race.jsx is loading...

Check out:

react-cdn-firebase-post-app (code)

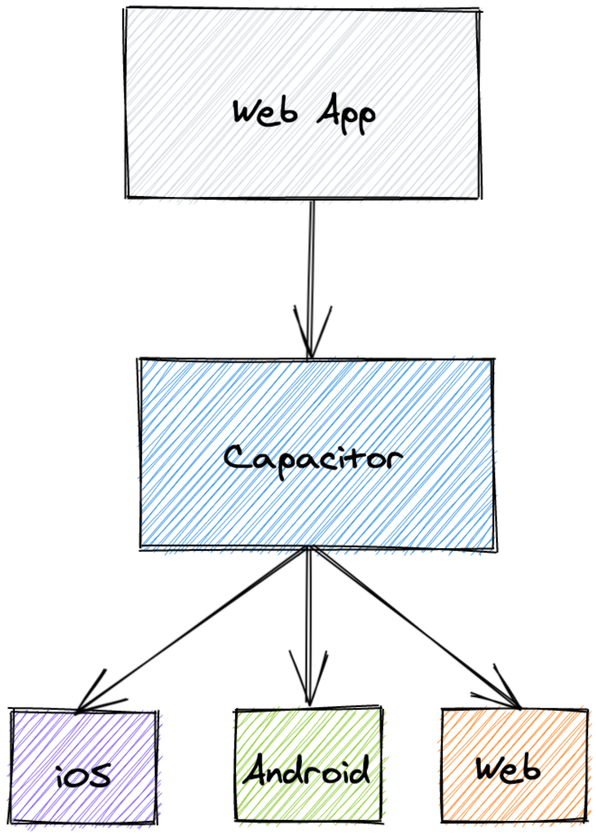
STORAGE & NATIVE APIS

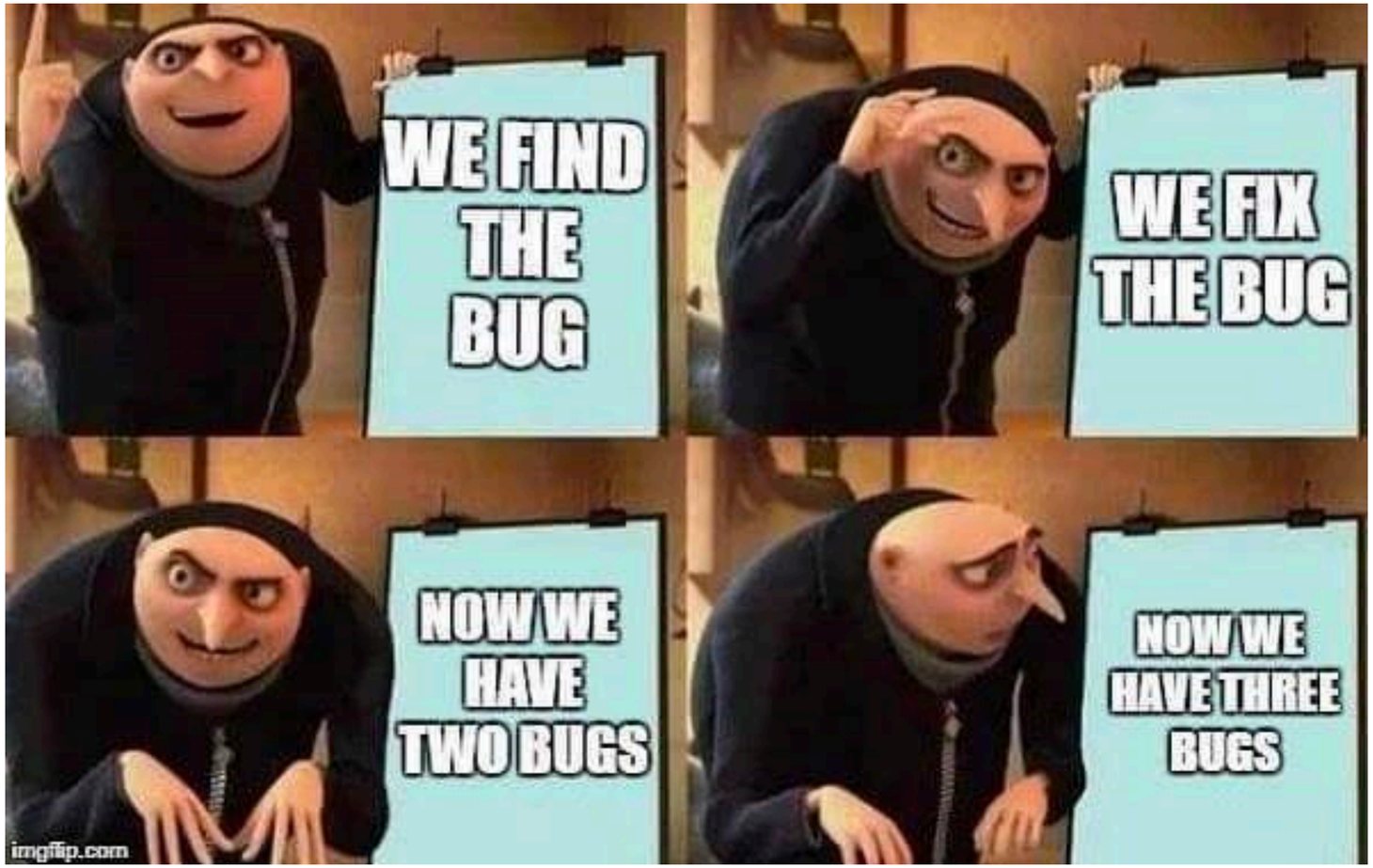
Agenda

1. Deployment 🤦
2. Ionic Post App w/ Firebase REST
- Firebase & Realtime DB REST API
- Native APIs
- Icons & Splash Screens
3. Internship Info (13.15)


HTML
CSS
JS
YOUR APP (ANGULAR, REACT, VUE...)
UI CONTROLS (IONIC)
NATIVE ACCESS (CAPACITOR)
DISTRIBUTION PLATFORMS

App Dev w/ Capacitor





App Dev can be tough 🤷🏼

You develop 90% in the browser

... and then you test on devices (physical devices!)

Deployment 🤦

1. `$ ionic build`
2. `$ ionic cap add [platform]`
3. `$ ionic cap copy` or `$ ionic cap sync` (plugins)
4. `$ ionic cap open [platform]`
5. `$ ionic cap run [platform]`
6. `$ ionic cap run [platform] -l —external` (Livereload)

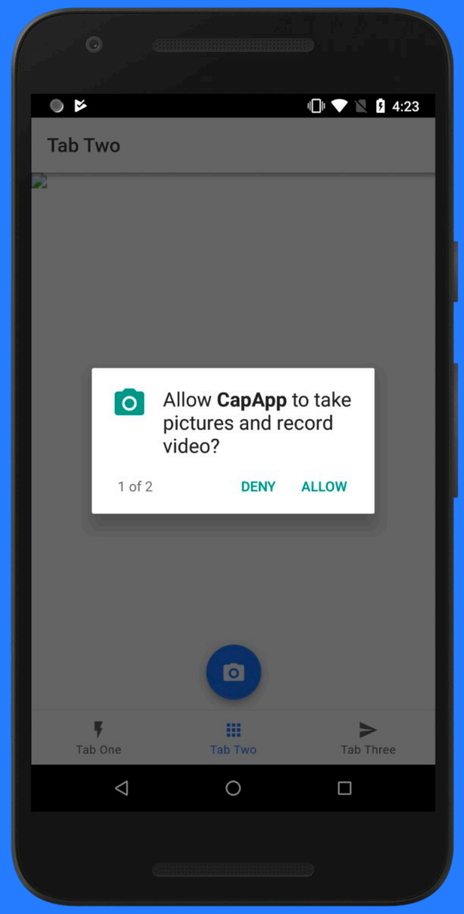
Deploying to iOS and Android

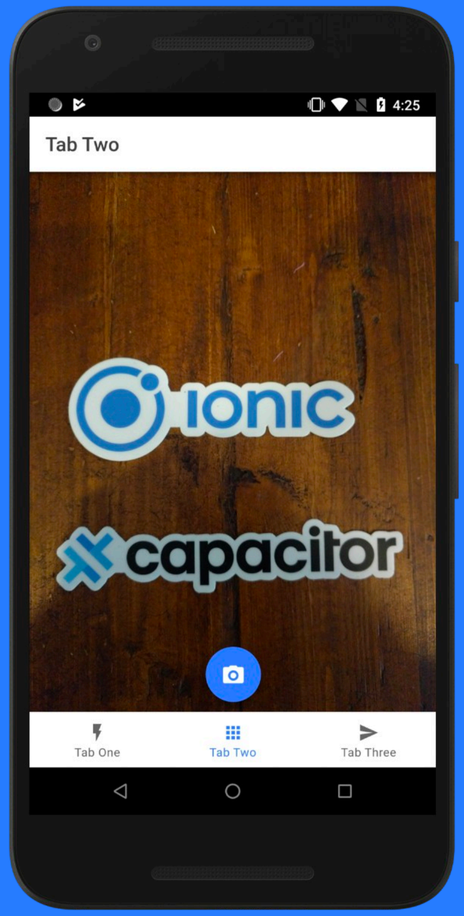
Android & Livereload 

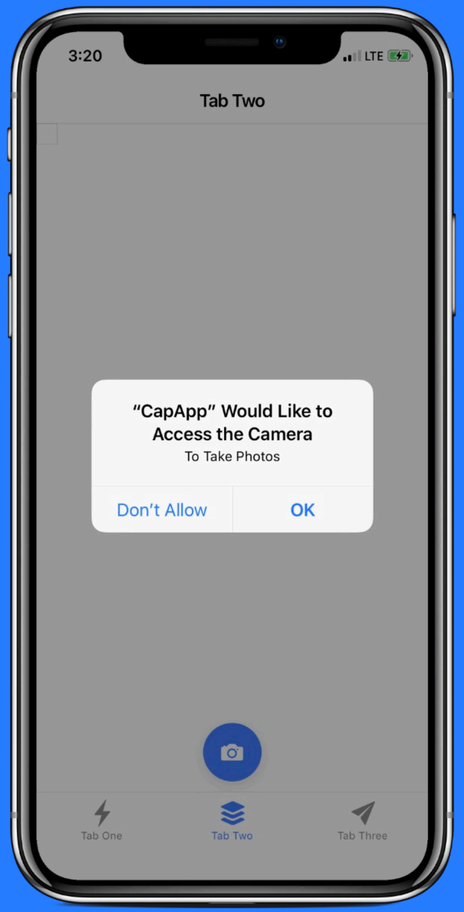
1. Update Java Version
2. Android Studio -> SDK Manager -> Android 9.0(Pie)
3. Turn on developer mode on your phone, Allow USB Debugging and connect your device via USB.
4. Through Android Studio, choose your physical device and run project.
5. Run `$ ionic capacitor run android -l --external` and choose your device.

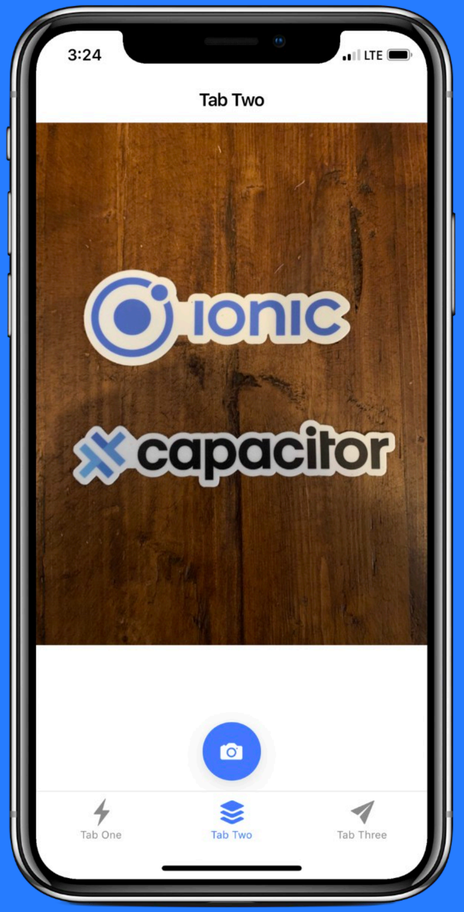
User Permissions

https://ionicframework.com/docs/react/your-first-app/deploying-mobile



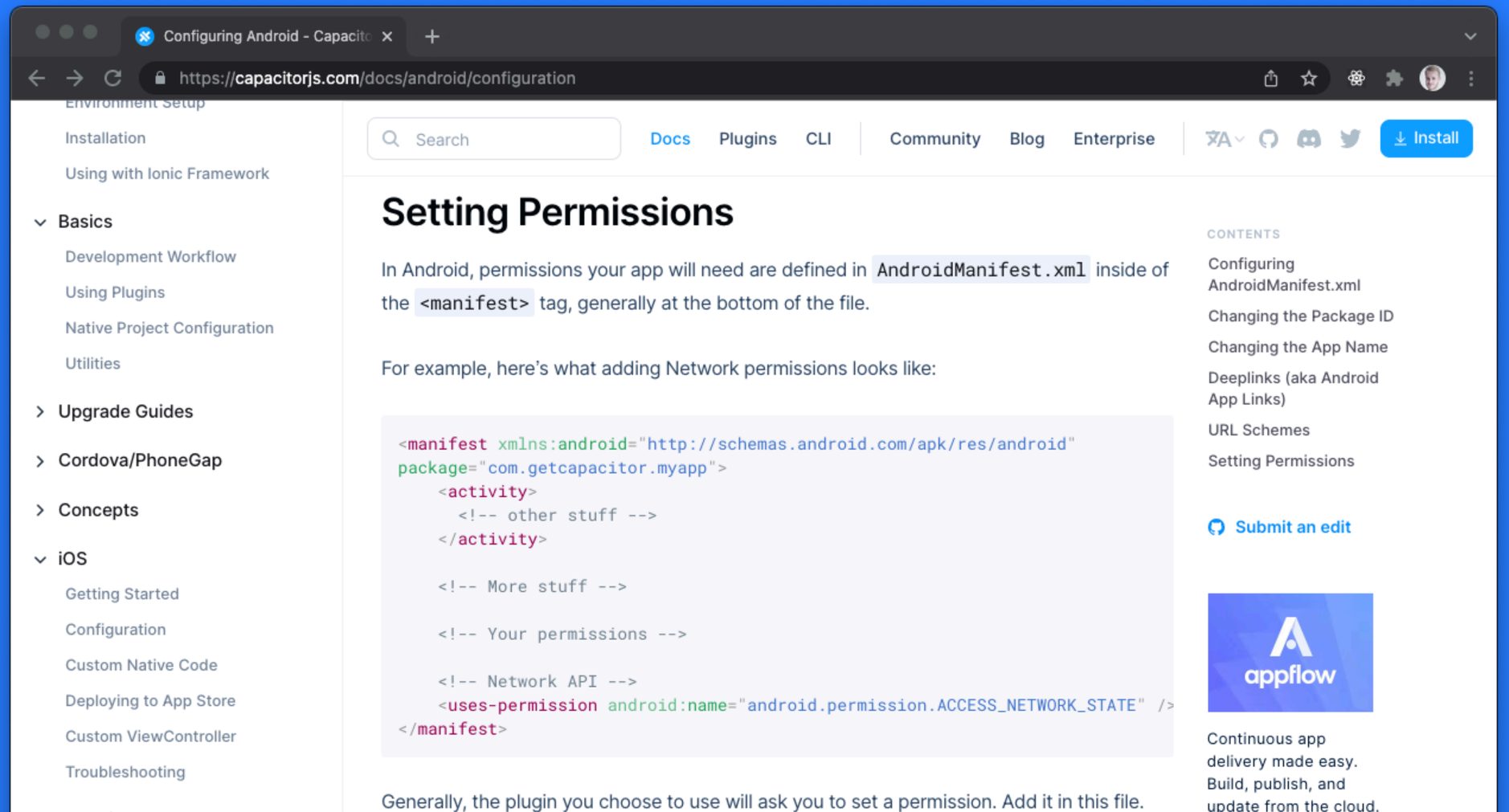






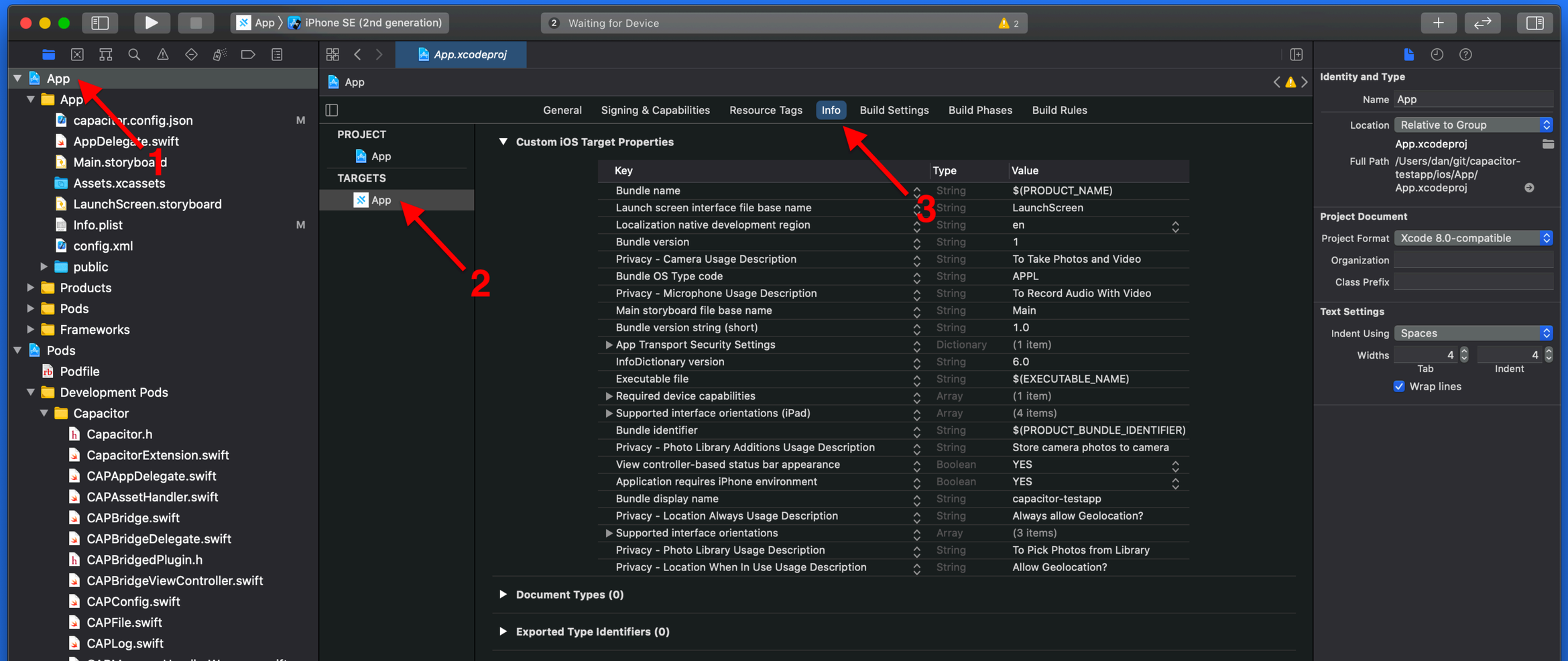
Configuring Android

https://capacitorjs.com/docs/android/configuration



Configuring iOS

https://capacitorjs.com/docs/ios/configuration



Common Commands

https://race.notion.site/Ionic-CLI-Common-Commands-7715d0d0c3754bbc97bd3f0a47ddb975

Dev & deployment tips

https://ionicframework.com/docs/developing/tips
https://ionicframework.com/docs/cli/livereload#tips
https://ionicframework.com/docs/react/your-first-app/deploying-mobile

Ionic Post App w/ Firebase REST

Step 1 - 10

Firebase
&
Realtime DB REST API

Step 1 - 5

Introducing Firebase

What is Firebase?

Platform & Backend-as-a-Service
for Web & App Development

Build better apps

Cloud Firestore
Store and sync app data at global scale

ML Kit BETA
Machine learning for mobile developers

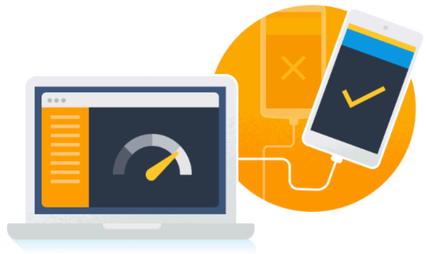
Cloud Functions
Run mobile backend code without managing servers

Authentication
Authenticate users simply and securely

Hosting
Deliver web app assets with speed and security

Cloud Storage
Store and serve files at Google scale

Realtime Database
Store and sync app data in milliseconds



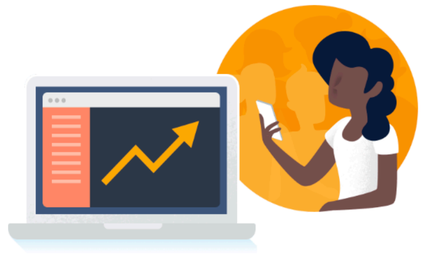
Improve app quality

Crashlytics
Prioritize and fix issues with powerful, realtime crash reporting

Performance Monitoring
Gain insight into your app's performance

Test Lab
Test your app on devices hosted by Google

App Distribution BETA
Distribute pre-release versions of your app to your trusted testers



Grow your business

In-App Messaging BETA
Engage active app users with contextual messages

Google Analytics
Get free and unlimited app analytics

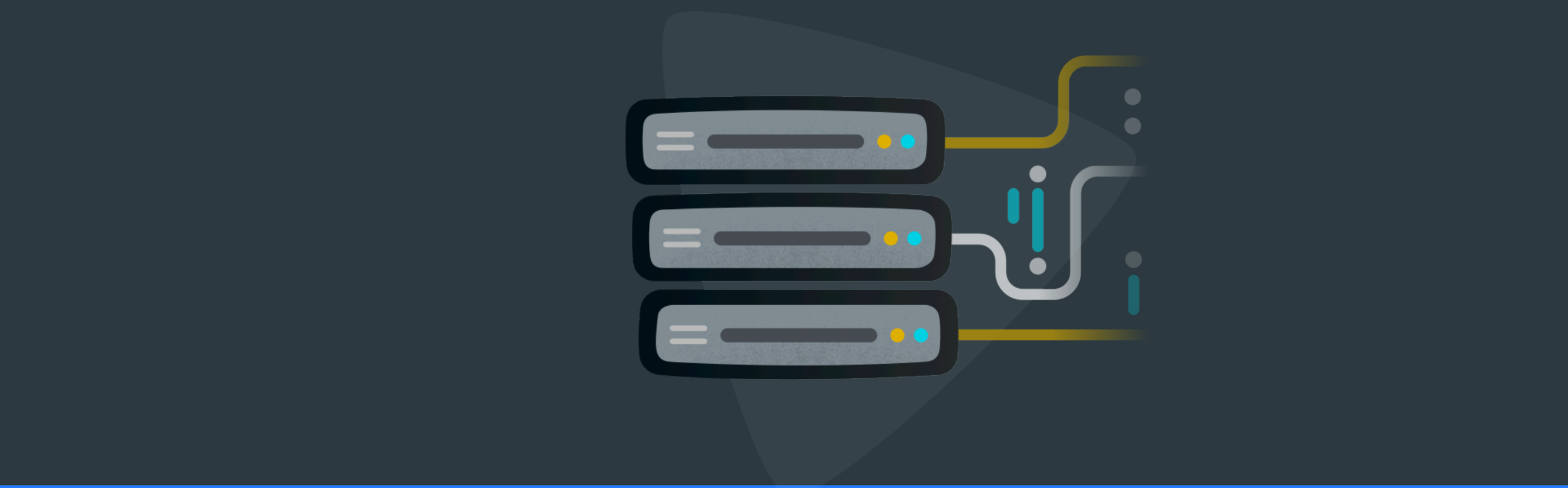
Predictions
Smart user segmentation based on predicted behavior

A/B Testing BETA
Optimize your app experience through experimentation

Cloud Messaging
Send targeted messages and notifications

Remote Config
Modify your app without deploying a new version

Dynamic Links
Drive growth by using deep links with attribution



Realtime Database & REST API

Store and sync data in real time

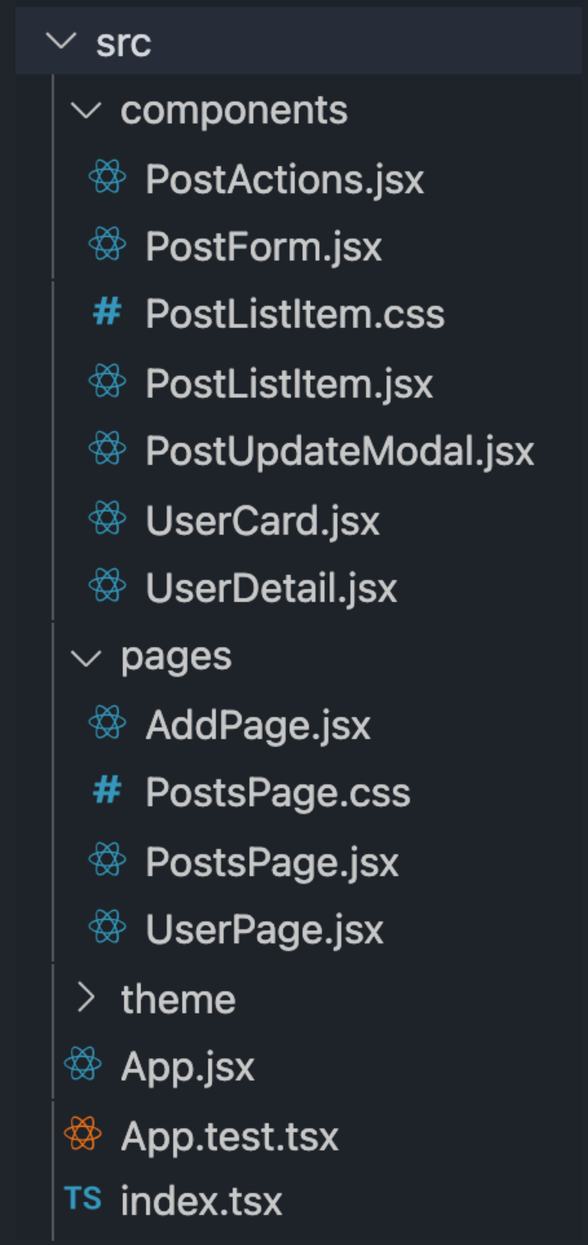
https://firebase.google.com/products/realtime-database

CRUD, CRUD, CRUD

... data, file storage, push notifications,
authentication, hosting, etc.

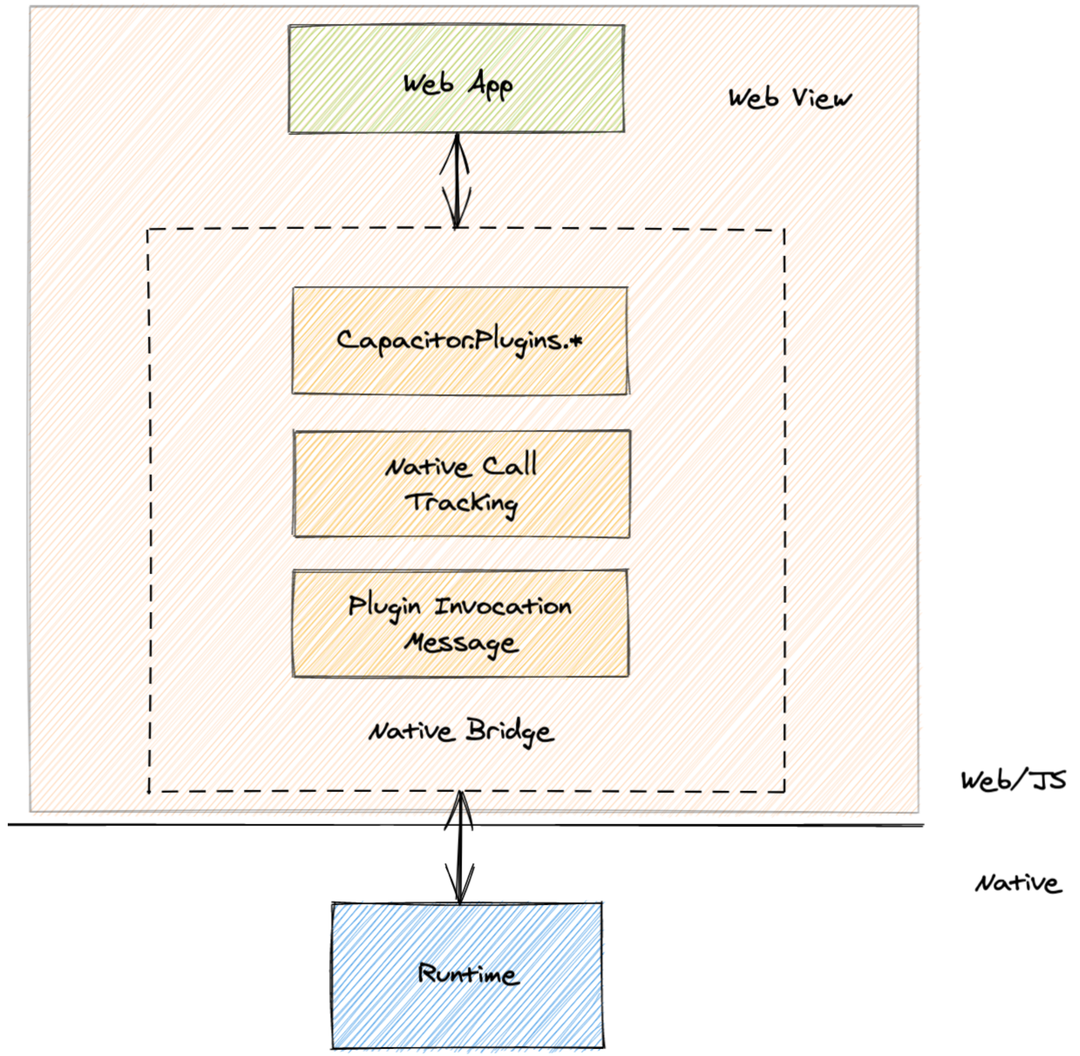
Thinking in React

In React, UI is a **function** of **props** & **states**. The UI is built with (function) **Components**.



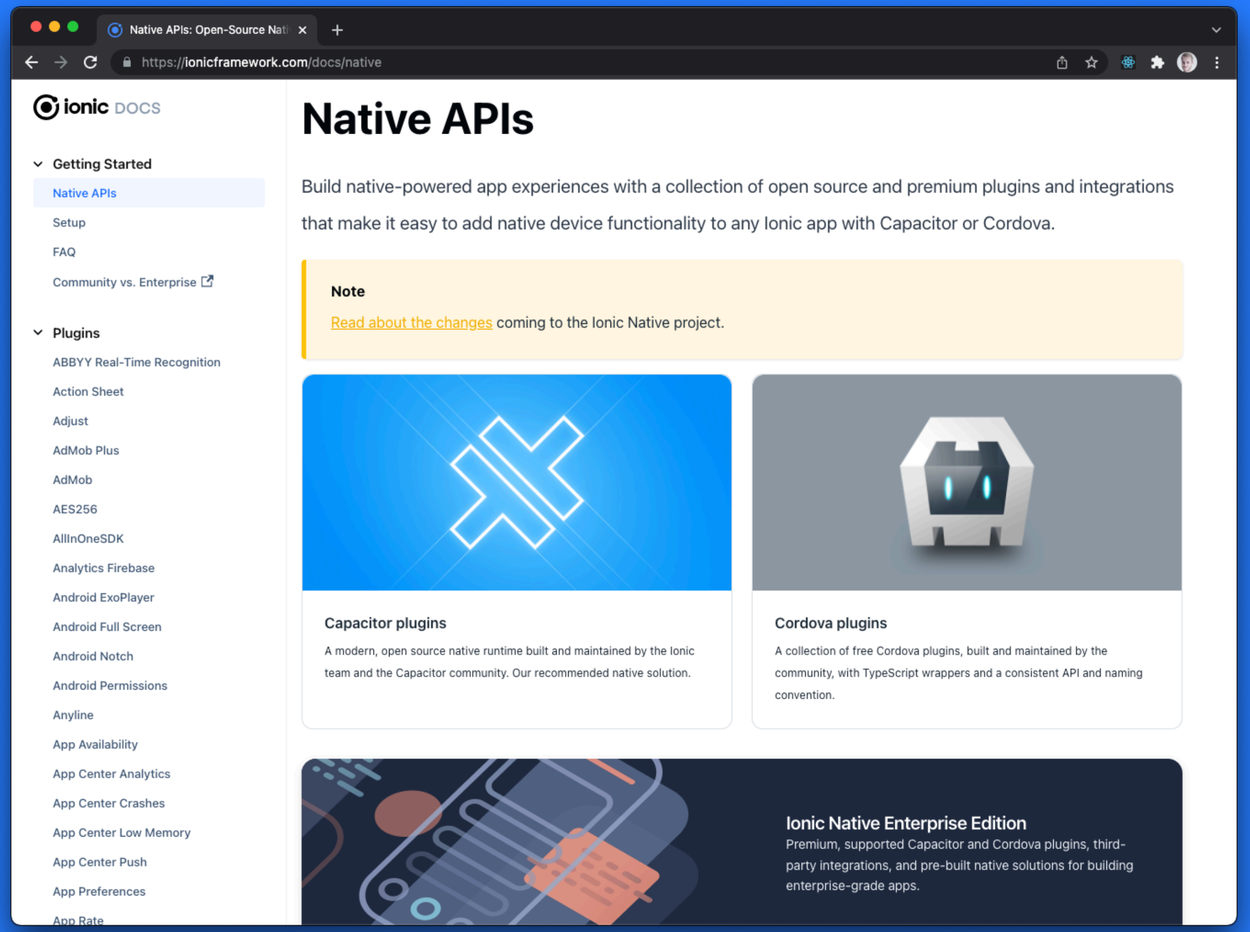
Native APIs

... provides access to native features such as camera, geolocation, and filesystem in your Web Native App.



Capacitor Plugins

Enables directly access to native devices features with Native APIs



https://ionicframework.com/docs/native

Capacitor

A cross-platform native runtime for Web Native Apps.

The Web View and the native app communicate through the use of Capacitor or Cordova plugins. Plugins provide native APIs such as camera, geolocation, and filesystem access to your web app.

UI (Web View)

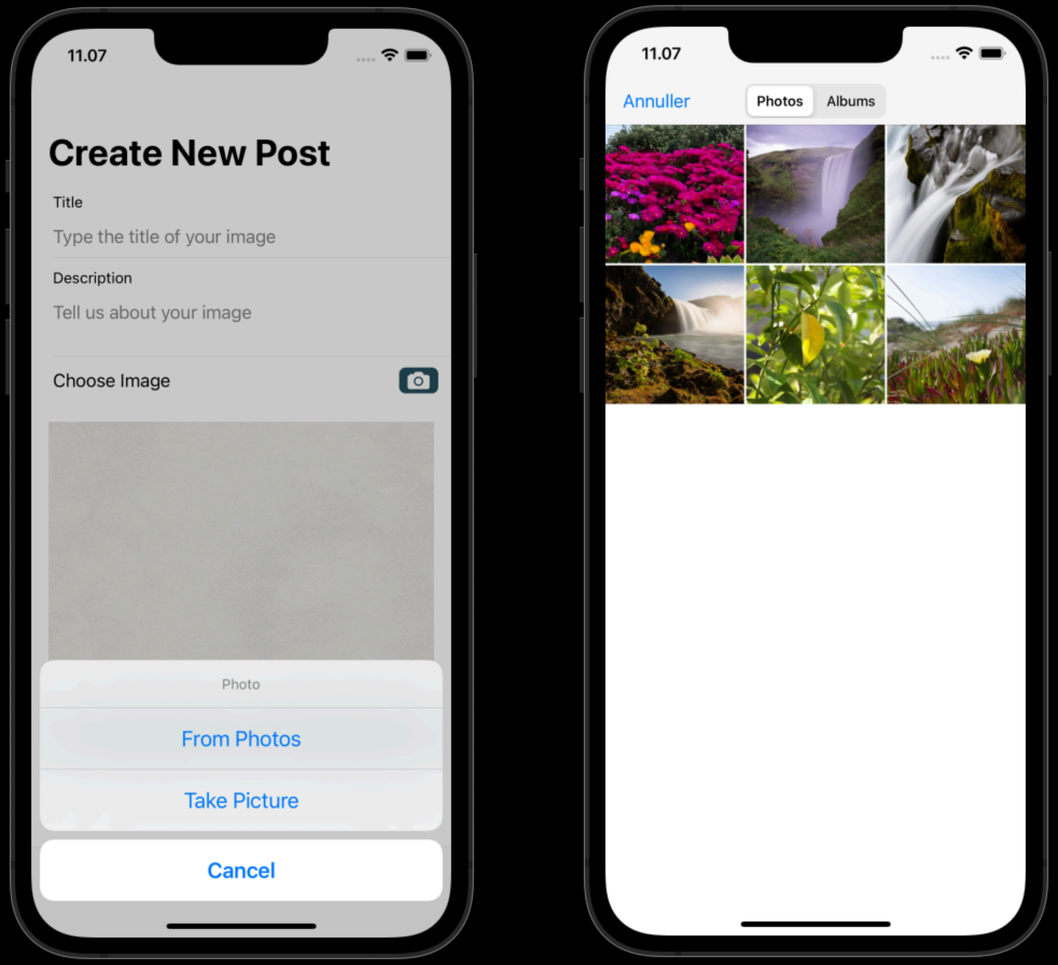
JS, HTML & CSS | **Ionic React**

Capacitor

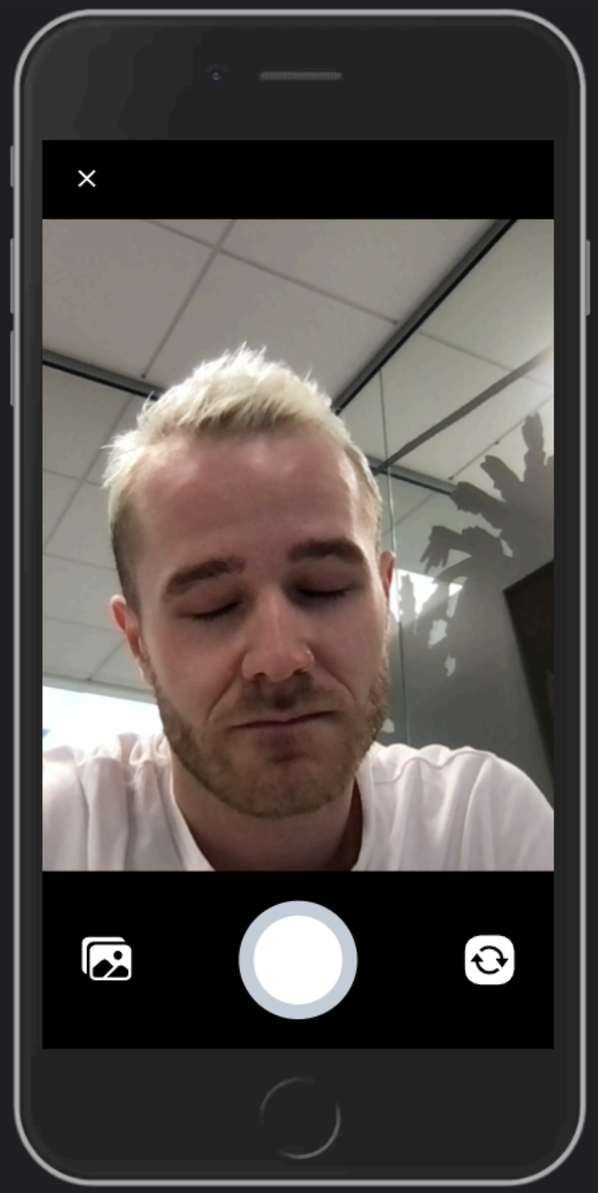
iOS, Android & PWA

https://capacitorjs.com/

@capacitor/camera




```
async function takePicture() {
    const imageOptions = {
        quality: 80,
        width: 500,
        allowEditing: true,
        resultType: CameraResultType.DataUrl
    };
    const image = await Camera.getPhoto(imageOptions);
    const imageUrl = image.dataUrl;
    setImage(imageUrl);
}
return (
    <form onSubmit={submitEvent}>
        <IonItem>
            <IonLabel position="stacked">Title</IonLabel>
            <IonInput value={title} placeholder="Type the tit
        </IonItem>
        <IonItem>
            <IonLabel position="stacked">Description</IonLabe
            <IonTextarea value={body} placeholder="Tell us ab
        </IonItem>
        <IonItem onClick={takePicture} lines="none">
```



@ionic/pwa-elements

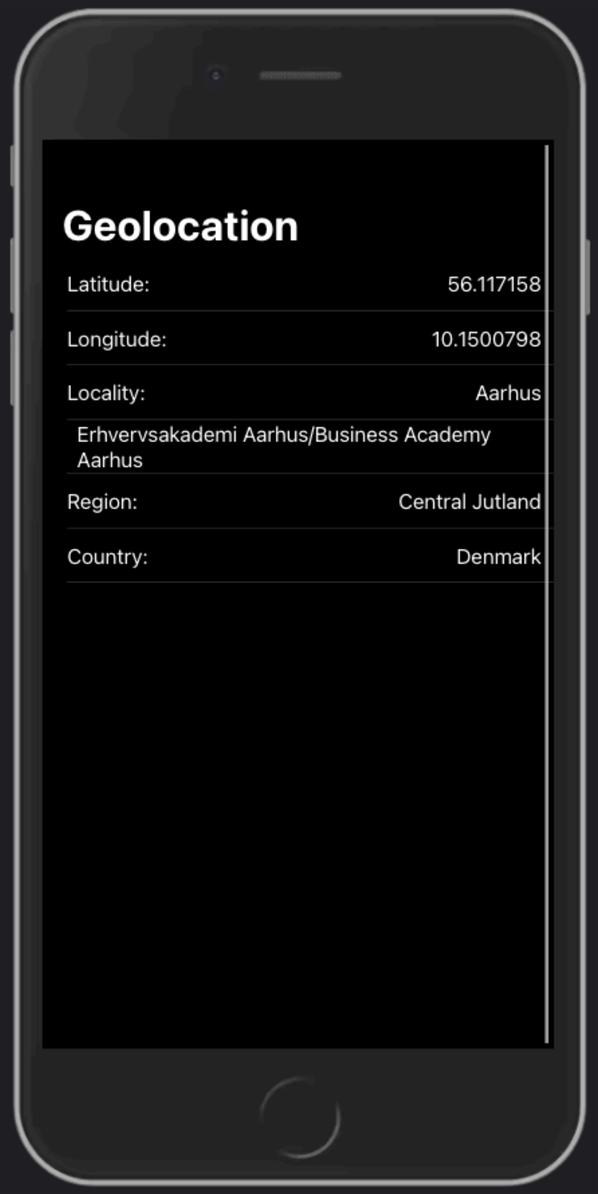
Web-based UI for PWAs

```
npm install @ionic/pwa-elements
```

```
import { defineCustomElements } from '@ionic/pwa-elements/loader';

ReactDOM.render(<App />, document.getElementById('root'));

// Call the element loader after the app has been rendered the first time
defineCustomElements(window);
```



@capacitor/geolocation

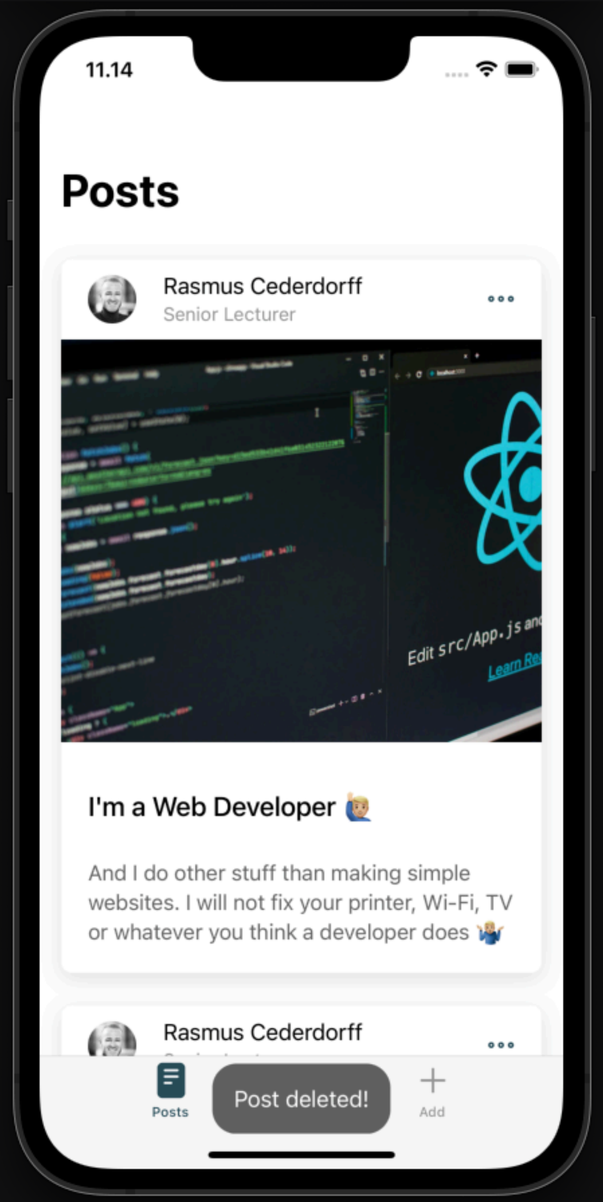
Track the current position of the device

```
import { IonContent, IonHeader, IonPage, IonTitle, IonToolbar, IonItem, IonLabel } from "@
import { Geolocation } from "@capacitor/geolocation";
import { useEffect, useState } from "react";

const Home = () => {
    const [lat, setLat] = useState("");
    const [long, setLong] = useState("");
    const [location, setLocation] = useState("");

    async function getCurrentPosition() {
        const coordinates = await Geolocation.getCurrentPosition();
        console.log("Current position:", coordinates);
        setLat(coordinates.coords.latitude);
        setLong(coordinates.coords.longitude);
        getLocation(coordinates.coords.latitude, coordinates.coords.longitude);
    }

    async function getLocation(latitude, longitude) {
        const key = "14de60fd94d4d8753fe8a277ba88667a";
        const res = await fetch(`http://api.positionstack.com/v1/reverse?access_key=${key}
        const result = await res.json();
        console.log(result);
```



@capacitor/toast

Pop up notification

```
import { Toast } from '@capacitor/toast';

const showHelloToast = async () => {
  await Toast.show({
    text: 'Hello!',
  });
};
```

Icons & Splash Screens

https://race.notion.site/Splash-Screen-and-Icons-be395d6b4b8b49e896797d1eb36e2fb2

Next Thursday