

A network diagram background consisting of a central globe surrounded by a dashed circle, and a larger network of nodes and lines extending from the top right and bottom left corners. The globe is a purple outline showing the Americas. The nodes are small circles, some solid and some dashed, connected by thin lines.

PWA

Progressive Web App



“

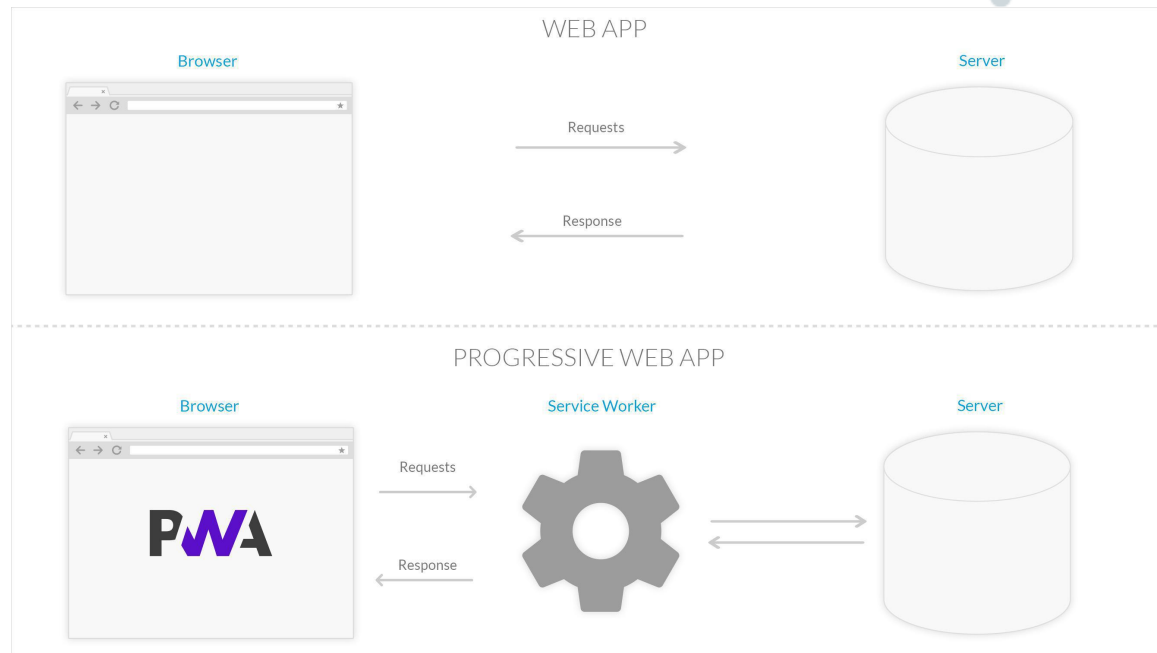
Il termine **Progressive Web App** (PWA, applicazioni web progressive) viene utilizzato per indicare una nuova metodologia per sviluppare software. Diversamente dalle applicazioni tradizionali, le progressive web apps sono un ibrido tra le normali pagine web (o siti web) e le applicazioni mobili. Questo nuovo modello di applicazioni cerca di combinare le possibilità offerte dalla maggior parte dei moderni browser con i benefici dell'utilizzo in mobilità.

https://it.wikipedia.org/wiki/Progressive_web_app

Few Requirements for PWA

- HTTPS
- Service Worker
- App Shell
- App manifest
- Connectivity-independent

PWA: Service Worker



- Intercepting network requests
- Caching
- retrieving resources from the cache
- delivering push messages

<https://developers.google.com/web/tools/workbox>

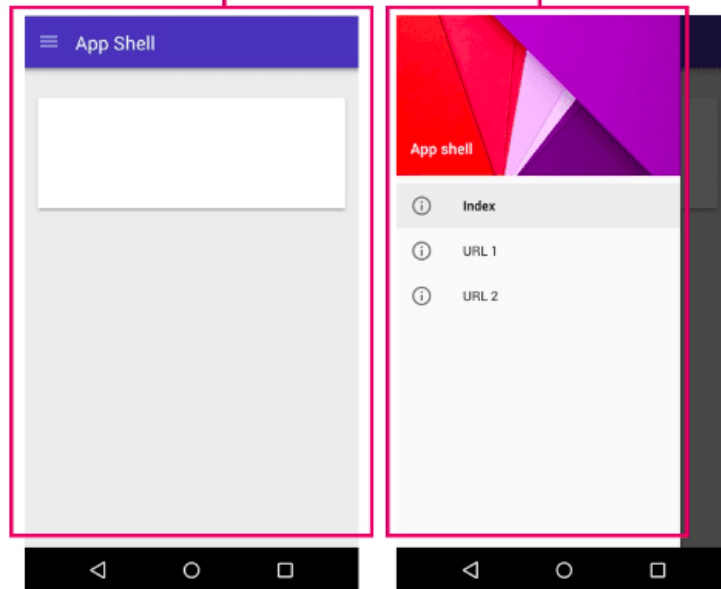
<https://ionicframework.com/pwa>

https://developers.google.com/web/fundamentals/codelabs/offline#top_of_page

https://blog.goodbarber.com/it/I-Service-Worker_a555.html

PWA: App shell

application shell



Cached shell loads **instantly** on repeat visits.

content



Dynamic content then populates the view

<https://developers.google.com/web/fundamentals/architecture/app-shell?hl=it>

PWA: Manifest

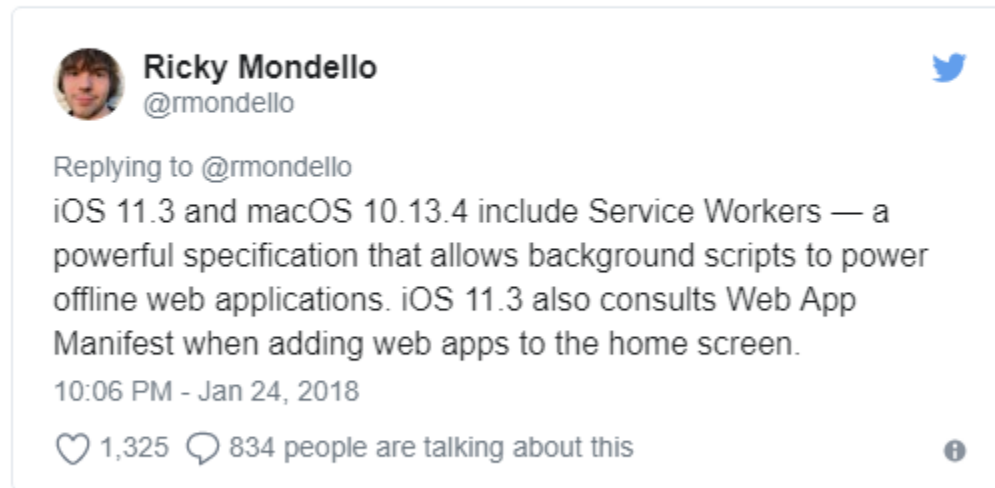
```
{
  "short_name": "AirHorner",
  "name": "Kinlan's AirHorner of Infamy",
  "icons": [
    {
      "src": "launcher-icon-1x.png",
      "type": "image/png",
      "sizes": "48x48"
    },
    {
      "src": "launcher-icon-2x.png",
      "type": "image/png",
      "sizes": "96x96"
    },
    {
      "src": "launcher-icon-4x.png",
      "type": "image/png",
      "sizes": "192x192"
    }
  ],
  "start_url": "index.html?launcher=true"
}
```



<https://developers.google.com/web/fundamentals/web-app-manifest/>
<https://developer.mozilla.org/en-US/docs/Web/Manifest>

PWA: Safari

Update : ios 11.3 supports web app manifest and service worker



Tweet about Service worker and manifest support

<https://medium.com/awebdeveloper/progressive-web-apps-pwas-are-coming-to-a-safari-near-you-216812aba5a>

PWA: Sample

Table of Known Patterns for Building PWAs

Use-case	Patterns	Examples
Publishing	Full SSR	https://babe.news/ https://ampbyexample.com https://ampproject.org
Publishing	Application Shell	https://app.jalantikus.com/ https://m.geo.tv/ https://app.kompas.com/ https://www.nfl.com/now/ https://www.chromestatus.com
Publishing	AppShell + SSR content for entry pages	https://react-hn.appspot.com https://www.polymer-project.org/1.0/
Publishing	Streams for body content / UI	https://wiki-offline.jakearchibald.com/wiki/The_Raccoons
Social	AppShell	https://web.telegram.org/
E-commerce	Application Shell	https://m.aliexpress.com/ https://kongax.konga.com/ https://m.flipkart.com (mobile/emulate) https://m.airberlin.com/en/pwa https://shop.polymer-project.org/
E-commerce	AppShell + SSR content for entry page	https://selio.com/ (try on mobile/emulate) https://lite.5milesapp.com/ (partial)
Conference	AppShell	https://events.google.com/io2016/schedule

Top PWA examples

Table of Contents

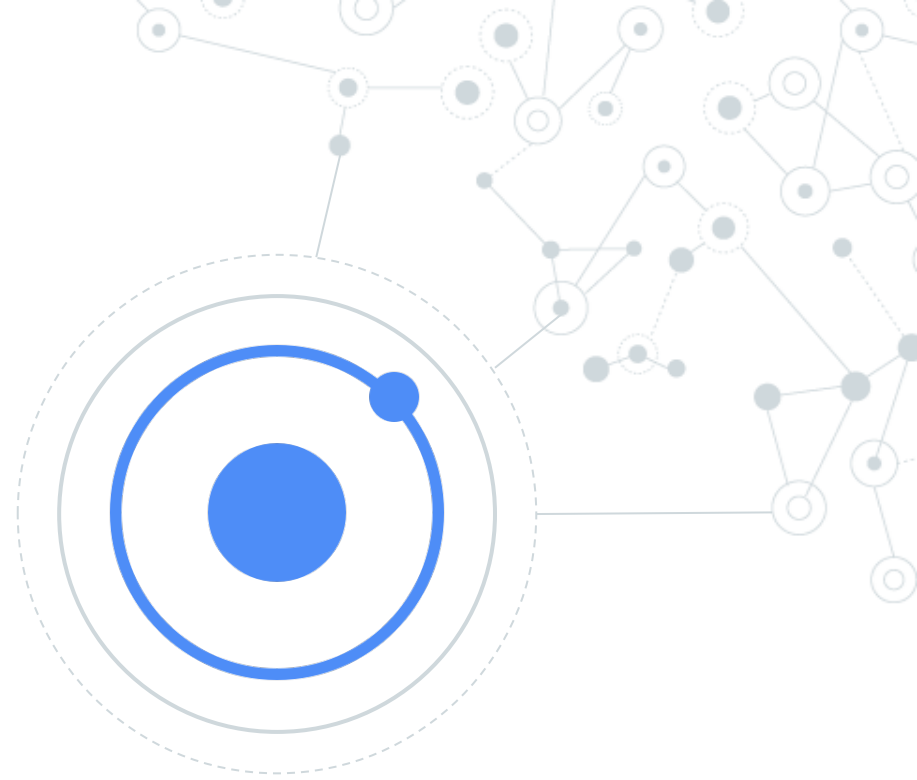
- I. Trivago Hotel Booking
- II. Pinterest
- III. Tinder
- IV. 9Gag
- V. OLX
- VI. Starbucks
- VII. Forbes

<https://pwa.rocks/>

<https://appmaker.xyz/pwa-examples-successful-progressive-web-apps/>

https://developers.google.com/web/ilt/pwa/introduction-to-progressive-web-app-architectures#table_of_known_patterns_for_building_pwas

Ionic





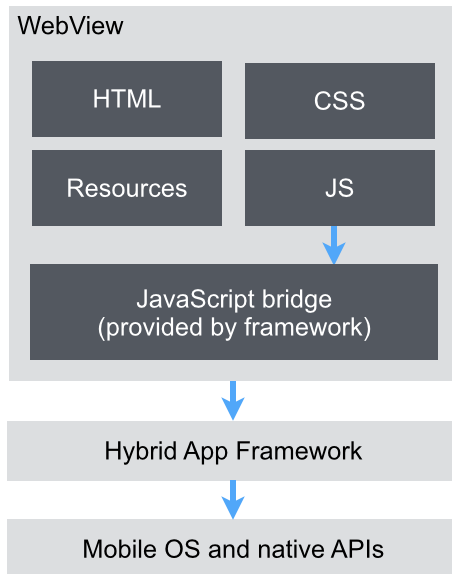
Programma

- Di cosa si tratta?
- Le tecnologie utilizzate
- Setup ambiente
- La struttura del progetto base
- I componenti base
- Alcuni servizi utili
- ...

Di cosa si tratta?

WebView

L'applicazione vive in un browser contenuto nell'app

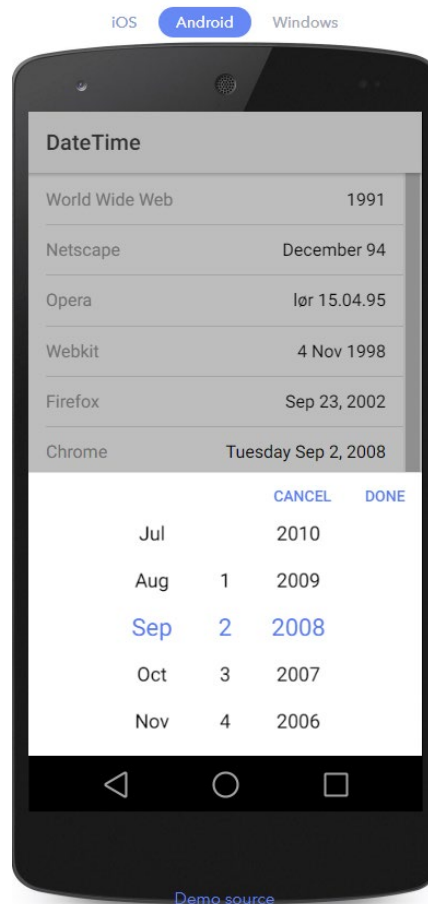
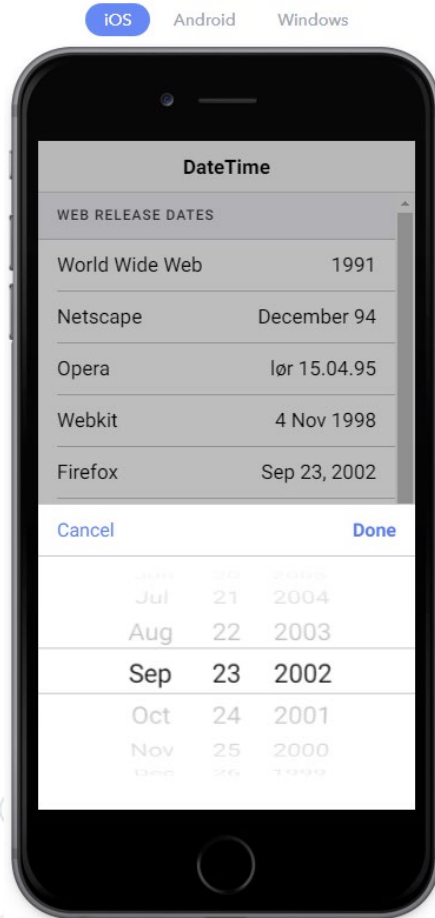


Ionic permette di sviluppare applicazioni mobile ibride sfruttando tecnologie web che tentano di riprodurre il comportamento nativo del sistema

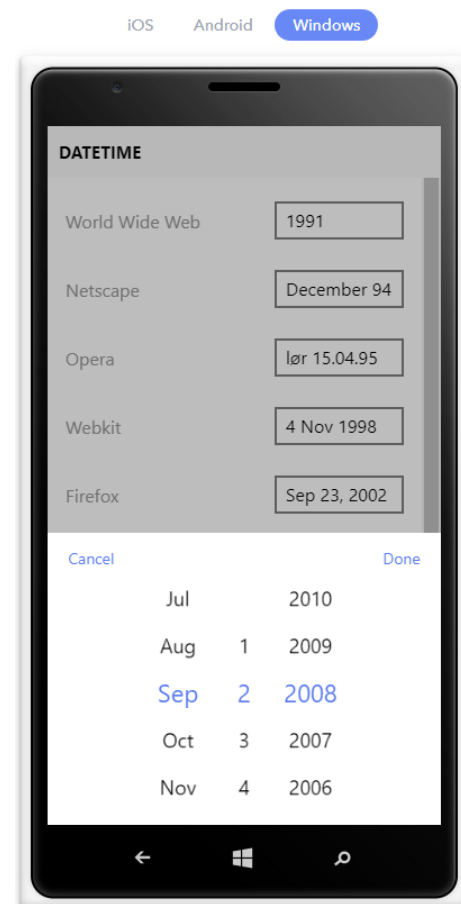
Di cosa si tratta?

Un solo tag html:

```
<ion-datetime displayFormat="MM/DD/YYYY" [(ngModel)]="myDate"></ion-datetime>
```

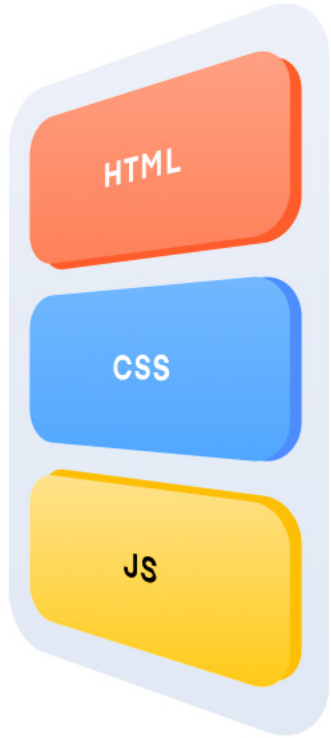


[Demo source](#)



[Demo source](#)

Le tecnologie utilizzate



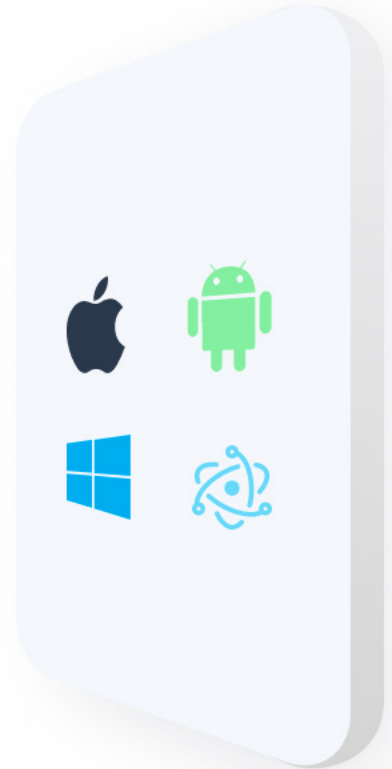
YOUR APP (ANGULAR, REACT, VUE...)



UI CONTROLS (IONIC)



NATIVE ACCESS (CAPACITOR)



DISTRIBUTION PLATFORMS

Le tecnologie utilizzate



TypeScript: linguaggio di programmazione (superset di JavaScript)



HTML5: linguaggio di markup per pagine web



Sass/scss: estensione del css per definire fogli di stile

Setup

- Installare nodejs LTS
- Installare un IDE come VSCODE
- Eseguire: `npm install -g @ionic/cli`
- Eseguire: `ionic start «nomeprogetto»`
- Scegliere «conference» come esempio di app
- Condividere la stessa rete tra notebook e smartphone oppure usare il remote debugging di Chrome
- Entrare nella cartella del progetto ed eseguire: «`ng serve`»

Struttura

Immagini e risorse

app

main

pages

```
schedule.ts - myProget - Visual Studio Code
File Edit Selection View Go Debug Tasks Help

EXPLORER
├─ OPEN EDITORS
│   └─ TS schedule.ts src\pages\schedule
├─ MYPROGET
│   ├── .github
│   ├── .sourcemaps
│   ├── .tmp
│   ├── node_modules
│   ├── resources
│   └─ src
│       ├── app
│       │   ├── TS app.component.ts
│       │   ├── TS app.module.ts
│       │   ├── app.scss
│       │   ├── app.template.html
│       │   ├── TS main.ts
│       │   ├── assets
│       │   ├── interfaces
│       │   └─ pages
│       │       ├── about
│       │       │   ├── about.html
│       │       │   ├── about.scss
│       │       │   └─ about.ts
│       │       ├── about-popover
│       │       │   ├── TS about-popover.ts
│       │       ├── account
│       │       ├── login
│       │       │   ├── login.html
│       │       │   ├── login.scss
│       │       │   └─ login.ts
│       │       └─ man
│       └─ main

TS schedule.ts x
1  import { Component, ViewChild } from '@angular/core';
2
3  import { AlertController, App, FabContainer, ItemSliding, List, Mo
4
5  /*
6   To learn how to use third party libs in an
7   Ionic app check out our docs here: http://ionicframework.com/doc
8  */
9  // import moment from 'moment';
10
11 import { ConferenceData } from '../providers/conference-data';
12 import { UserData } from '../providers/user-data';
13
14 import { SessionDetailPage } from '../session-detail/session-detail
15 import { ScheduleFilterPage } from '../schedule-filter/schedule-fi
16
17
18 @Component({
19   selector: 'page-schedule',
20   templateUrl: 'schedule.html'
21 })
22 export class SchedulePage {
23   // the list is a child of the schedule page
24   // @ViewChild('scheduleList') gets a reference to the list
25   // with the variable #scheduleList, 'read: List' tells it to ret
26   // the List and not a reference to the element
27   @ViewChild('scheduleList', { read: List }) scheduleList: List;
28
29   dayIndex = 0;
30   queryText = '';
31   segment = 'all';
32   excludeTracks: any = [];
33   shownSessions: any = [];
34   groups: any = [];
```


Pagina

Azione

view

controller

The image shows a development environment with three main components:

- EXPLORER (Left):** Shows the project structure. The 'pages/about' folder is expanded, and 'about.html' is selected. Other files include 'config.xml', 'README.md', 'main.ts', 'about.scss', 'about.ts', and various other page files like 'login.html', 'schedule.html', etc.
- EDITOR (Center):** Shows the HTML code for 'about.html'. The code includes an 'ion-header' with a 'menuToggle' button and a 'more' button, and an 'ion-content' with a header, a date, and a list of items (Date, Location, etc.).
- MOBILE PREVIEW (Right):** Shows the rendered mobile application. The 'About' page features the Ionic logo, the text 'Ionic Conference', and details such as 'Date: May 17, 2047' and 'Location: Madison, WI'. A bottom navigation bar contains icons for 'Schedule', 'Speakers', 'Map', and 'About'.

Red arrows point from the labels 'view' and 'controller' to the 'about.html' file in the Explorer. Another red arrow points from the label 'Azione' to the 'presentPopover(\$event)' function call in the HTML code.

Componenti per UI

ActionSheetController

AlertController

App

Avatar

Badge

Button

Checkbox

Chip

Col

Config

Content

DateTime

Events

FabButton

FabContainer

FabList

Footer

Grid

Haptic

Header

HideWhen

Icon

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

Menus

Menu is a side-menu navigation that can be dragged out or toggled to show. The content of a menu will be hidden when the menu is closed.

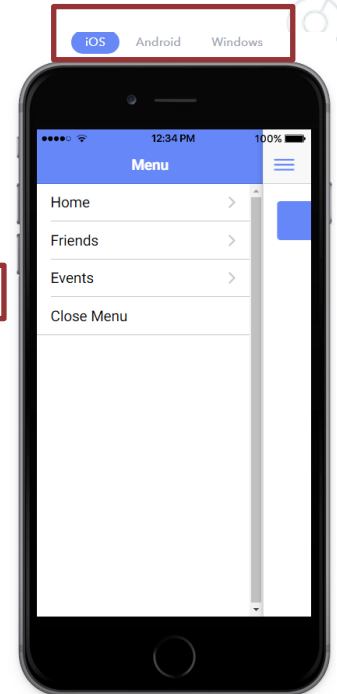
Menu adapts to the appropriate style based on the platform.

For more information, Check out the [API docs](#).

Basic Usage

```
<ion-menu [content]="content">
  <ion-header>
    <ion-toolbar>
      <ion-title>Menu</ion-title>
    </ion-toolbar>
  </ion-header>
  <ion-content>
    <ion-list>
      <button ion-item (click)="openPage(homePage)">
        Home
      </button>
      <button ion-item (click)="openPage(friendsPage)">
        Friends
      </button>
      <button ion-item (click)="openPage(eventsPage)">
        Events
      </button>
      <button ion-item (click)="closeMenu()">
        Close Menu
      </button>
    </ion-list>
  </ion-content>
</ion-menu>
```

[Demo Source](#)



Attiva Windows
Passa a Impostazioni per attivare Windows.

Componente NavController

NavController is the base class for navigation controller components like `Nav` and `Tab`. You use navigation controllers to navigate to `pages` in your app. At a basic level, a navigation controller is an array of pages representing a particular history (of a `Tab` for example). This array can be manipulated to navigate throughout an app by pushing and popping pages or inserting and removing them at arbitrary locations in history.

