Intro to Ionic

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Today’s goals

- Overview of Ionic and Setting Up
- Ionic Components
  - Structural, Item, Inputs, Lists
- Services
- Routing
- Create a simple project
  - Showcase components
  - Showcase navigation

Setting Up Ionic

- Install Ionic

```
npm info ionic              // Check current versions of ionic
npm install -g @ionic/cli
ionic -v                    // Check ionic version
```

- Create Ionic project

```
ionic start [project_name]
```

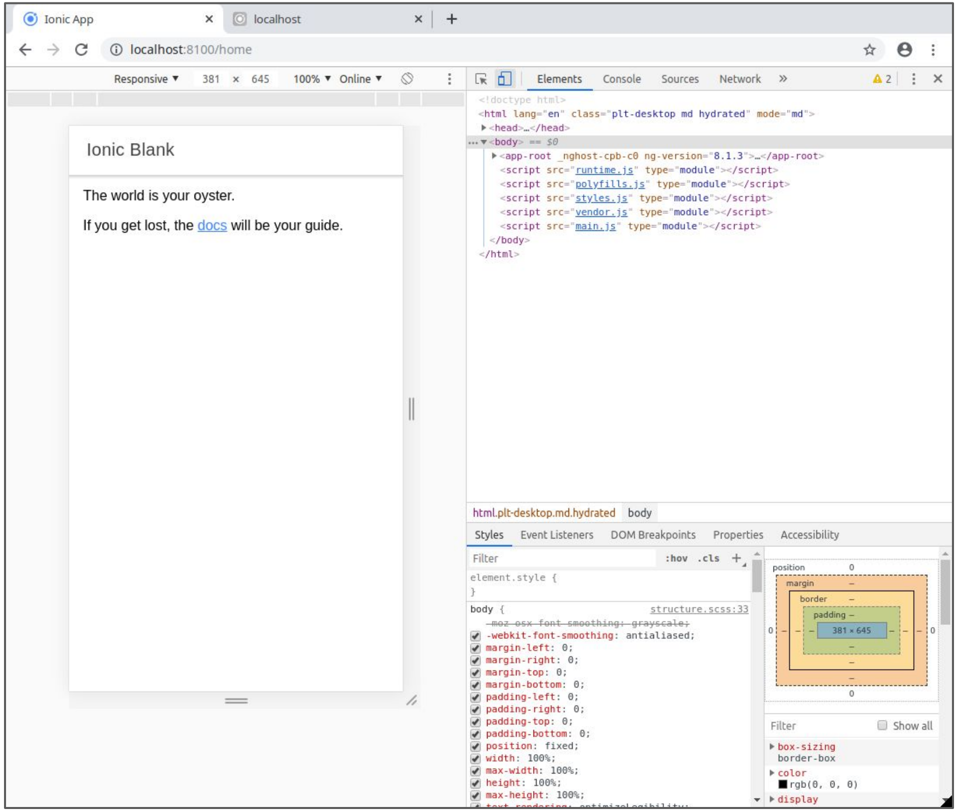
- Serve Ionic project

```
cd [project_name]           // Change directory to project
ionic serve                 // Default: localhost:8100
```

- Serve Ionic project in a lab

```
cd [project_name]           // Change directory to project
npm install @ionic/lab      // Install lab in the project (NO -g flag)
ionic serve -l              // Default for lab: localhost:8200
```

Ionic Project in Browser



Ionic Blank

The world is your oyster.

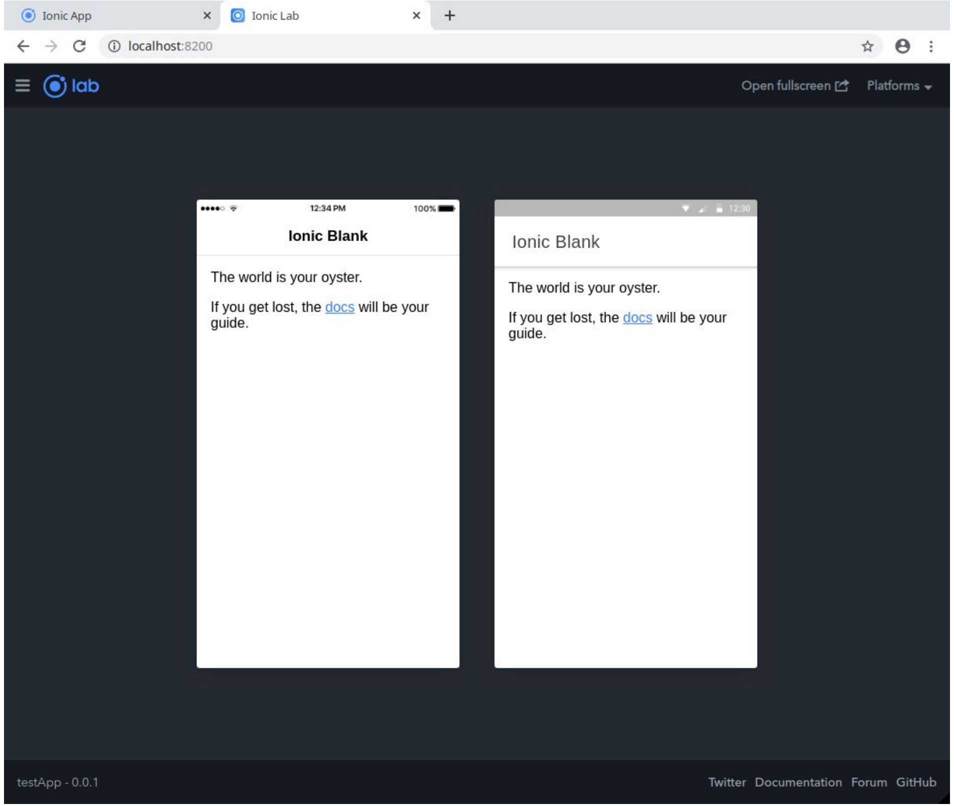
If you get lost, the docs will be your guide.

```
<!doctype html>
<html lang="en" class="plt-desktop md hydrated" mode="md">
 ▶<head>…</head>
…▼<body> == $0
   ▶<app-root _nghost-cpb-c0 ng-version="8.1.3">…</app-root>
    <script src="runtime.js" type="module"></script>
    <script src="polyfills.js" type="module"></script>
    <script src="styles.js" type="module"></script>
    <script src="vendor.js" type="module"></script>
    <script src="main.js" type="module"></script>
  </body>
</html>
```

```
element.style {
}
body {                                        structure.scss:33
  -moz-osx-font-smoothing: grayscale;
☑ -webkit-font-smoothing: antialiased;
☑ margin-left: 0;
☑ margin-right: 0;
☑ margin-top: 0;
☑ margin-bottom: 0;
☑ padding-left: 0;
☑ padding-right: 0;
☑ padding-top: 0;
☑ padding-bottom: 0;
☑ position: fixed;
☑ width: 100%;
☑ max-width: 100%;
☑ height: 100%;
☑ max-height: 100%;
☑ text-rendering: optimizeLegibility;
```

```
▶ box-sizing
  border-box
▶ color
  ■rgb(0, 0, 0)
▶ display
```

Ionic Lab in Browser



Ionic Blank

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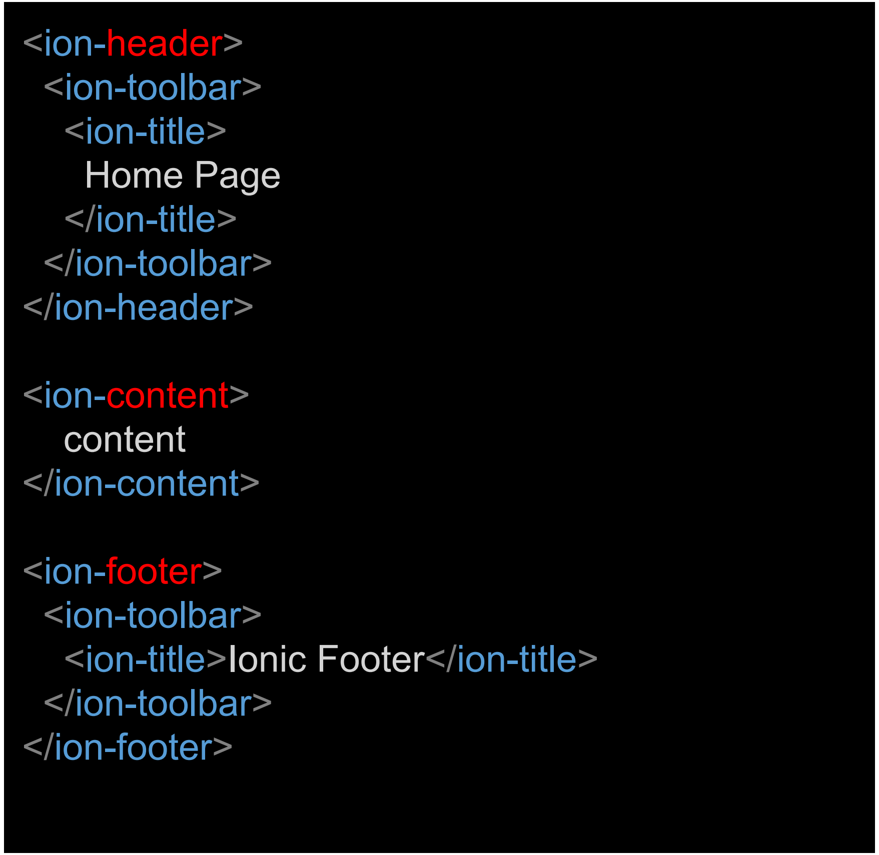
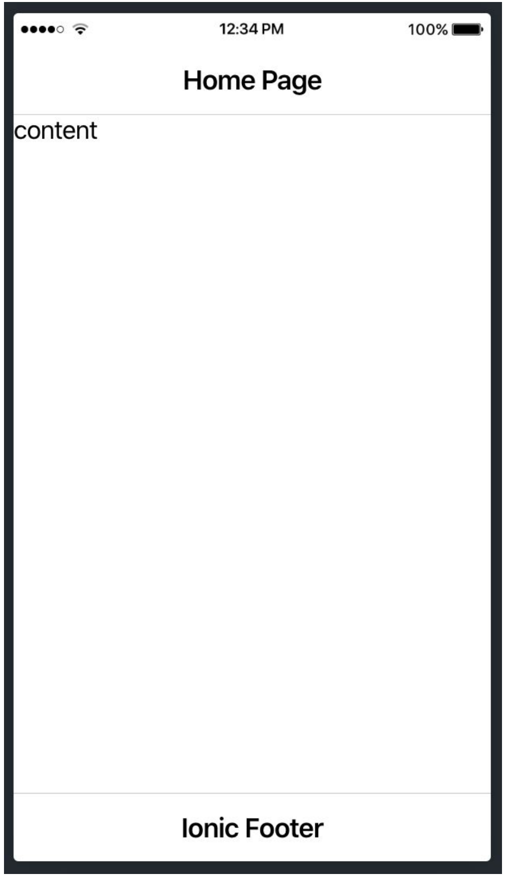
Ionic Structural Components

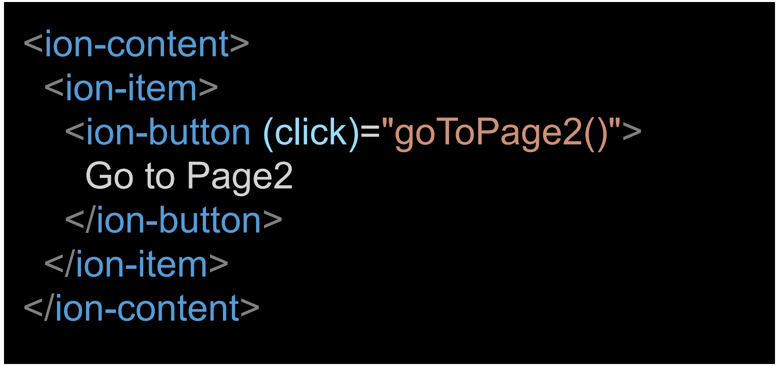


```
<ion-header>
  <ion-toolbar>
    <ion-title>
      Home Page
    </ion-title>
  </ion-toolbar>
</ion-header>

<ion-content>
    content
</ion-content>

<ion-footer>
  <ion-toolbar>
    <ion-title>Ionic Footer</ion-title>
  </ion-toolbar>
</ion-footer>
```



Ionic Items

- <ion-item> is a basic component
- Essentially like <div>
- Creates a block, so its content become a “row”
- Contain other components (e.g.: a button):

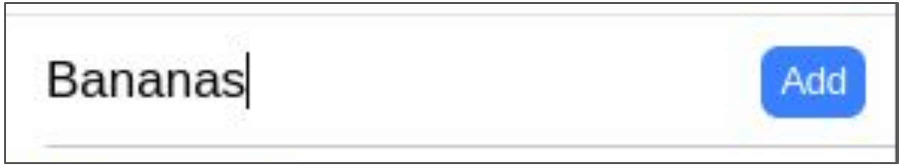


```
<ion-content>
 <ion-item>
  <ion-button (click)="goToPage2()">
   Go to Page2
  </ion-button>
 </ion-item>
</ion-content>
```

Ionic Inputs

- Ionic supports various inputs
  - Today we’ll only focus on text input
- Use [(ngModel)]= to bind to the variable

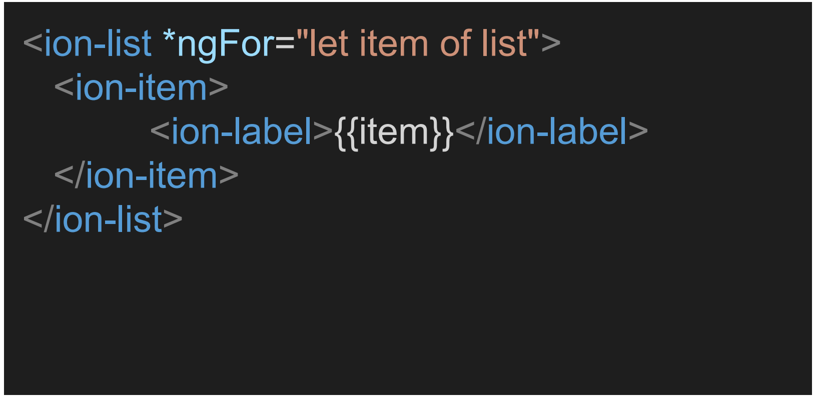
```
<ion-input type="text" placeholder="Item" [(ngModel)]="item"></ion-input>
<ion-button (click)="addItem()"> Add </ion-button>
```



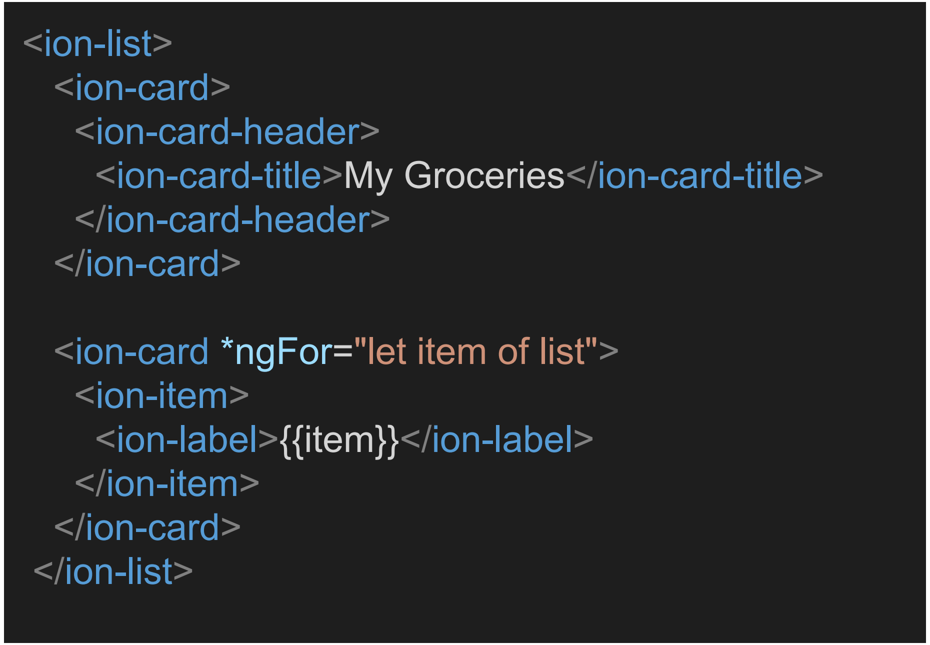
Bananas

Ionic Lists

- Display rows of information
- Items in lists are very customizable



```
<ion-list *ngFor="let item of list">
  <ion-item>
        <ion-label>{{item}}</ion-label>
  </ion-item>
</ion-list>
```



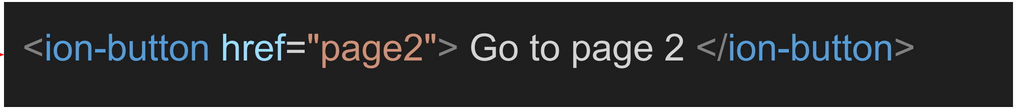
```
<ion-list>
  <ion-card>
    <ion-card-header>
      <ion-card-title>My Groceries</ion-card-title>
    </ion-card-header>
  </ion-card>

  <ion-card *ngFor="let item of list">
    <ion-item>
      <ion-label>{{item}}</ion-label>
    </ion-item>
  </ion-card>
 </ion-list>
```

Ionic Services

- Works very similarly with Angular Services
- Generate service
  - `ionic generate service [service_name]`
- Must include in the “`providers`” in the app.module.ts
- Injecting services work the same way as Angular

Ionic Routing

- Ionic has largely two types of views: component and pages
  - Page is a component that acts as **an entire view** (with some nested components)
  - Components are “smaller”
- To navigate around multiple pages, Ionic uses the app-routing.module.ts
  - Using Ionic CLI to generate pages fills out the app-routing.module.ts for you
  - Generate page: `ionic generate page [page_name]`
- Two different ways to navigate
  - In view

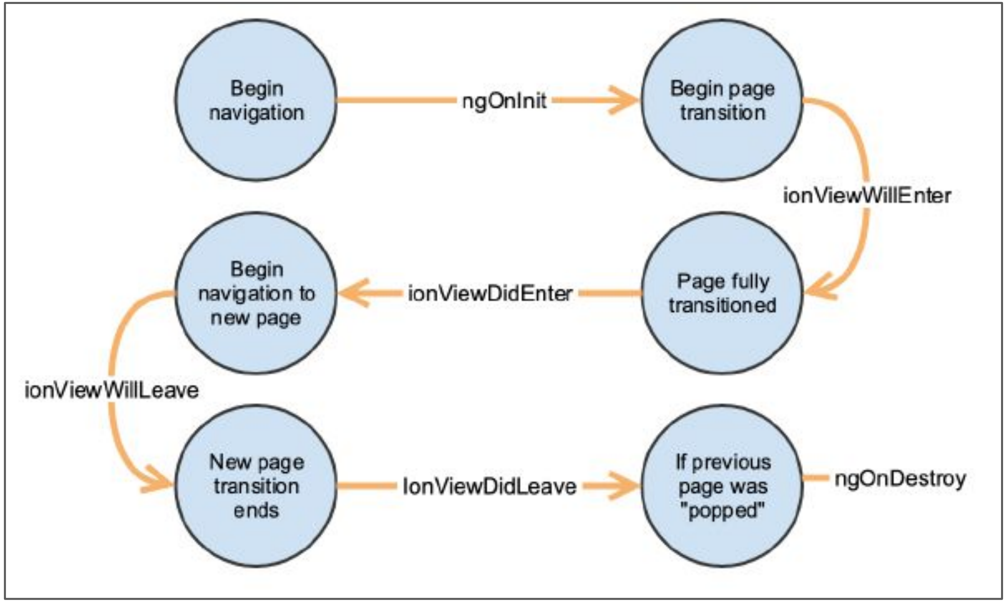


```
<ion-button href="page2"> Go to page 2 </ion-button>
```

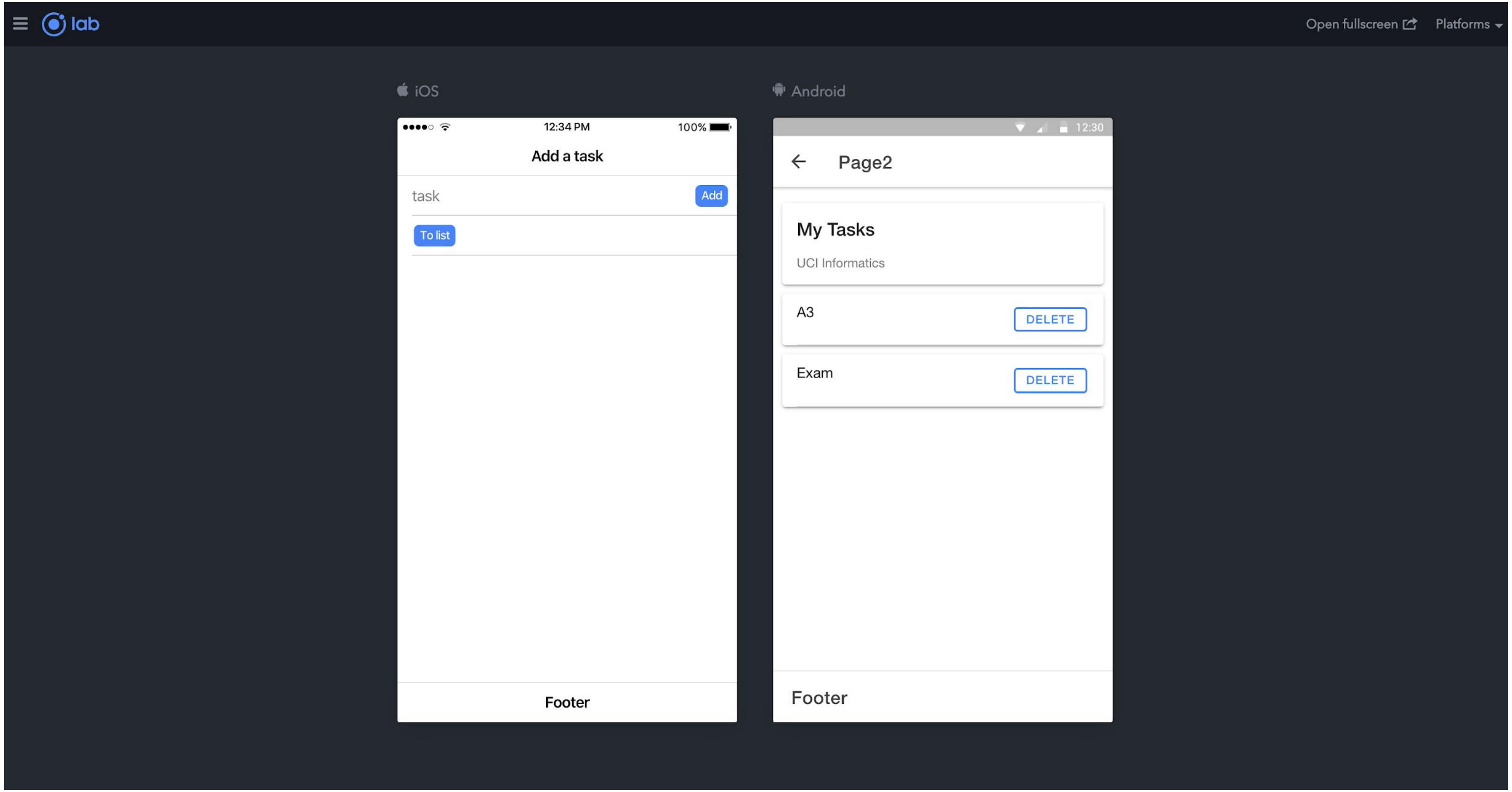
  - In controler
    - More intuitive with an example, so will be explained in the live demo

Ionic Page Lifecycle

- Various events are fired between when a page is generated to its closure
- Mostly used are
  - ngOnInit
    - Fired once when a page is loaded
  - ngOnDestroy
    - Fired right before the view is destroyed.



Ionic Live Demo



Steps for live demo

- Add header, content area, footer in home page
- Generate new page
  - ionic generate page list
- Add navigation between pages
  - home.page.html: add button, set (click)=”goToListPage()”
  - home.page.ts: import NavController, inject, add goToListPage() {this.navCtrl.navigateForward('/page2');}
  - list.page.html: add ion-buttons with slot=start, add ion-back-button with click()=”goBack()”
  - list.page.ts: import NavController, inject, add goBack() {this.navCtrl.back();}
- Add list:String[] in list.page.ts
- Add card-based list in list.page.html
- Generate groceries service: ionic generate service groceries
  - Import and add to app.module.ts providers
- Add input and inject service to home