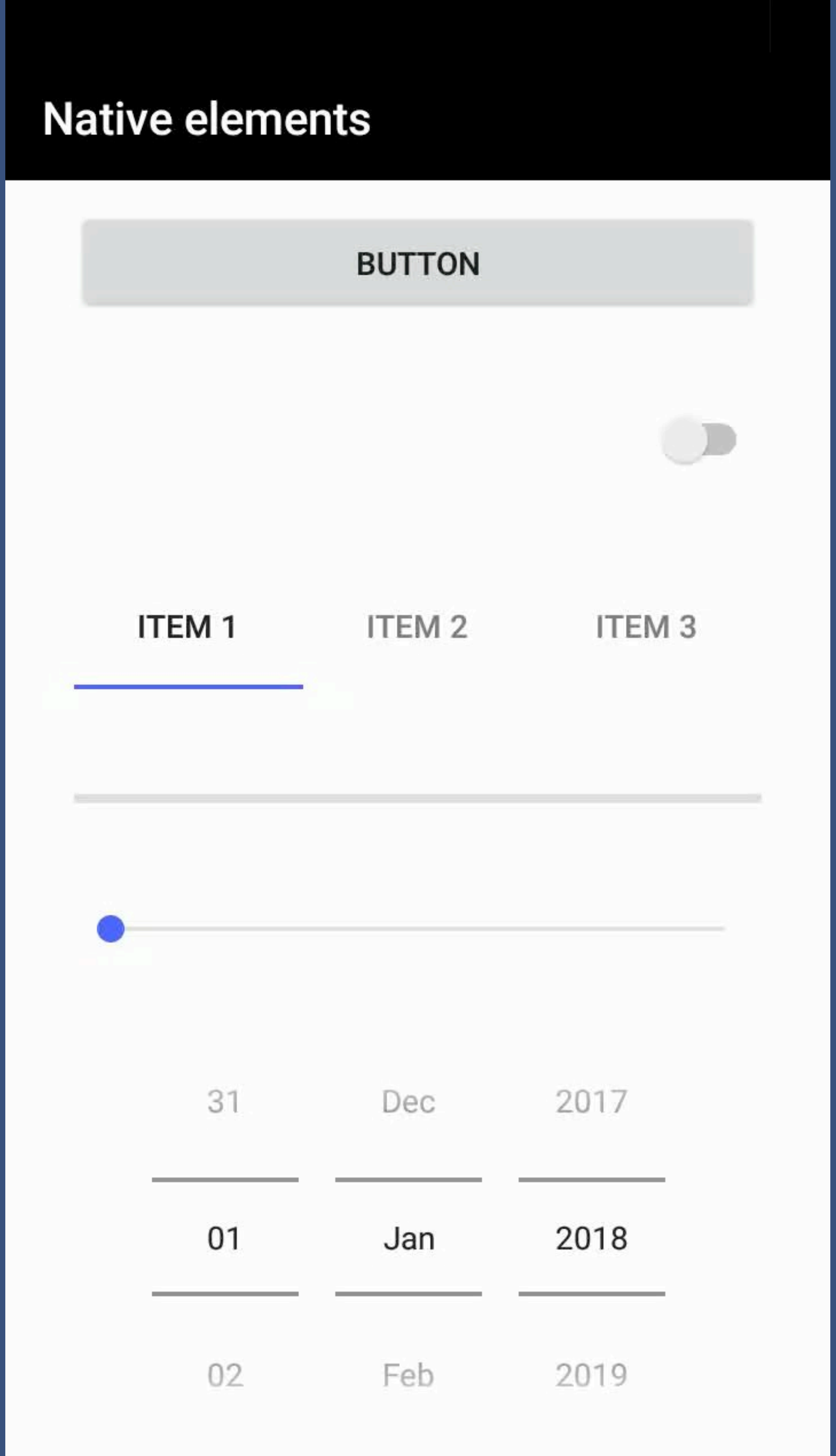
РАЗЦ
ИХ НАР
Ч

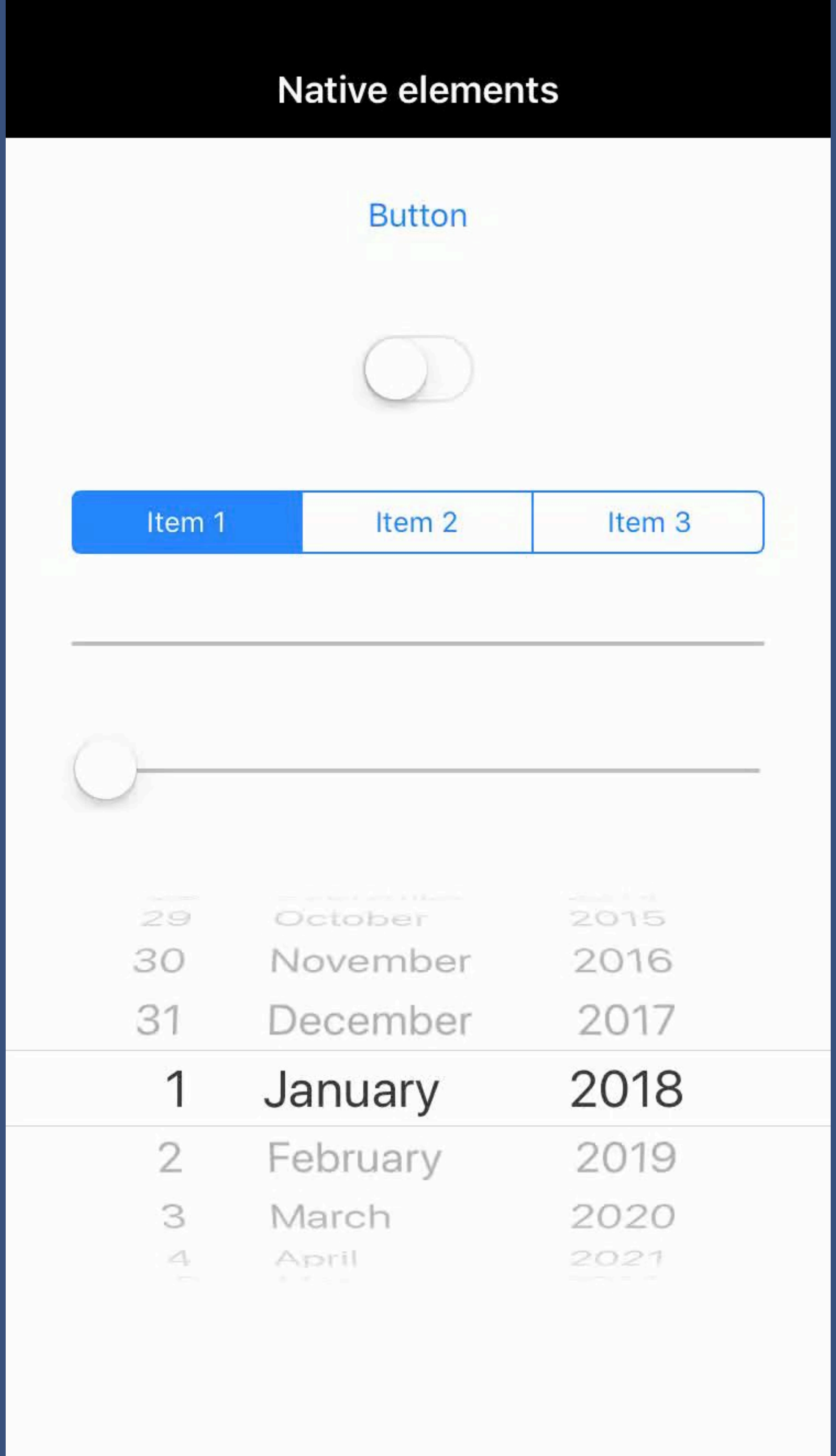
MARKUP LIKE ON THE WEB

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

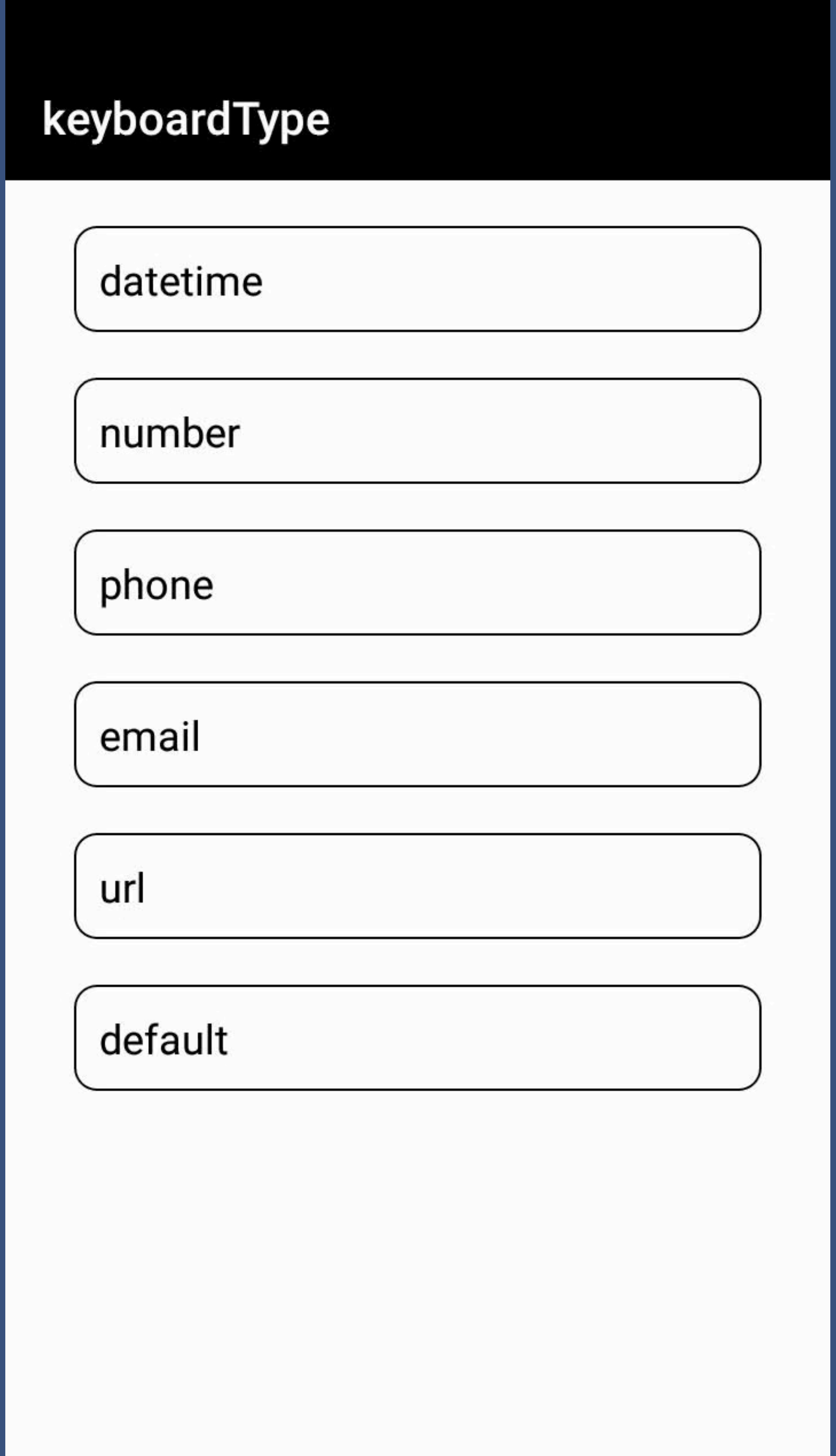
https://docs.nativescript.org/api-reference/modules/_ui_text_field_.textfield

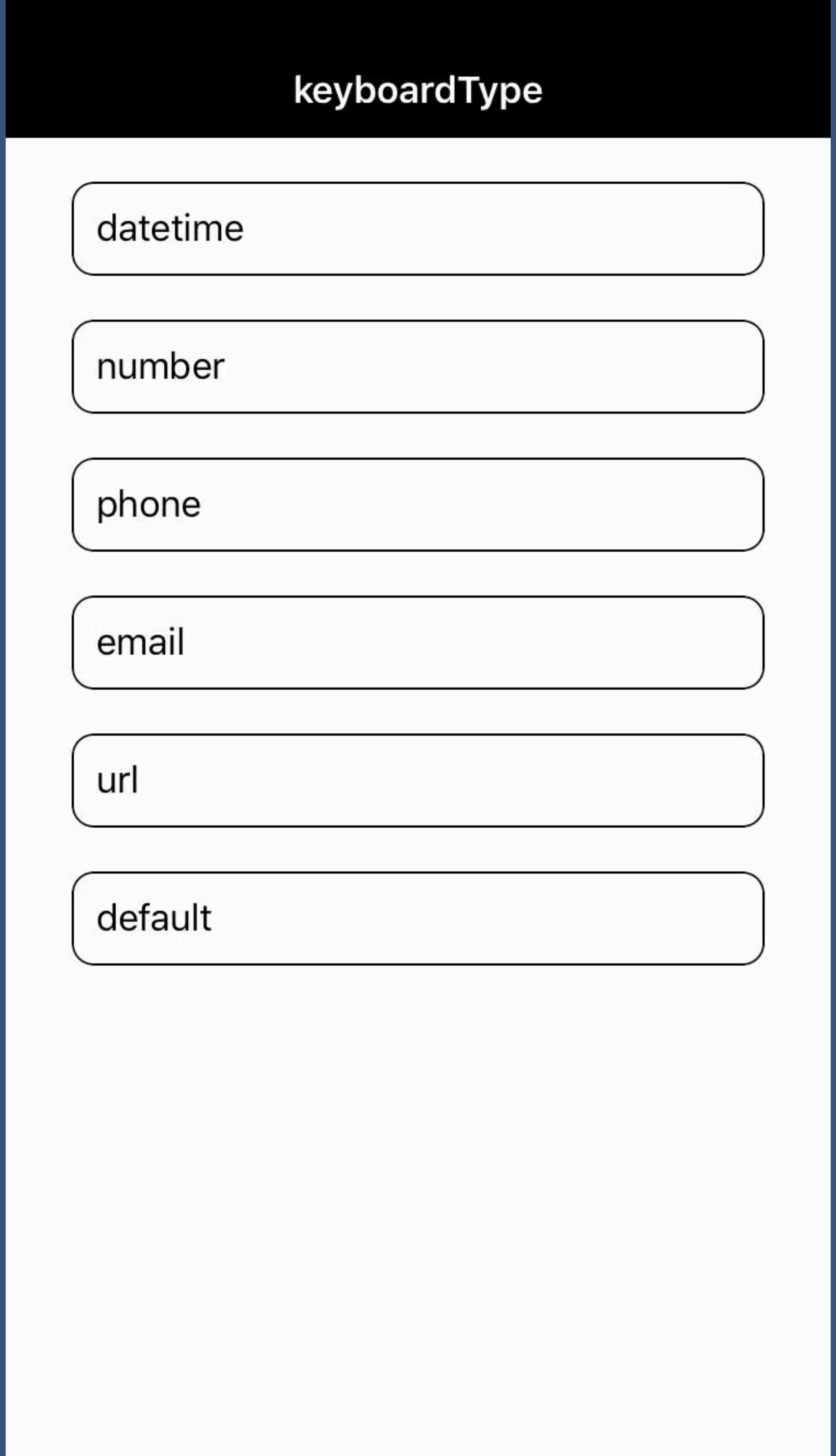
```
<TextField autocorrect="true"/>

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

TEXTFIELD: 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

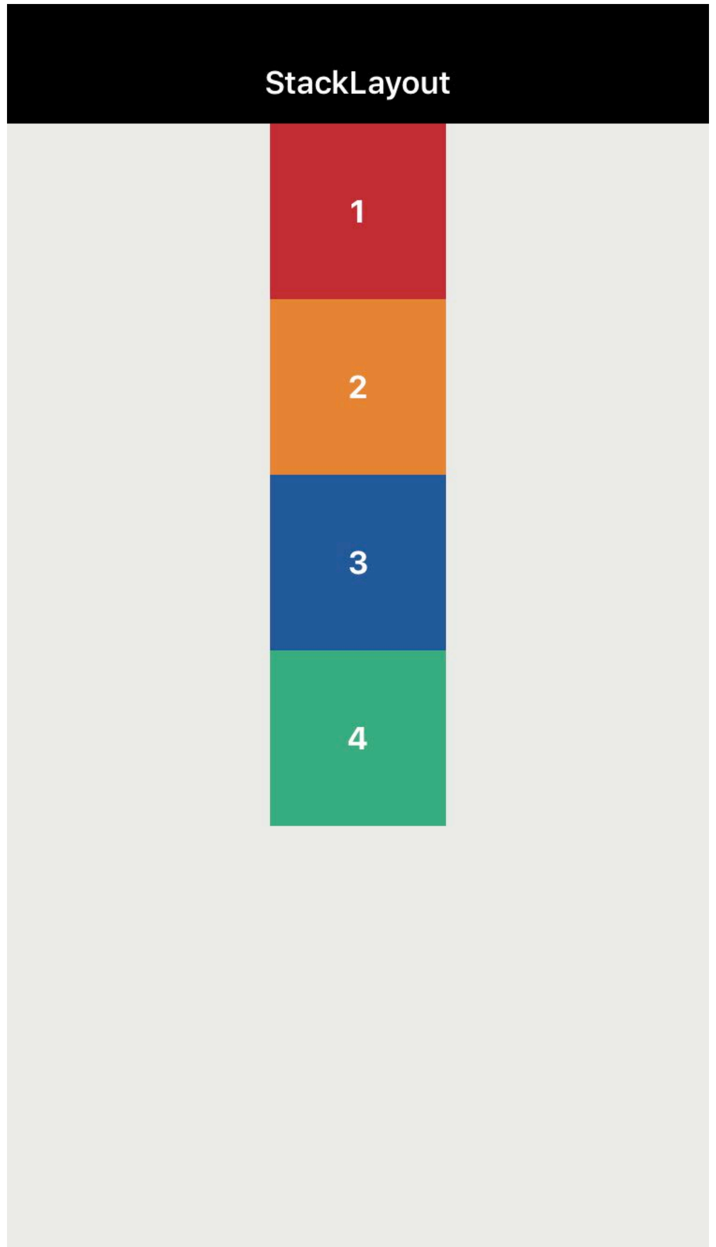
TEXTFIELD: MORE ATTRIBUTES

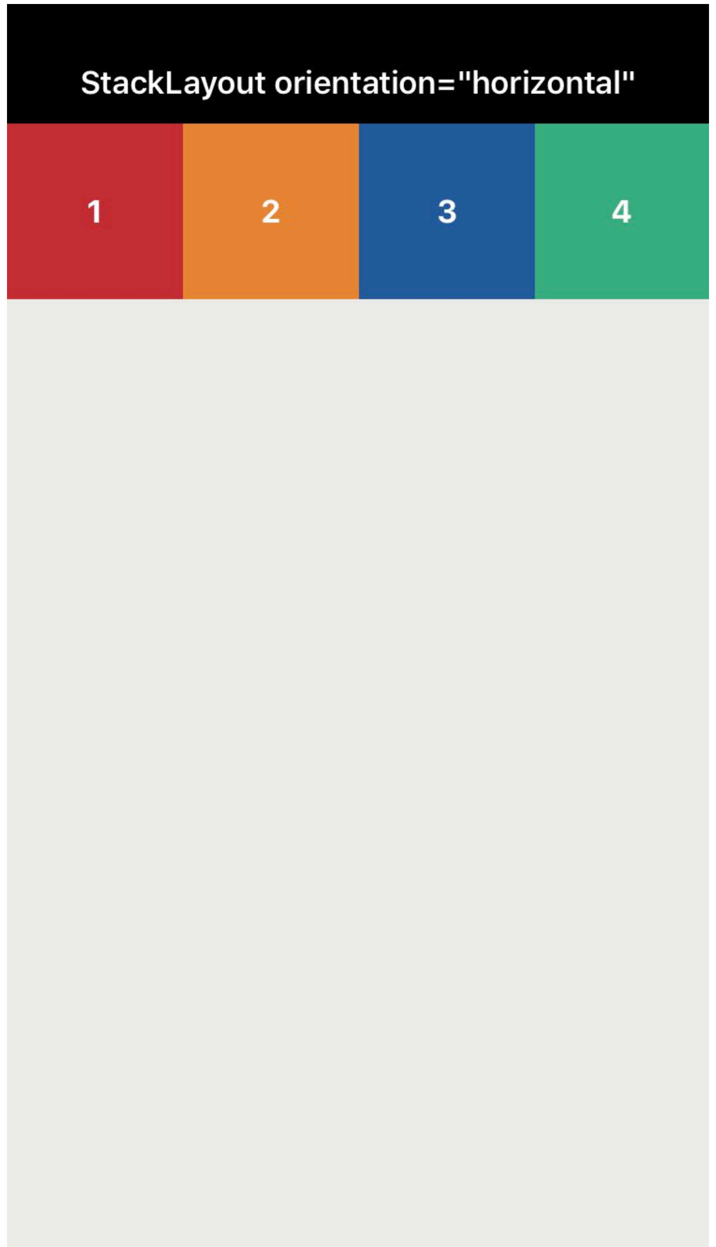
https://docs.nativescript.org/api-reference/modules/_ui_text_field_.textfield

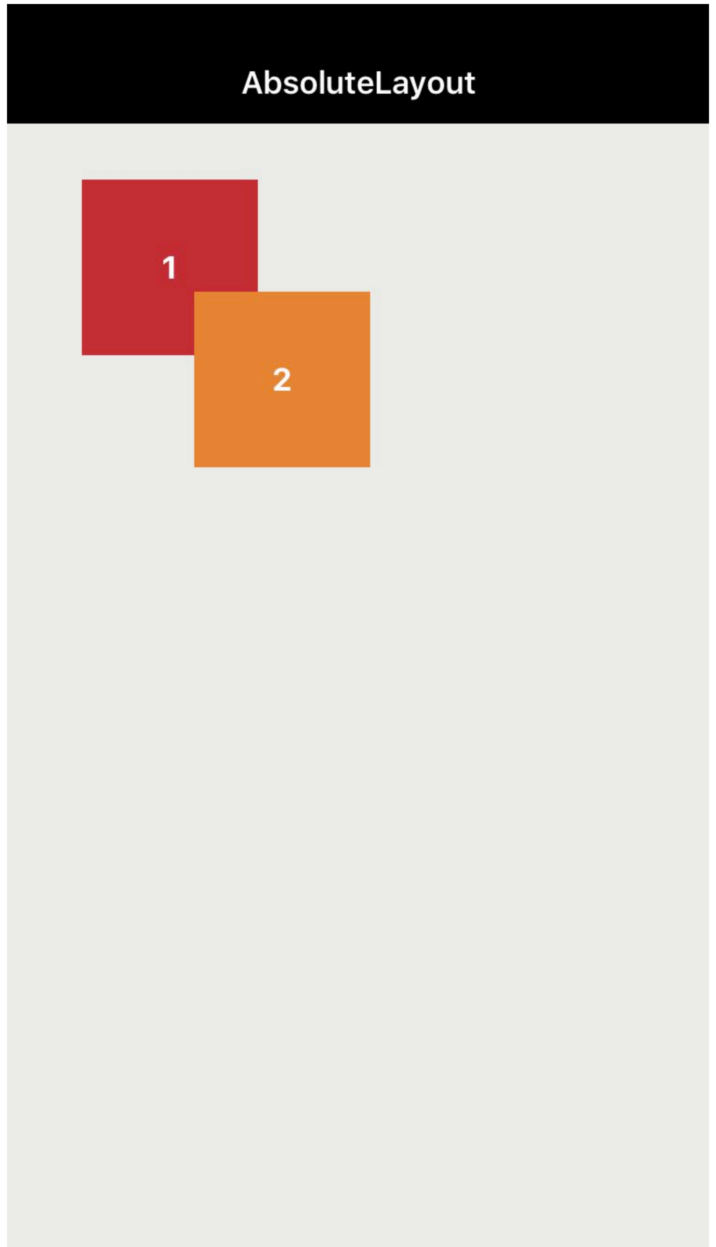
```
<TextField textAlignment=""/>

<TextField visibility=""/>

<TextField width=""/>

<TextField maxLength=""/>
```

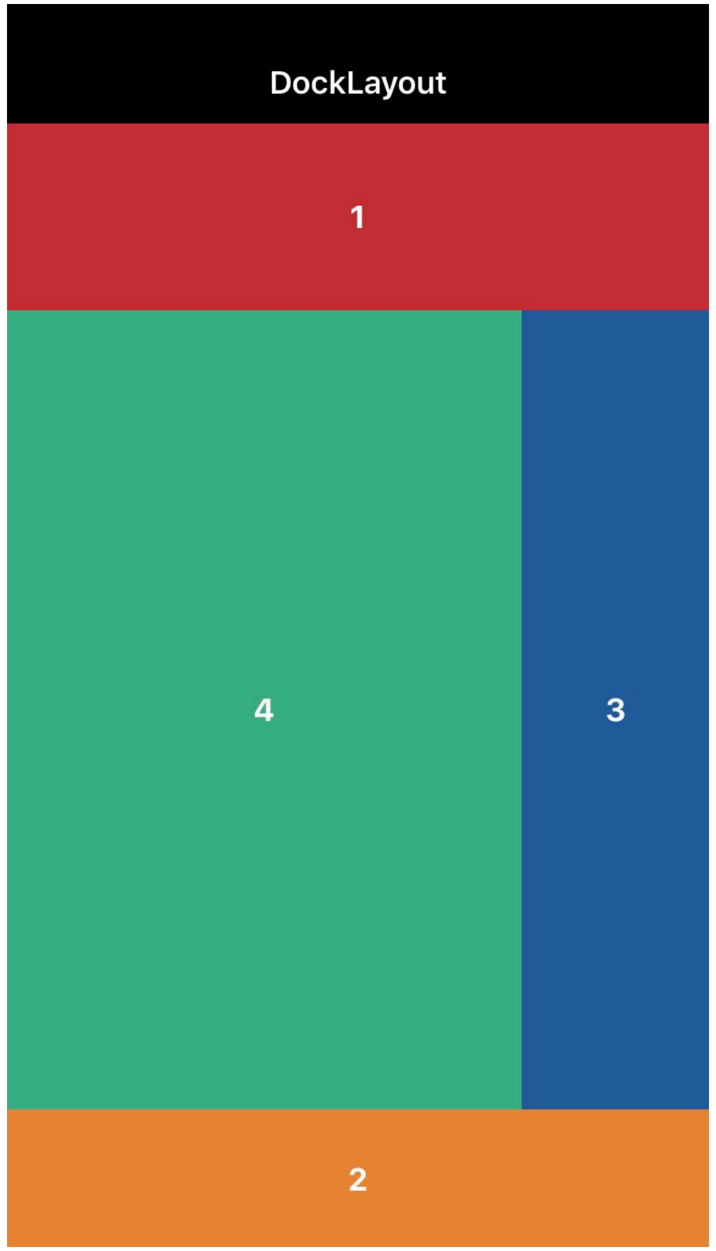
LAYOUTS

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



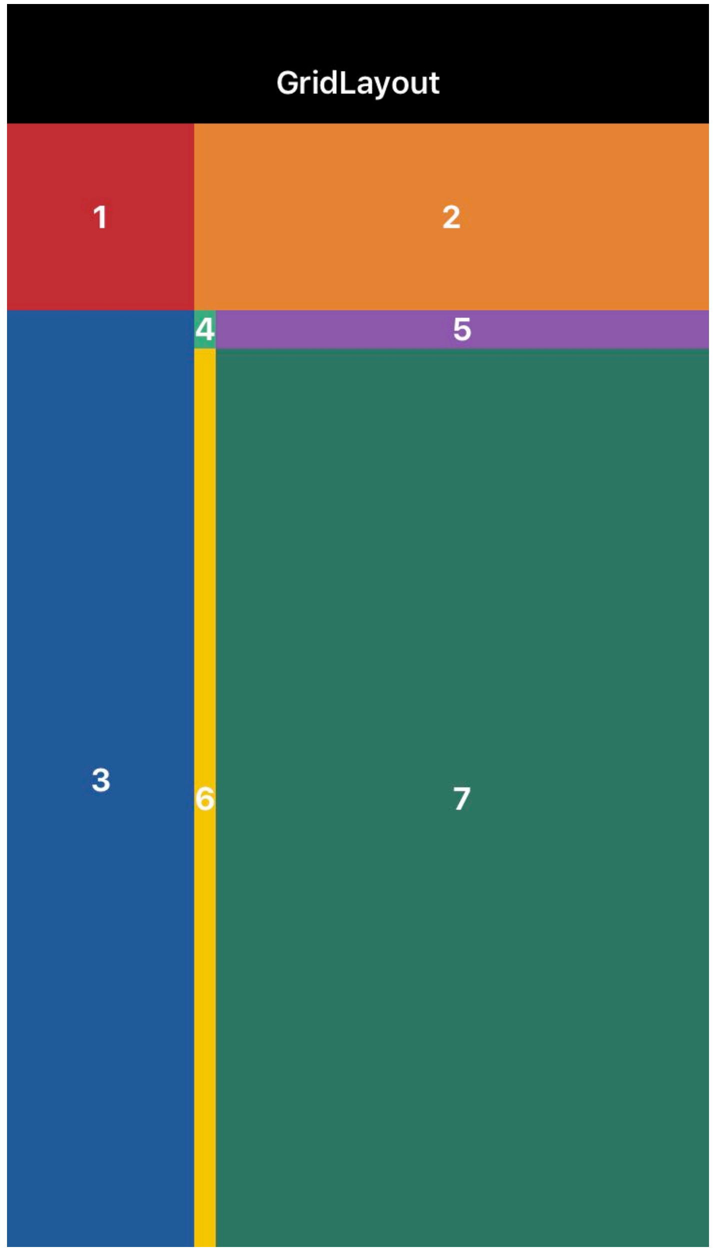


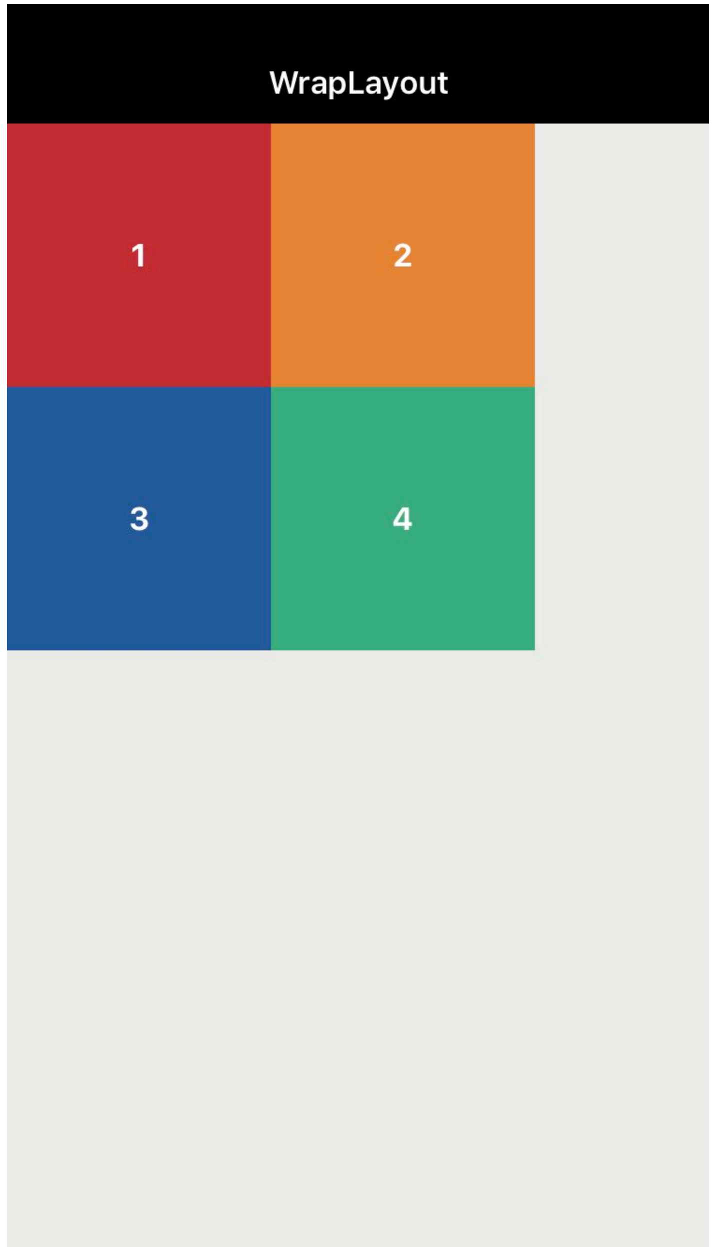


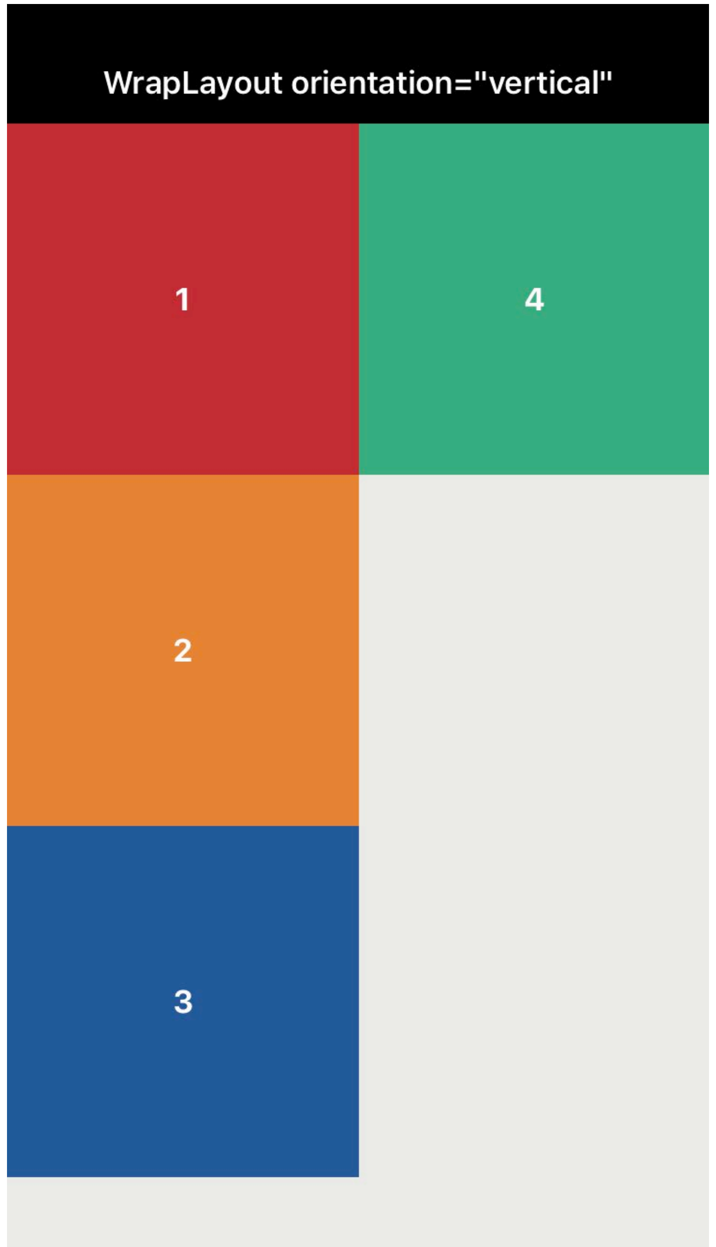


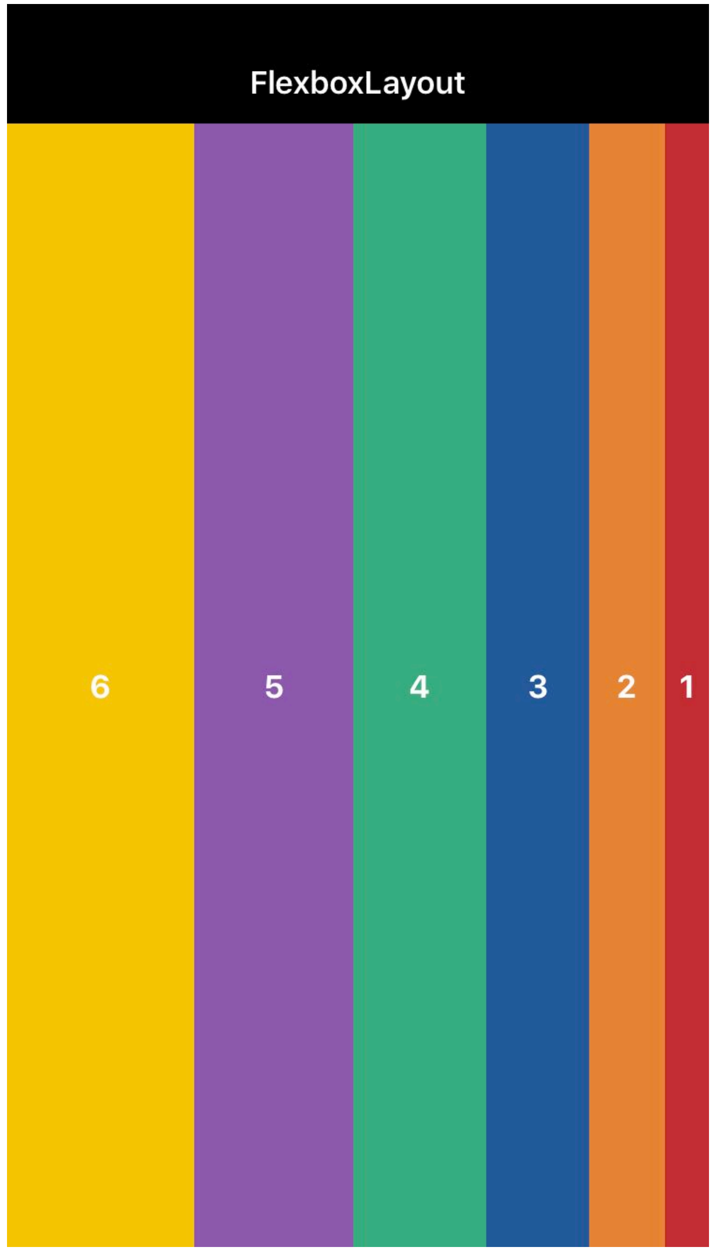
LAYOUTS

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





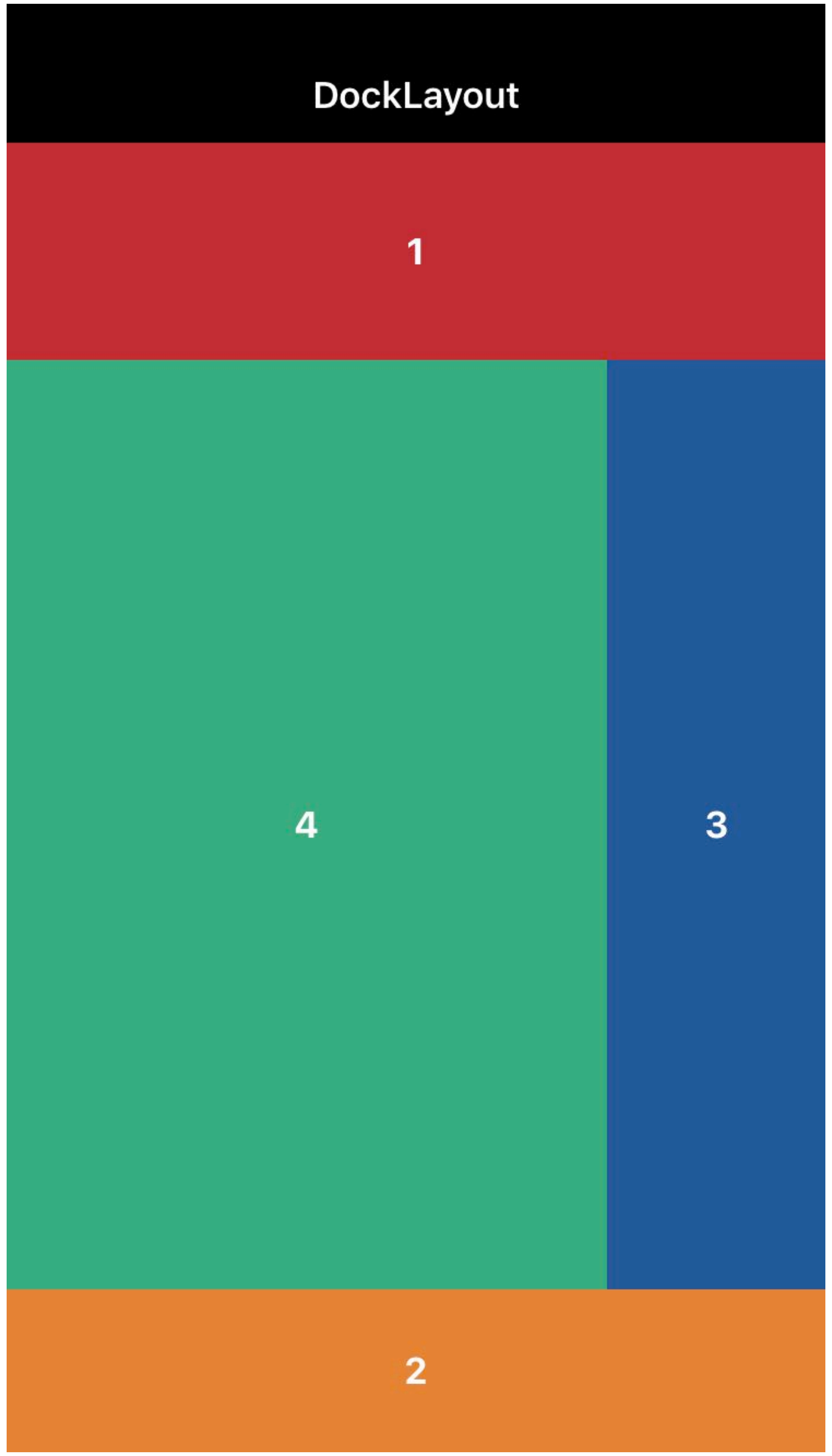




DOCKLAYOUT

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

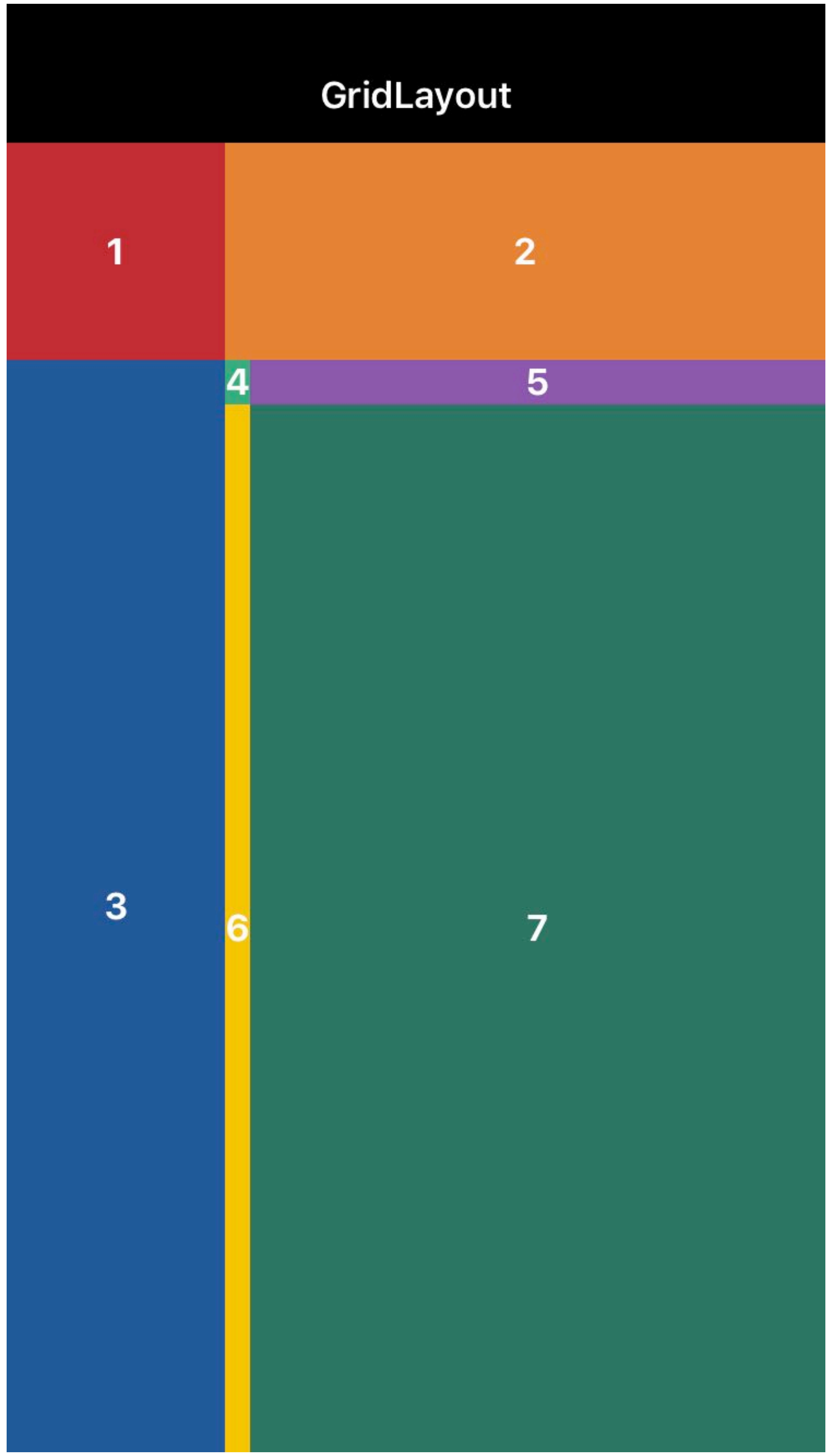
```
<DockLayout height="100%"
    stretchLastChild="true">

    <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

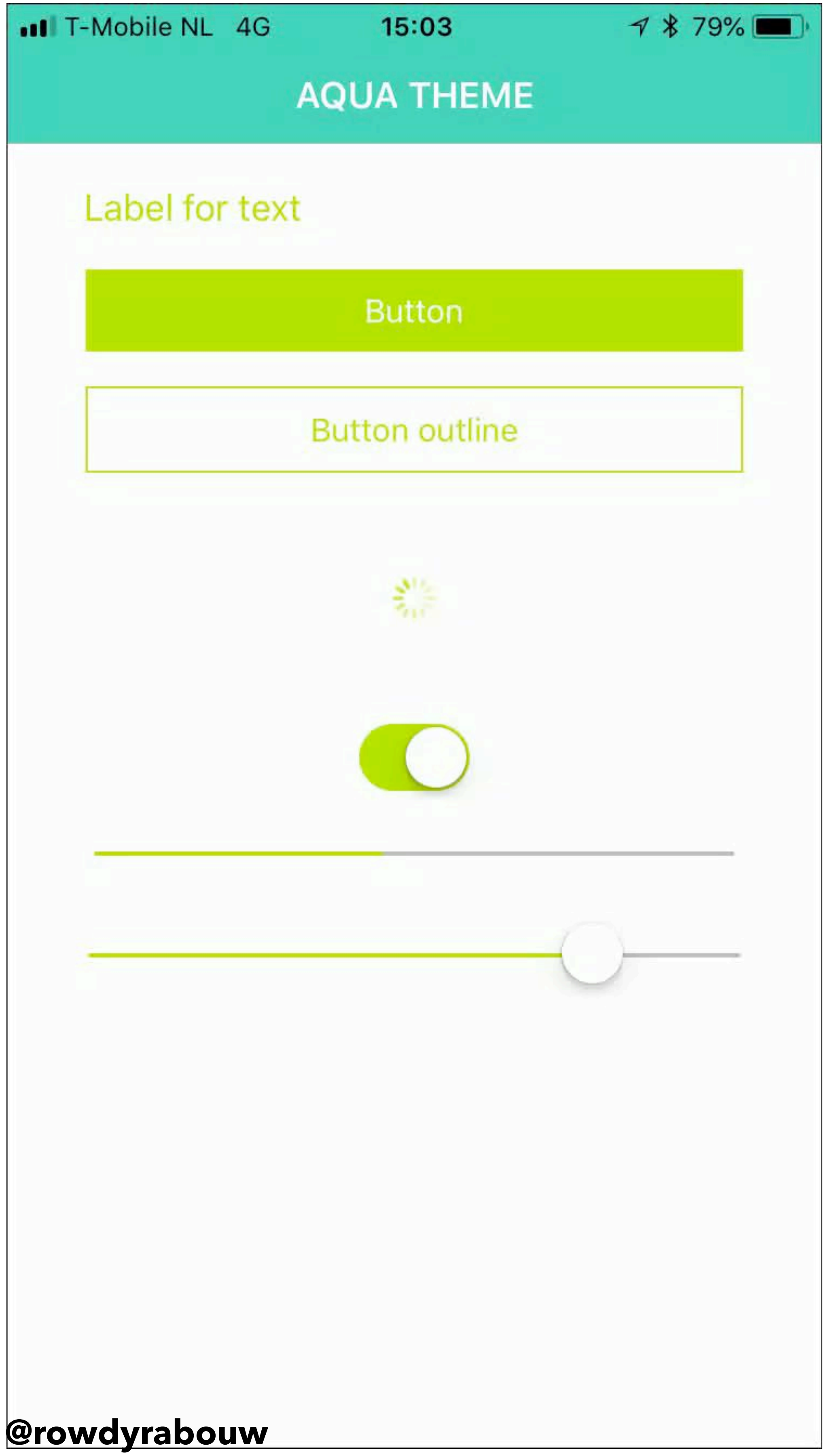
https://docs.nativescript.org/ui/styling

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

{N} CORE THEMES

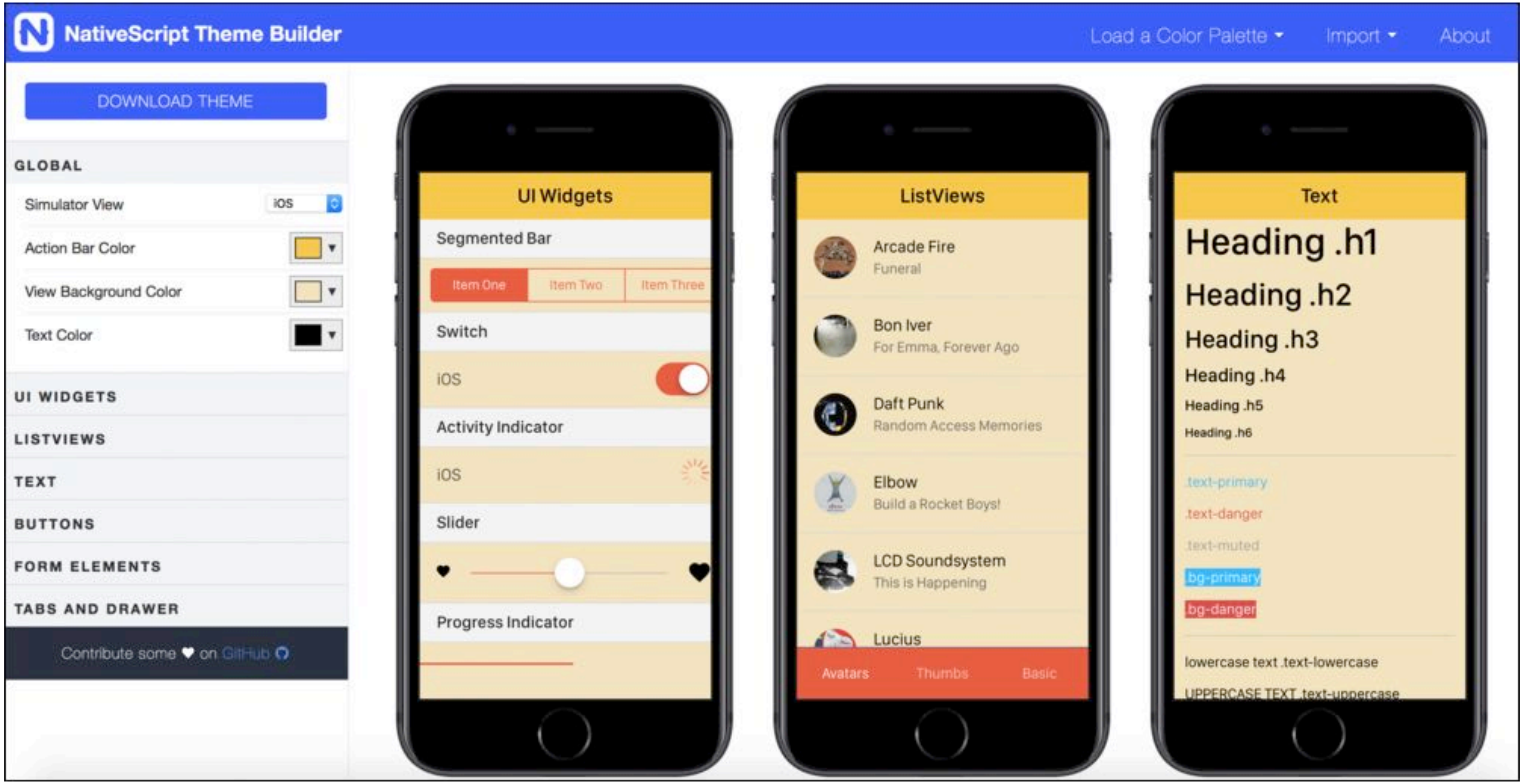
https://docs.nativescript.org/ui/theme

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



NATIVESCRIPT THEME BUILDER

https://www.nativescriptthemebuilder.com



Simulator View iOS

Action Bar Color

View Background Color

Text Color

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>
```

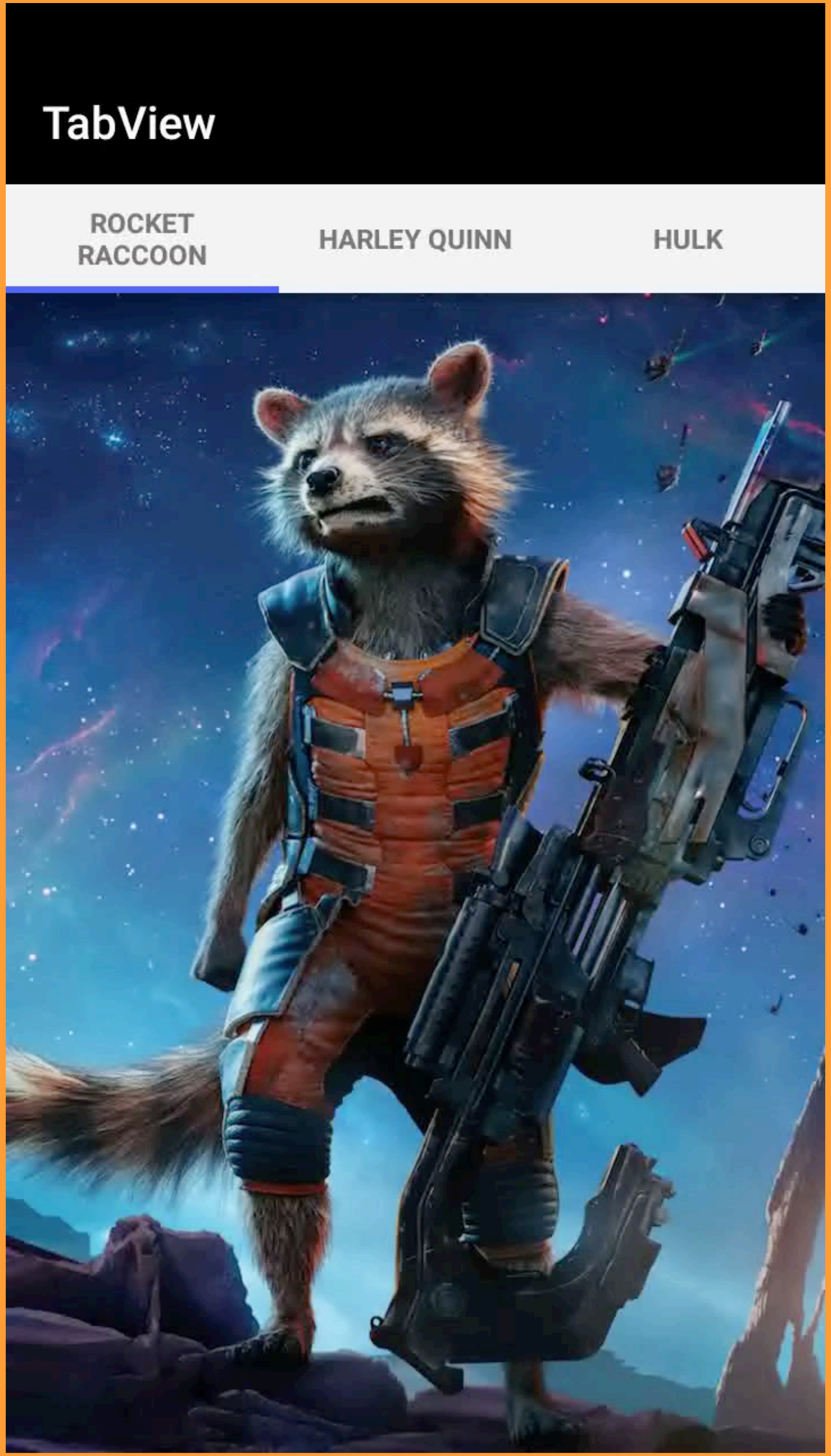
TABVIEW

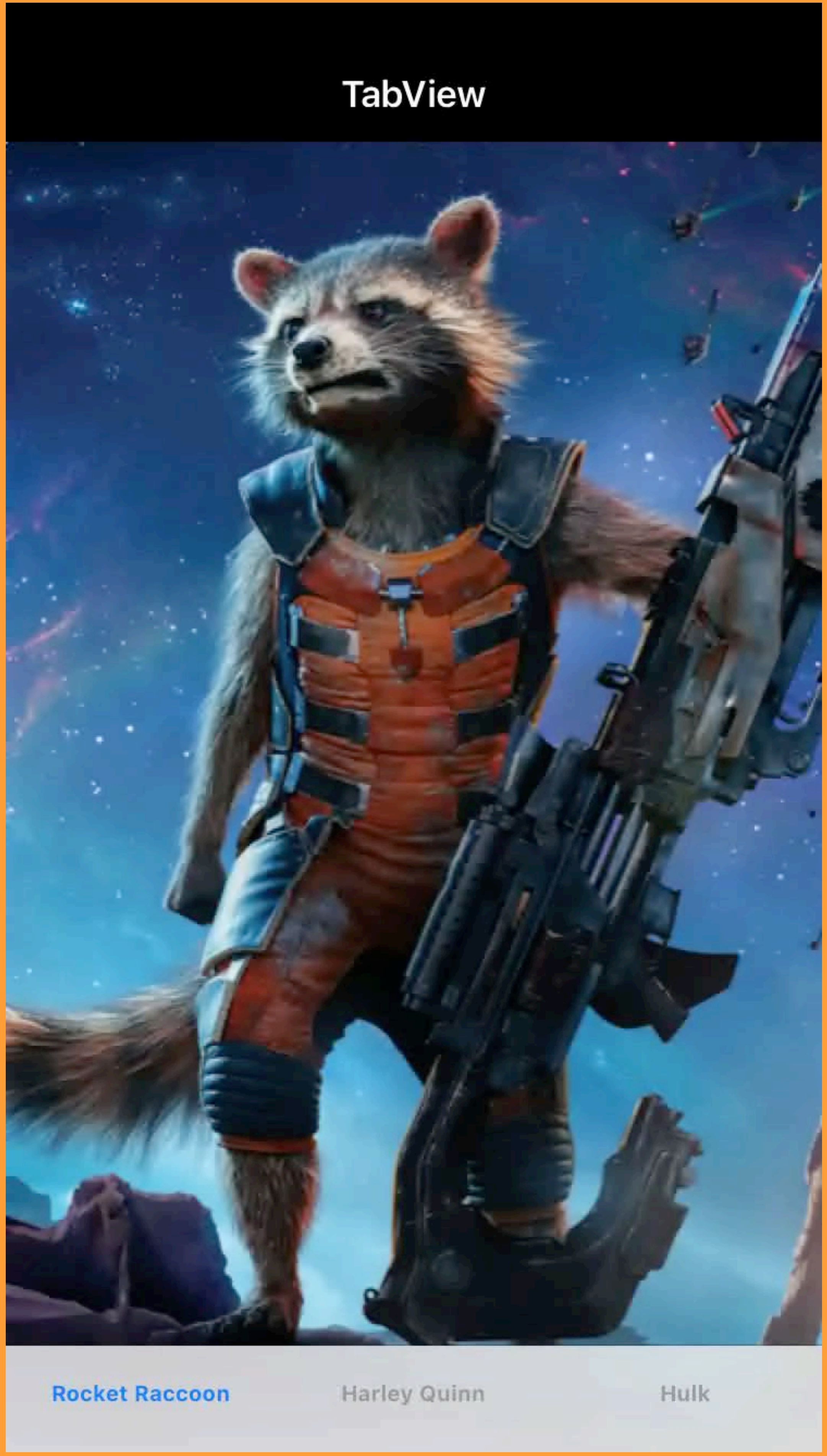
```css
.full {
  background-size: cover;
  background-position: center;
  background-repeat: no-repeat;
}

.rocket { background-image: url("~/images/rocket-raccoon.jpg"); }

.harley { background-image: url("~/images/harley-quinn.jpg"); }

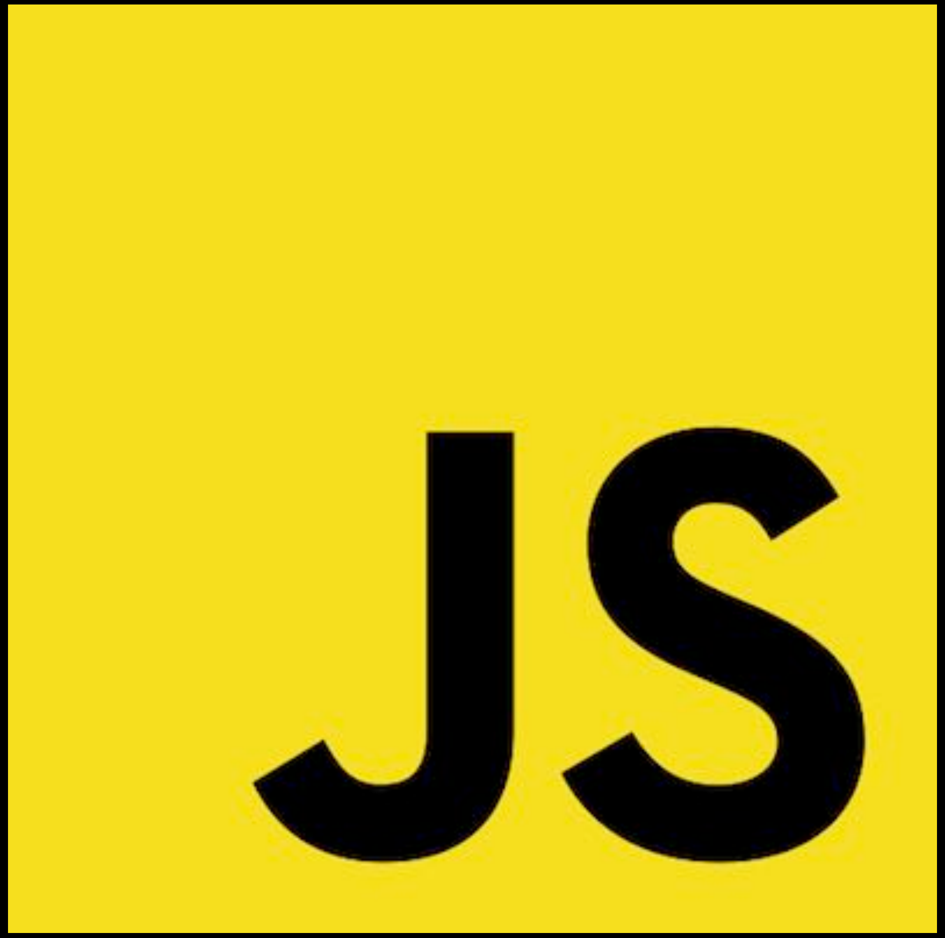
.hulk { background-image: url("~/images/hulk.jpg"); }
```


TabView
ROCKET RACCOON
HARLEY QUINN
HULK

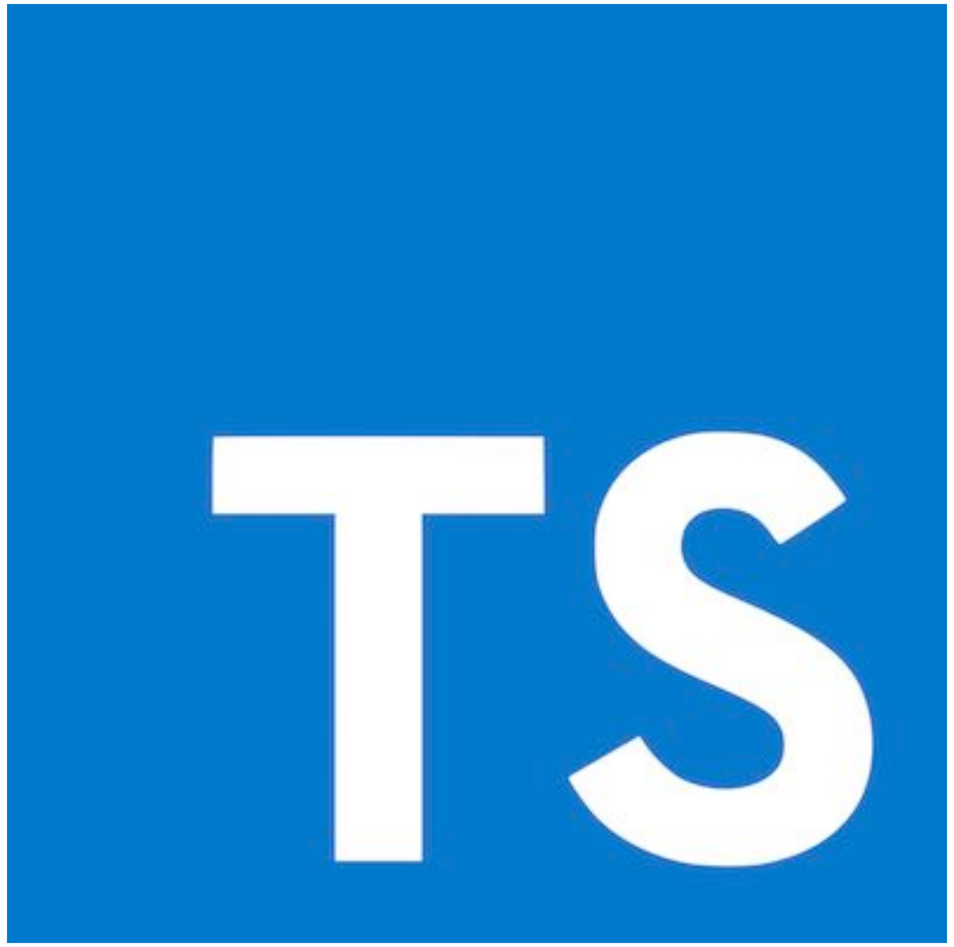

TabView
Rocket Raccoon
Harley Quinn
Hulk

4
4

4 FANTASTIC CHOICES



JAVASCRIPT



TYPESCRIPT

VUE.JS

ANGULAR

ANGULAR

- Opinionated JavaScript framework
- Typescript
- Full-featured routing
- Dependency injection
- Data binding
- Seperate core team for Angular
- nativescript-schematics for easy code sharing

ANGULAR

```
import { NgModule } from "@angular/core";
import { NativeScriptRouterModule } from "nativescript-angular/router";
import { Routes } from "@angular/router";

const routes: Routes = [
  { path: "", redirectTo: "/start", pathMatch: "full" },
  { path: "start", loadChildren: "./components/startseite/startseite.module#StartSeiteModule" },
  { path: "super", loadChildren: "./components/superhelden/superhelden.module#SuperHeldenModule" }
];

@NgModule({
  imports: [NativeScriptRouterModule.forRoot(routes)],
  exports: [NativeScriptRouterModule]
})

export class AppRoutingModule {}
```

ANGULAR

```
import { NgModule } from "@angular/core";
import { NativeScriptRouterModule } from "nativescript-angular/router";
import { Routes } from "@angular/router";

const routes: Routes = [
  { path: "", redirectTo: "/start", pathMatch: "full" },
  { path: "start", loadChildren: "./components/startseite/startseite.module#StartSeiteModule" },
  { path: "super", loadChildren: "./components/superhelden/superhelden.module#SuperHeldenModule" }
];

@NgModule({
  imports: [NativeScriptRouterModule.forRoot(routes)],
  exports: [NativeScriptRouterModule]
})

export class AppRoutingModule {}
```

ANGULAR

```
import { SprachDienst } from "./dienste/sprach.dienst";

export class StartSeiteComponent {

  constructor(private sprachDienst: SprachDienst) {}

  spracheAndern(sprache: string) {
    this.sprachDienst.SpracheEinstellen(sprache);
  }

}
```

ANGULAR

one-way data binding

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

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

```
text: string = "Hallo München!";
```

ANGULAR

two-way data binding

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

ANGULAR

two-way data binding: 🍌 🍌 🎁

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

ANGULAR

links

```
<!-- Angular -->
<a routerLink="/next">Next</a>

<!-- NativeScript Angular -->
<Button text="Next" [nsRouterLink]="['/next']"></Button>
```

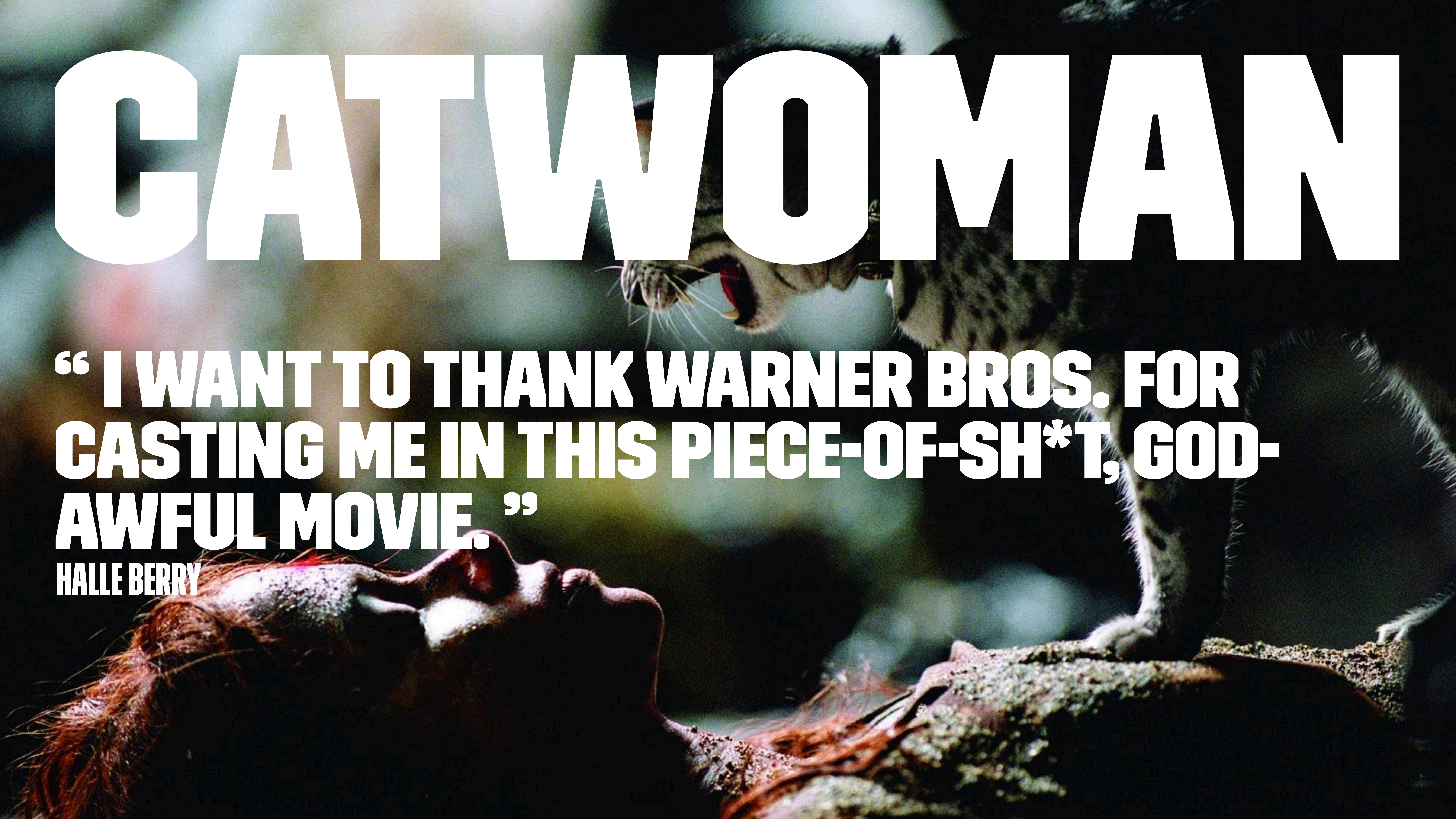
ANGULAR

checkbox / switch

```
<!-- Angular -->
<input type="checkbox">
<input type="checkbox" />

<!-- NativeScript Angular: no self-closing tags allowed -->
<Switch></Switch>
```

BAD PERFORMANCE



CATWOMAN

“ 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";

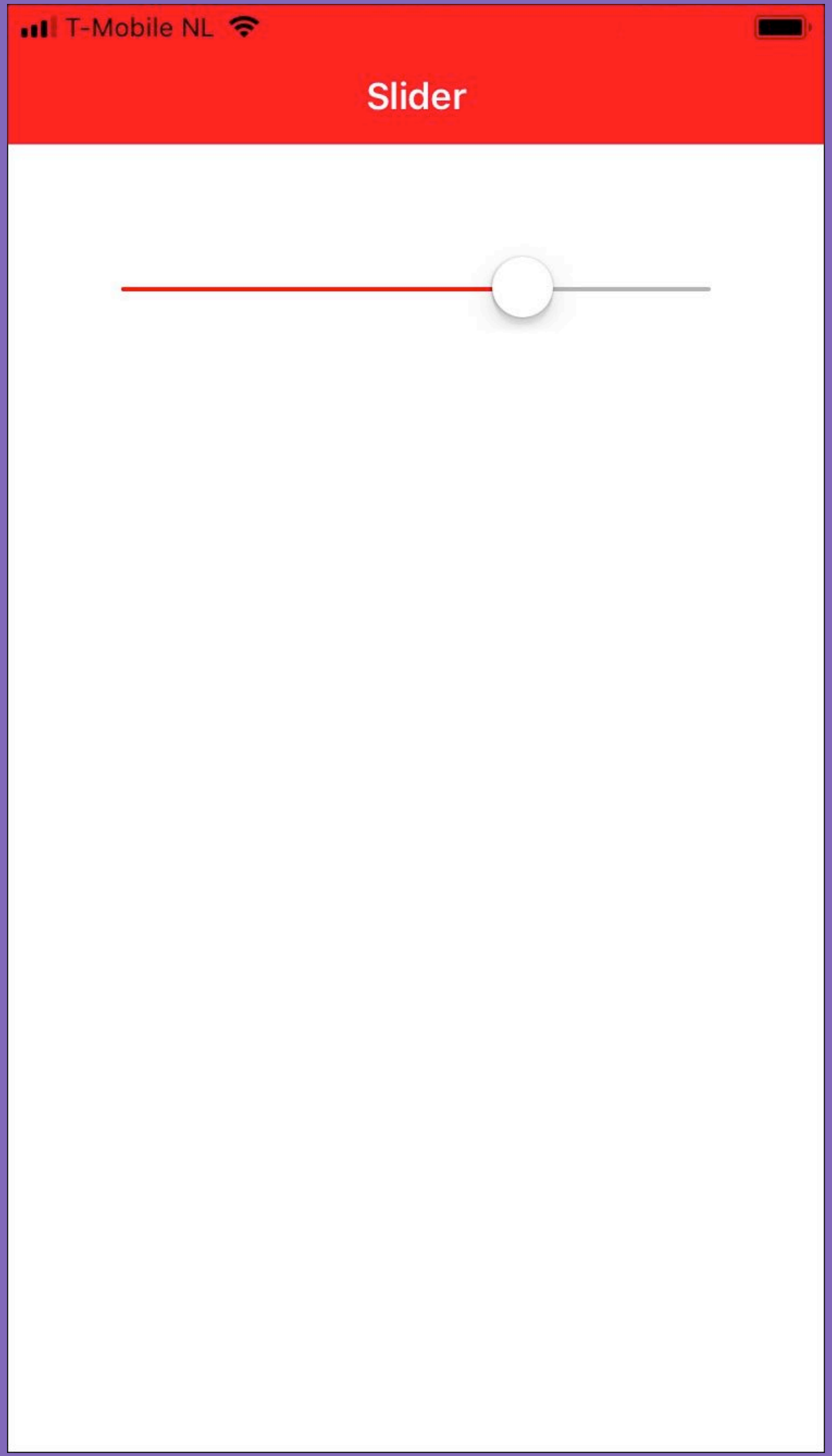
@Component({
  selector: "app-slider",
  moduleId: module.id,
  templateUrl: "slider.component.html",
  styleUrls: ["slider.component.css"]
})
export class SliderComponent {
  constructor() {}
}
```

SLIDER.COMPONENT.CSS

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

StackLayout {
  padding: 50;
}

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



T-Mobile NL

Slider

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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    }
  }
}
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SLIDER.DIRECTIVE.TS

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      uiSlider.setThumbImageForState(
        UIImage.imageNamed("image.png"), UIControlState.Normal);
    }
  }
}
```

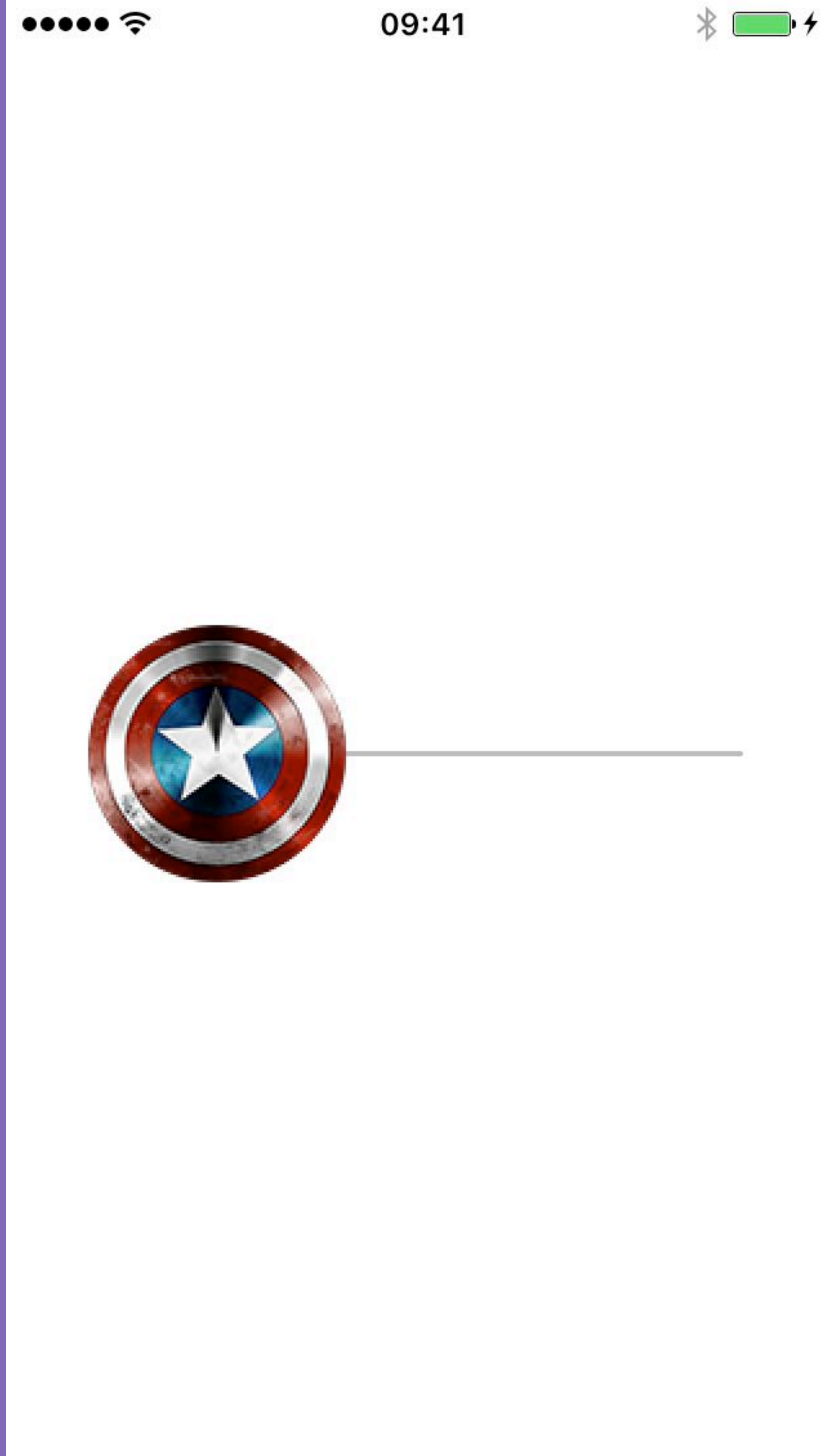
SLIDER.MODULE.TS

```
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 {}
```


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

```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

```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();
    }
  }
}
```

PACKAGES & LIBRARIES

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)

MULTILINGUAL: NGX-TRANSLATE

MULTILINGUAL: NGX-TRANSLATE

- Matthias Drescher: Lokalisierung in Angular (mit 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

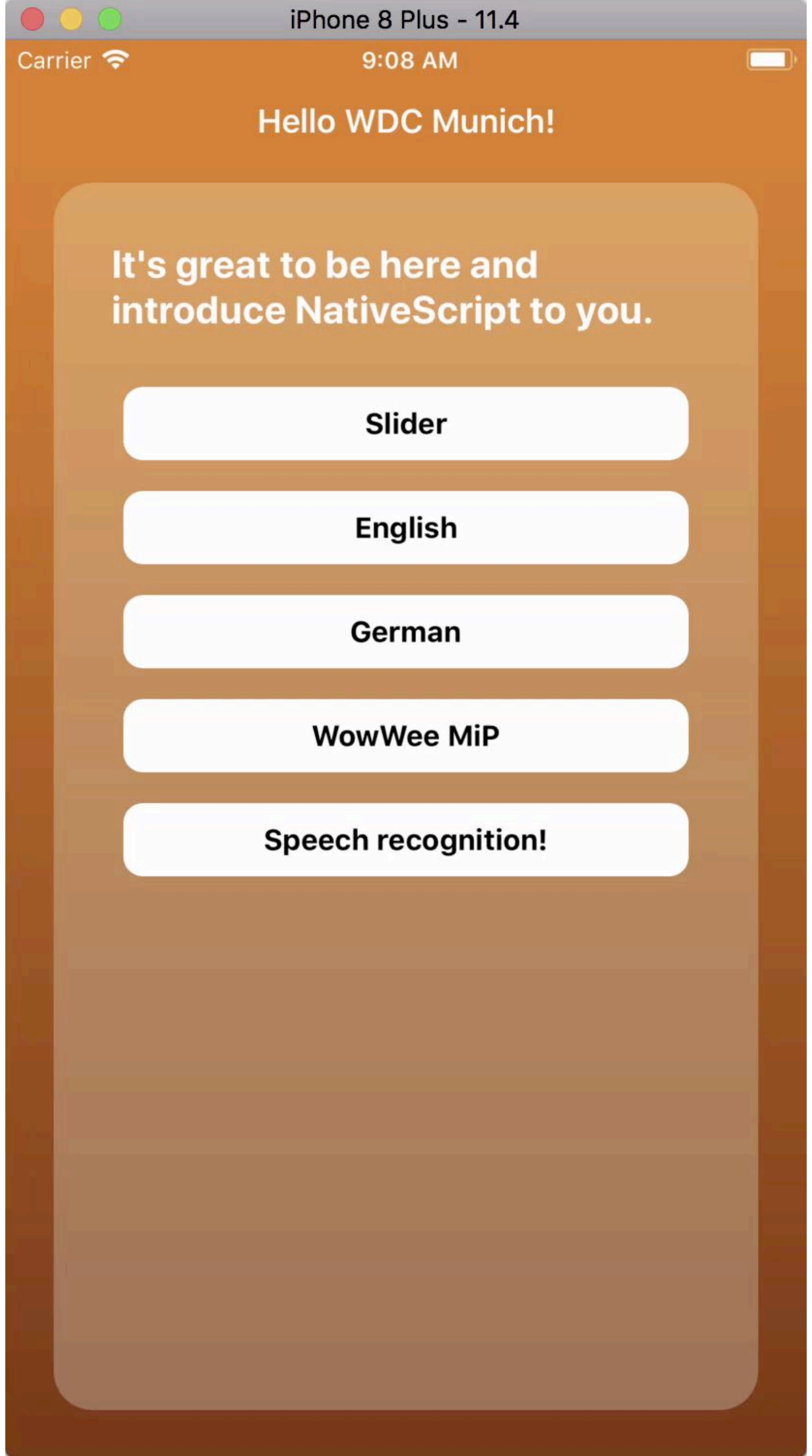
```
{
  "HOME": {
    "TITLE": "Hello WDC Munich!",
    "TEXT": "It's great to be here and introduce NativeScript to you.",
    "SLIDER": "Slider",
    "ENGLISH": "English",
    "FOREIGN": "German",
    "MIP": "WowWee MiP",
    "SPEECH_RECOGNITION": "Speech recognition!"
  }
}
```

MULTILINGUAL: NGX-TRANSLATE

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

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

[] = one way data binding in Angular

| = display-value transformations



Hello WDC Munich!

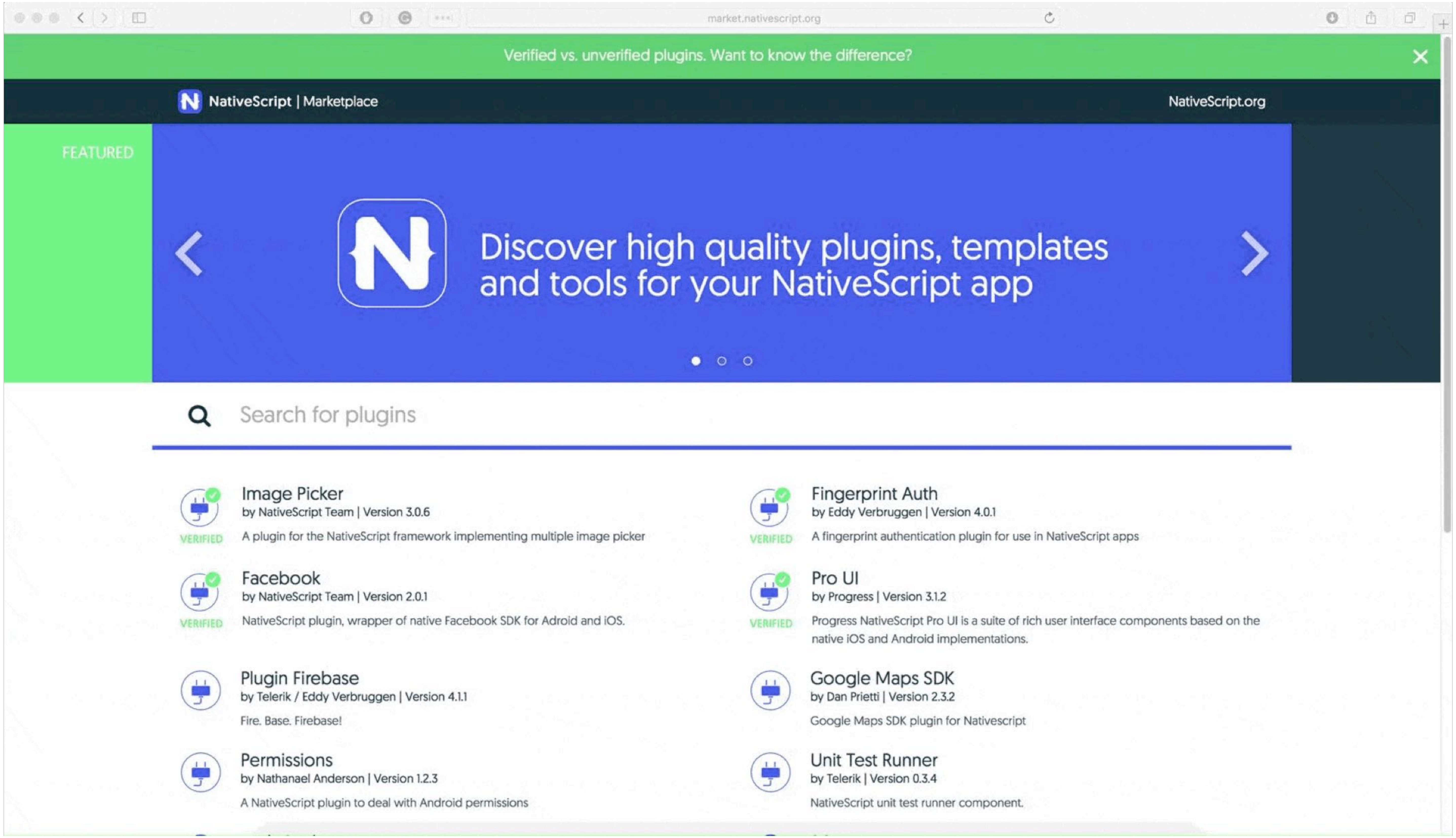
It's great to be here and introduce NativeScript to you.

NATIVESCRIPT 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**



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

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

Image Picker
by NativeScript Team | Version 3.0.6
VERIFIED
A plugin for the NativeScript framework implementing multiple image picker

Fingerprint Auth
by Eddy Verbruggen | Version 4.0.1
VERIFIED
A fingerprint authentication plugin for use in NativeScript apps

Facebook
by NativeScript Team | Version 2.0.1
VERIFIED
NativeScript plugin, wrapper of native Facebook SDK for Adroid and iOS.

Pro UI
by Progress | Version 3.1.2
VERIFIED
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

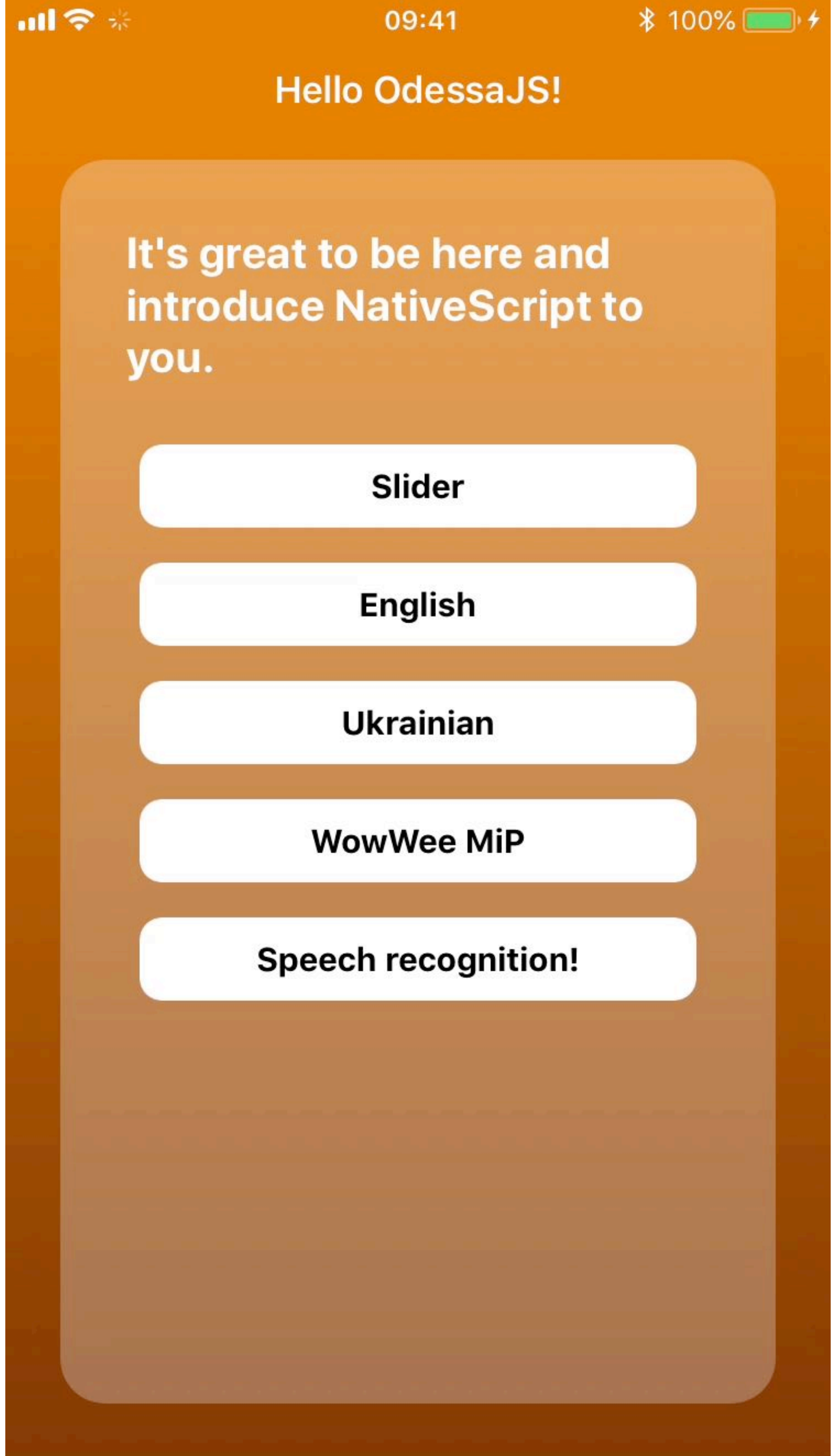
- nativescript-bluetooth
- nativescript-accelerometer
- nativescript-speech-recognition

NATIVESCRIPT PLUGINS

- nativescript-texttospeech
- nativescript-directions
- nativescript-videoplayer

{N} PLUGINS (LIVE) DEMO

MiP
WowWee



Hello OdessaJS!

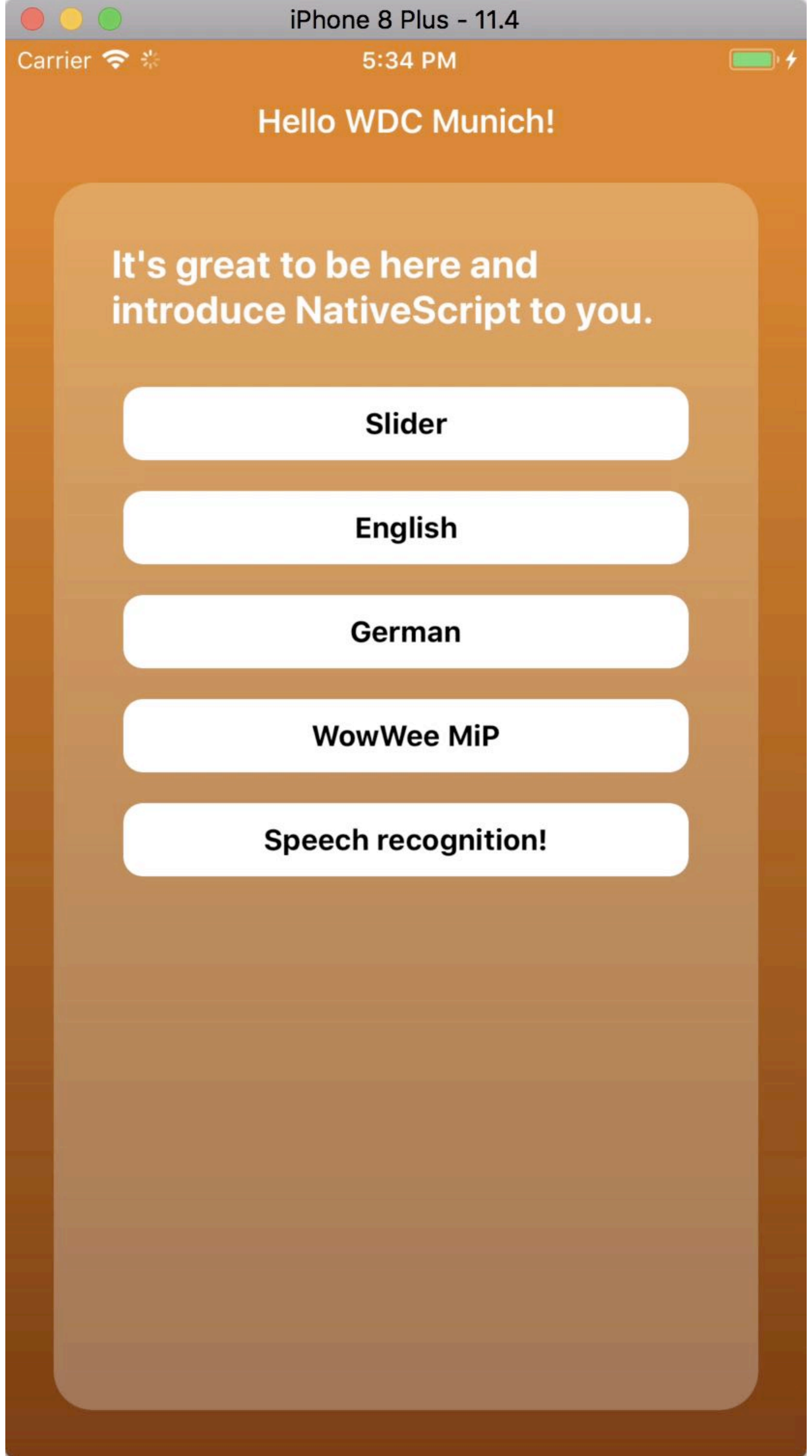
It's great to be here and introduce NativeScript to you.

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
});
```



Hello WDC Munich!

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

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);
});
```

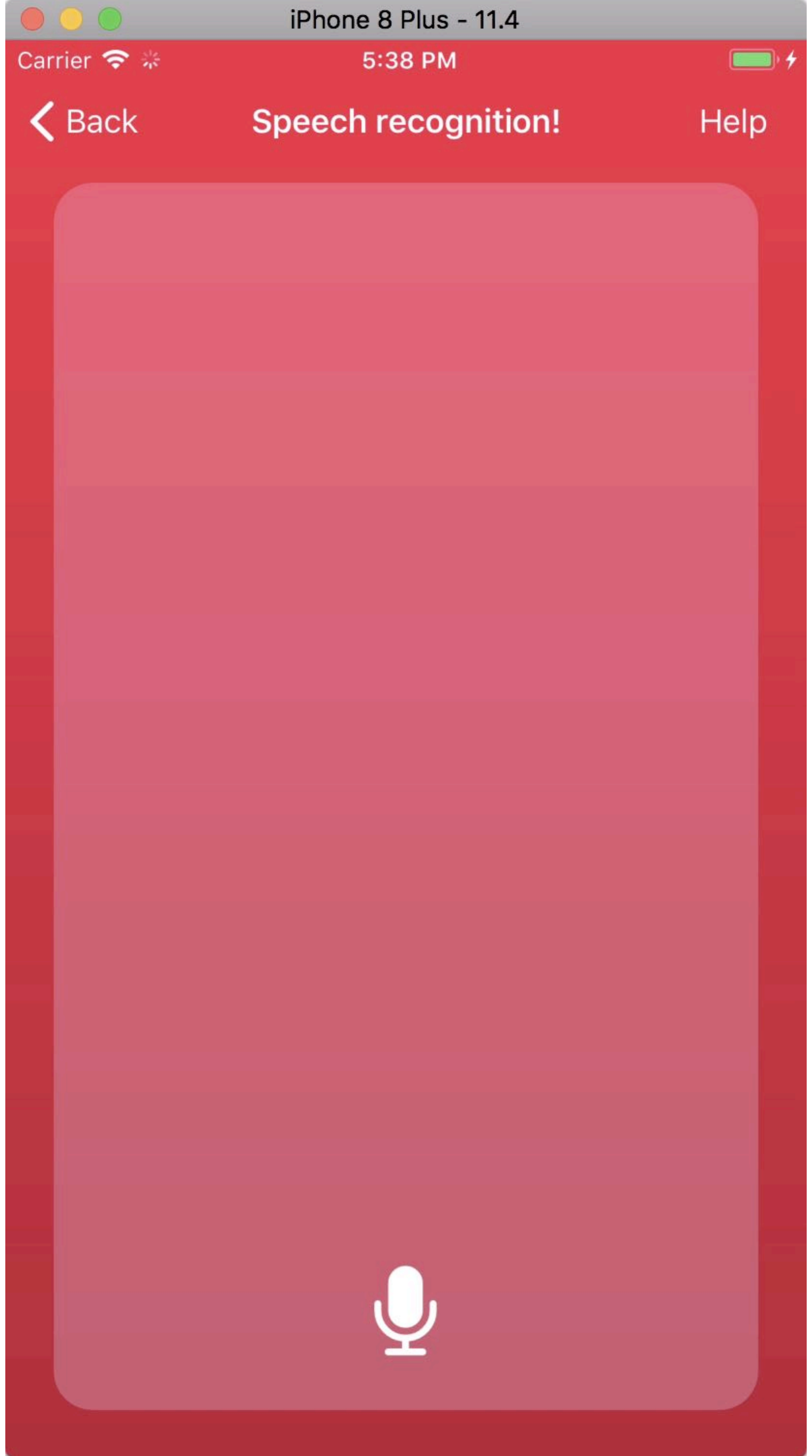
NATIVESCRIPT-SPEECH-RECOGNITION

```
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-US",
  speakRate: 0.5,
  pitch: 0.8
};

textToSpeech.speak(speakOptions);
```

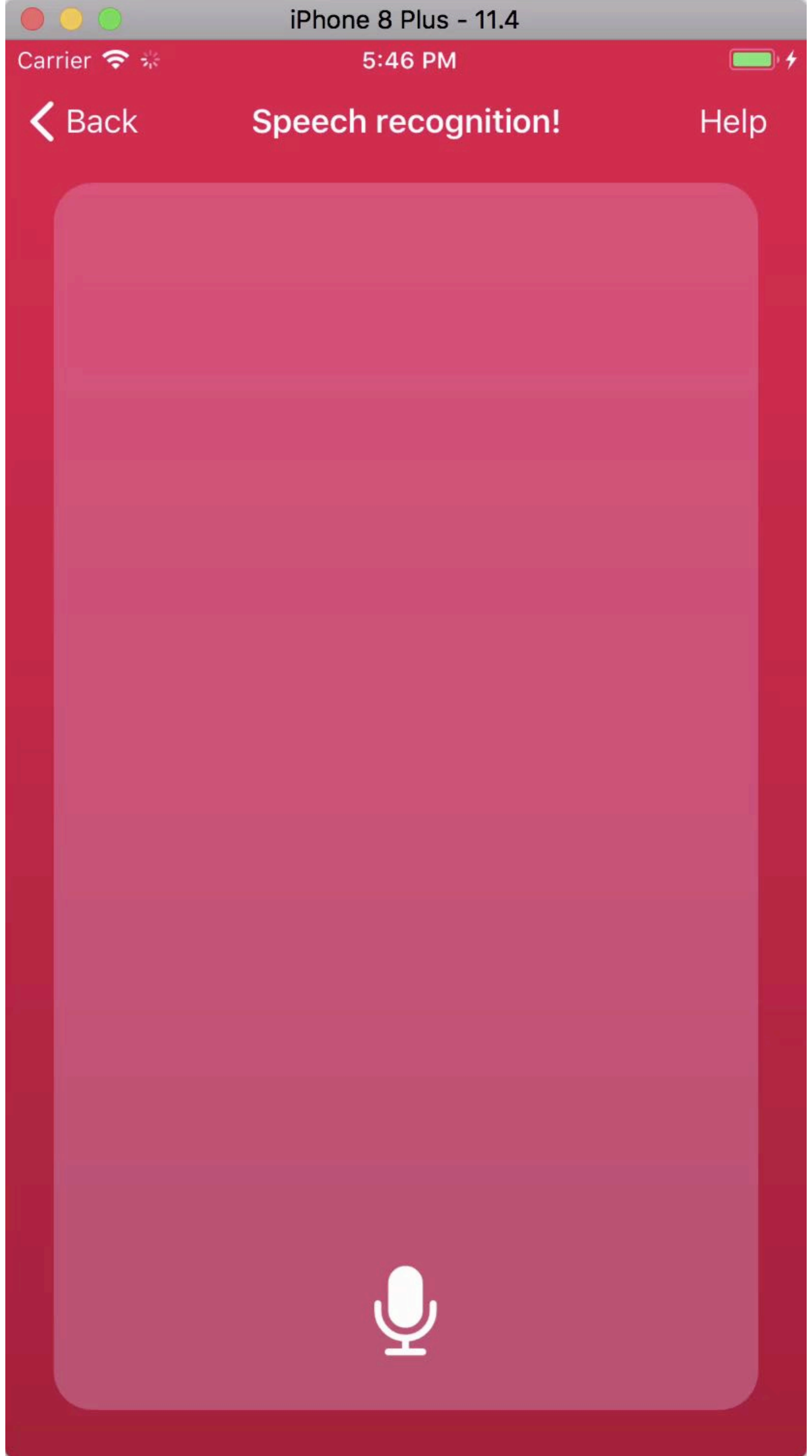
.



iPhone 8 Plus - 11.4
Carrier
5:38 PM
Back
Speech recognition!
Help

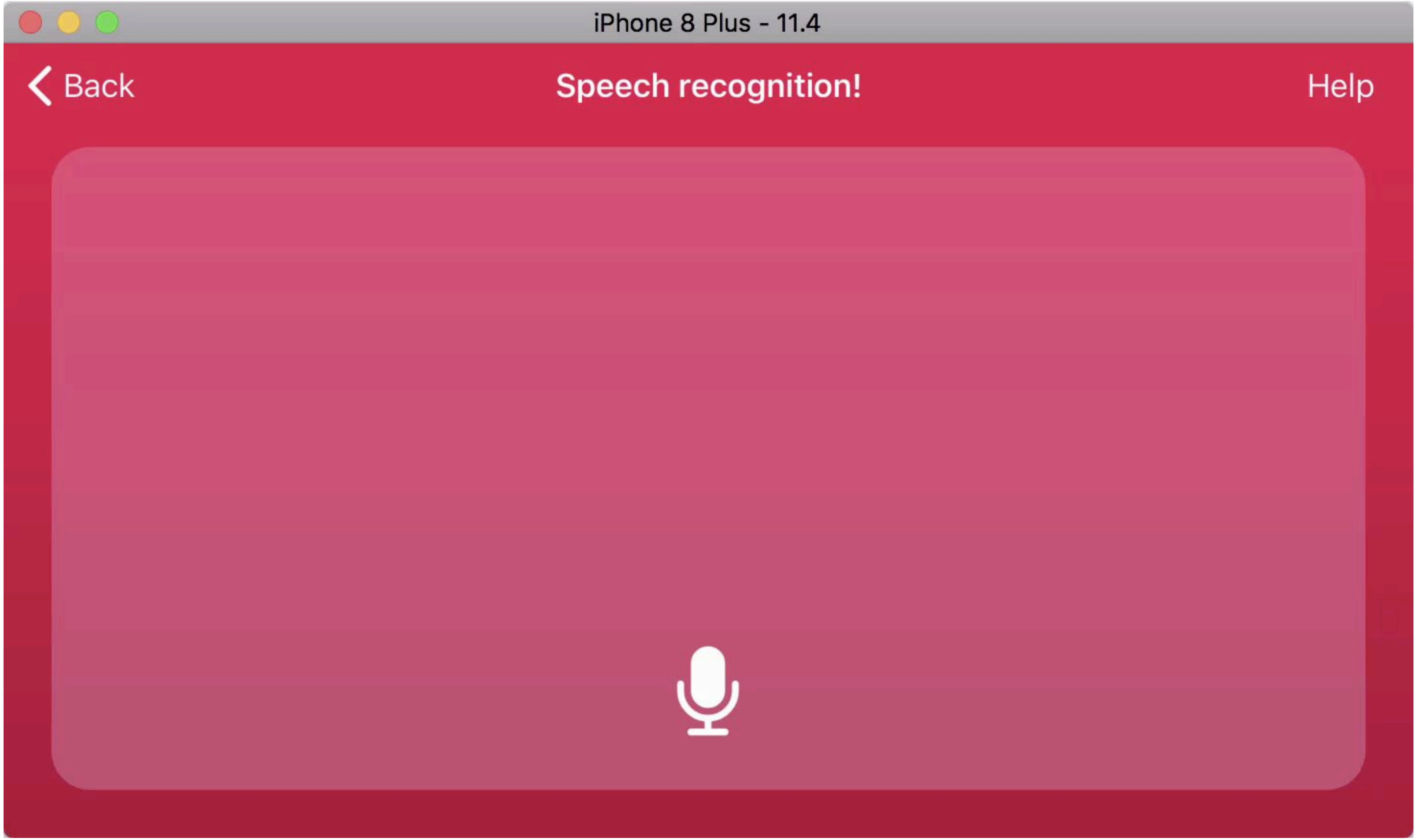
ANGULAR HTTPCLIENT

```
const apiUrl = "https://api.darksky.net/forecast/...../";

const city = { name: "Gouda", country: "The Netherlands",
               latitude: 52.0115205, longitude: 4.7104633 };

let params = city.latitude + "," + city.longitude;

this.httpClient.get(apiUrl + params).subscribe(res => {
  // do something with the json data
});
```


iPhone 8 Plus - 11.4
Carrier
5:46 PM
Back
Speech recognition!
Help

NATIVESCRIPT-DIRECTIONS

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

let directions = new Directions();
directions.navigate({
  // optional, default "current location"
  from: {
    lat: 48.1294915,
    lng: 11.5886514
  },
    // if an Array is passed, the last item is the destination,
    // the addresses in between are "waypoints"
  to: [{
    address: "Frauenplatz 12, 80331 München, Germany", // Frauenkirche
  },
  {
    address: "Marienplatz 1, 80331 München, Germany"
  }],
  ios: {
    preferGoogleMaps: true,
    allowGoogleMapsWeb: true
  }
})
```


iPhone 8 Plus - 11.4
Back
Speech recognition!
Help

NATIVESCRIPT-VIDEOPLAYER

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

2XR.NL/WDC

DANKE SCHÖN

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/WDC