

Cross-Platform Mobile-Entwicklung mit dem Ionic Framework

Robin Nunkesser

6. Februar 2018

Grundlagen

Hintergrund

- 2013 von Drifty entwickelt
- Setzt auf Cordova und AngularJS auf
 - Versionsprung von ionic 1 zu ionic 2
 - Aktuell ionic 3 u.a. mit ionic pro sdk
- Web-Apps und hybride Apps für iOS, Android, Windows 10 möglich

Oberflächenelemente

<https://ionicframework.com/docs/components/>

Schnellstart CLI

```
npm install -g ionic
ionic start MyApp blank
cd MyApp
ionic serve
```

Überblick Templates

```
tabs ..... ionic-angular A starting project with a simple tabbed
interface
blank ..... ionic-angular A blank starter project
sidemenu ..... ionic-angular A starting project with a side menu with
navigation in the content area
super ..... ionic-angular A starting project complete with pre-built
pages, providers and best practices for Ionic development.
conference ..... ionic-angular A project that demonstrates a realworld
application
tutorial ..... ionic-angular A tutorial based project that goes along with
the Ionic documentation
aws ..... ionic-angular AWS Mobile Hub Starter
tabs ..... ionic1 A starting project for Ionic using a simple tabbed
interface
blank ..... ionic1 A blank starter project for Ionic
sidemenu ..... ionic1 A starting project for Ionic using a side menu with
navigation in the content area
maps ..... ionic1 An Ionic starter project using Google Maps and a
side menu
```

Plattformen hinzufügen

```
ionic cordova platform add ios  
ionic cordova build ios  
ionic cordova emulate ios
```

bzw.

```
ionic cordova platform add android  
ionic cordova build android  
ionic cordova emulate android
```

bzw.

```
ionic cordova platform add https://github.com/apache/cordova-android  
ionic cordova build android  
ionic cordova emulate android
```

IDEs

Diverse Möglichkeiten

- Visual Studio Code
- JetBrains WebStorm
- ...

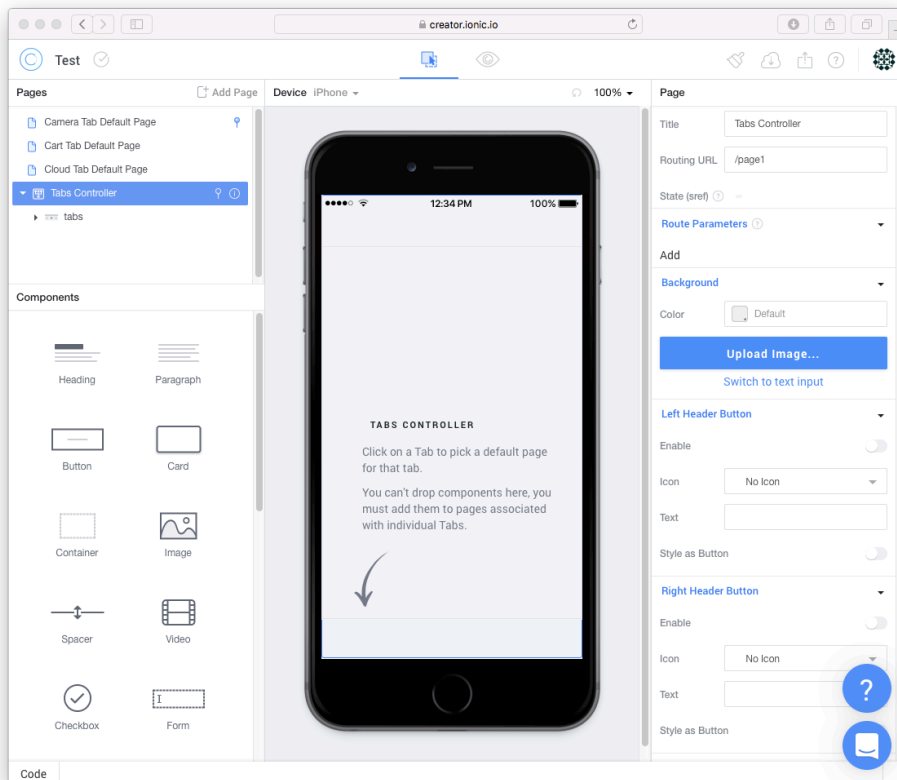
Entstandene Projekte (Live Demo)

- Ionic Projekt MyApp
- Xcode Projekt in MyApp/platforms/ios
- Android Studio Projekt in MyApp/platforms/android

Ionic Creator

Einführung

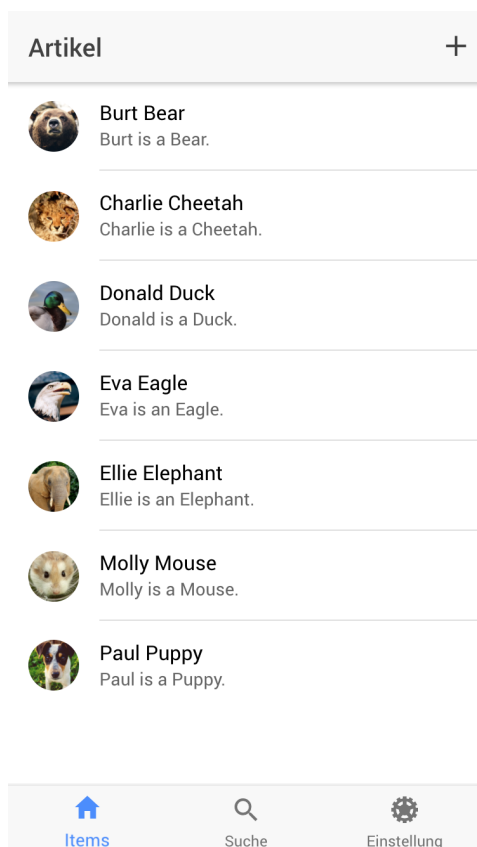
- Webapplikation zum Gestalten von Ionic Apps
- Sehr hilfreich für Oberflächengestaltung

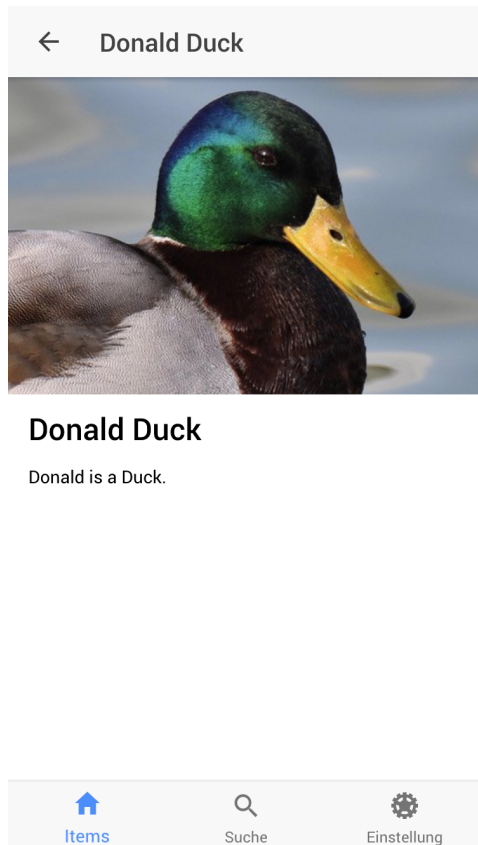


<https://creator.ionic.io/>

Ionic Super Starter App

Überblick





Ionic Native

Überblick

- TypeScript Wrapper für Cordova/PhoneGap Plugins
- Zugriff auf native Funktionen der Zielplattformen
- <https://ionicframework.com/docs/native/>

Beispiel ActionSheet

```
ionic start ActionSheetDemo blank
cd ./ActionSheetDemo
ionic cordova plugin add cordova-plugin-actionsheet
npm install --save @ionic-native/action-sheet
```

app.module.ts

```
import { BrowserModule } from '@angular/platform-browser';
import { ErrorHandler, NgModule } from '@angular/core';
import { IonicApp, IonicErrorHandler, IonicModule } from 'ionic-angular';
import { SplashScreen } from '@ionic-native/splash-screen';
import { StatusBar } from '@ionic-native/status-bar';

import { ActionSheet } from "@ionic-native/action-sheet";

import { MyApp } from './app.component';
import { HomePage } from '../pages/home/home';

@NgModule({
  declarations: [
    MyApp,
    HomePage
  ],
  imports: [
    BrowserModule,
    IonicModule.forRoot(MyApp)
  ],
  bootstrap: [IonicApp],
  entryComponents: [
    MyApp,
    HomePage
  ],
  providers: [
    StatusBar,
    SplashScreen,
    ActionSheet,
    {provide: ErrorHandler, useClass: IonicErrorHandler}
  ]
})
export class AppModule {}
```

home.html

```
<ion-header>
  <ion-navbar>
    <ion-title>
      Ionic Blank
    </ion-title>
  </ion-navbar>
```

```
</ion-header>

<ion-content padding>
  <ion-list>

    <button ion-button (click)="actionSheetClicked()">Action Sheet</button>
  </ion-list>
</ion-content>
```

home.ts

```
import { Component } from '@angular/core';
import { NavController } from 'ionic-angular';
import { ActionSheet, ActionSheetOptions } from '@ionic-native/action-sheet';

@Component({
  selector: 'page-home',
  templateUrl: 'home.html'
})
export class HomePage {

  constructor(public navCtrl: NavController, private actionSheet: ActionSheet) {

  }

  actionSheetClicked() {
    let buttonLabels = ['Share via Facebook', 'Share via Twitter'];

    const options: ActionSheetOptions = {
      title: 'What do you want with this image?',
      subtitle: 'Choose an action',
      buttonLabels: buttonLabels,
      addCancelButtonWithLabel: 'Cancel',
      addDestructiveButtonWithLabel: 'Delete',
      androidTheme: this.actionSheet.ANDROID_THEMES.THEME_HOLO_DARK,
      destructiveButtonLast: true
    };

    this.actionSheet.show(options).then((buttonIndex: number) => {
      console.log('Button pressed: ' + buttonIndex);
    });
  }
}
```


Ionic Live Demo

Überblick

<https://affiliate.itunes.apple.com/resources/documentation/itunes-store-web-service-search-api/>

app.module.ts

```
import { BrowserModule } from '@angular/platform-browser';
import { ErrorHandler, NgModule } from '@angular/core';
import { IonicApp, IonicErrorHandler, IonicModule } from 'ionic-angular';
import { SplashScreen } from '@ionic-native/splash-screen';
import { StatusBar } from '@ionic-native/status-bar';

import { HttpClientModule } from '@angular/common/http';

import { MyApp } from './app.component';
import { HomePage } from '../pages/home/home';
import { TrackListPage } from "../pages/tracklist/tracklist";

@NgModule({
  declarations: [
    MyApp,
    HomePage,
    TrackListPage
  ],
  imports: [
    BrowserModule,
    // import HttpClientModule after BrowserModule.
    HttpClientModule,
    IonicModule.forRoot(MyApp)
  ],
  bootstrap: [IonicApp],
  entryComponents: [
    MyApp,
    HomePage,
    TrackListPage
  ],
  providers: [
    StatusBar,
    SplashScreen,
    {provide: ErrorHandler, useClass: IonicErrorHandler}
  ]
})
```

```

    ]
  })
  export class AppModule {}

```

home.html

```

<ion-header>
  <ion-navbar>
    <ion-title>
      iTunes Search API
    </ion-title>
  </ion-navbar>
</ion-header>

<ion-content padding>
  <ion-list>
    <ion-item>
      <ion-input type="text" placeholder="Artist" value="" [(ngModel)]="artist"></ion-input>
    </ion-item>
    <ion-item>
      <ion-input type="text" placeholder="Album" value="" [(ngModel)]="album"></ion-input>
    </ion-item>
  </ion-list>
  <button ion-button block (click)="startSearch()">Go</button>
</ion-content>

```

home.ts

```

import { Component } from '@angular/core';
import { NavController } from 'ionic-angular';
import { Injectable } from '@angular/core';
import { HttpClient } from '@angular/common/http';
import { TrackListPage } from "../tracklist/tracklist";

@Component({
  selector: 'page-home',
  templateUrl: 'home.html'
})

@Injectable()
export class HomePage {

  artist = null;

```

```

album = null;
url = "https://itunes.apple.com/search";

constructor(public navCtrl: NavController, private http:HttpClient) {

}

startSearch() {
  var search = new URLSearchParams('entity=song&country=de');
  search.set('term', (this.artist!=null?this.artist+' ':'')+(this.album!=null?this.album:''));
  var queryUrl = this.url+'?' +search.toString();
  console.log(queryUrl);
  this.http.get(queryUrl).subscribe(data =>
  {
    this.navCtrl.push(TrackListPage, { paramResults: data['results'] });
  });
}
}

```

tracklist.ts

```

import { Component } from '@angular/core';

import {NavController, Platform, NavParams} from 'ionic-angular';

@Component({
  selector: 'page-tracklist',
  templateUrl: 'tracklist.html'
})
export class TrackListPage {

  results = null;

  constructor(public navCtrl: NavController, platform: Platform, params: NavParams) {
    this.results = params.get('paramResults');
  }
}

```

tracklist.html

```

<ion-header>
  <ion-navbar>
    <ion-title>
      Search Result
    </ion-title>
  </ion-navbar>
</ion-header>

<ion-content padding>
  <ion-list>
    <ion-item *ngFor="let result of results">
      <ion-avatar item-left>
        
      </ion-avatar>
      <h2>{{ result.trackNumber }} - {{ result.trackName }}</h2>
      <p>{{ result.collectionName }}</p>
    </ion-item>
  </ion-list>
</ion-content>

```