

Mobile Application Development

LECTURE 12

Introduction to Ionic Components

- Ionic Framework itself provides many already built-in UI components.
- Anything you will need in your mobile app, Ionic Framework has got you covered.
- We used some of these components such as ion-item , ion-card, ion-alert. Lets look at some more useful components that we can use.

Introduction to Ionic Components

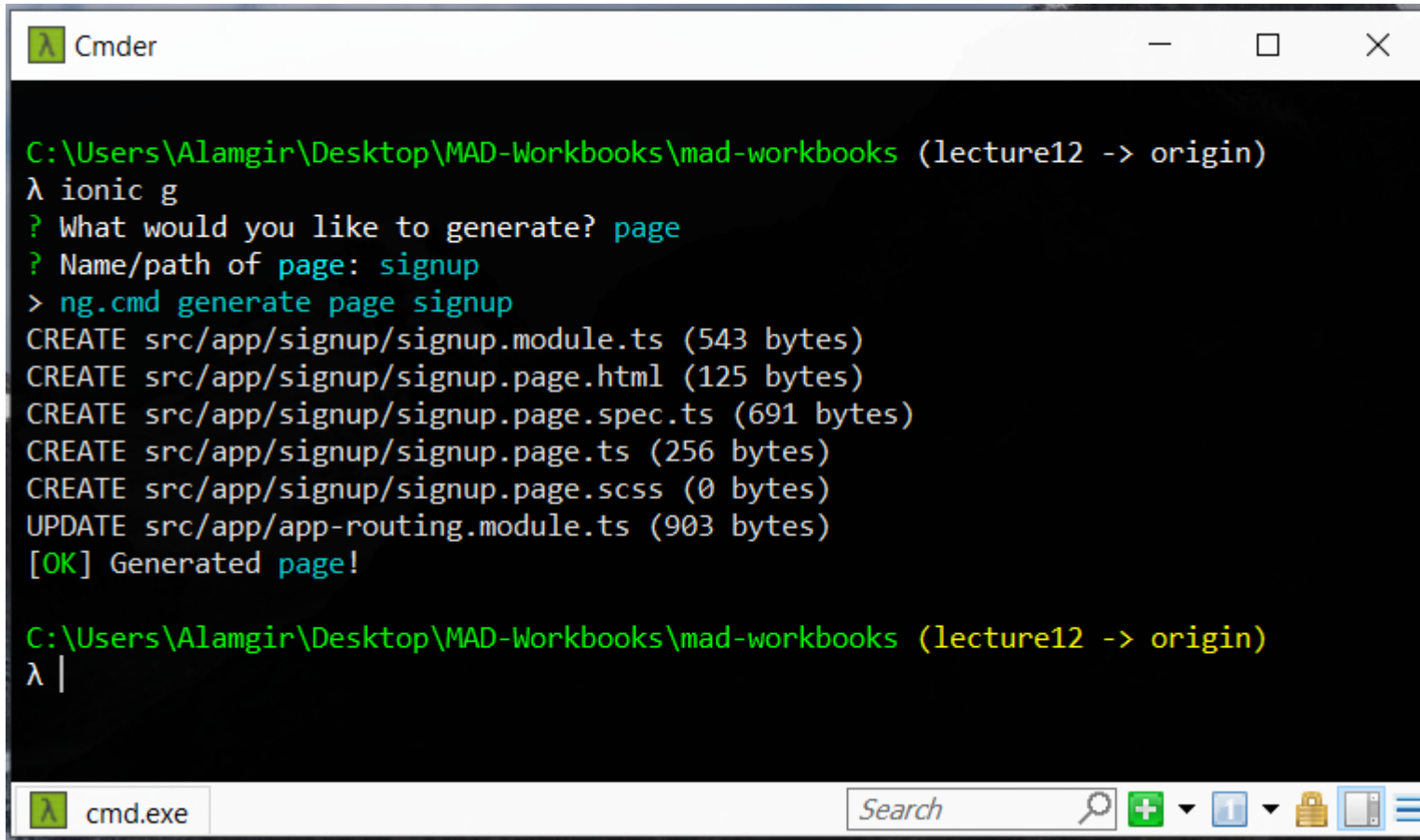
Core Component Types

Output	Layout	Input
<pre><ion-img> <ion-badge> <ion-loading> <ion-label> <ion-title> <ion-thumbnail> <ion-toolbar> <ion-alert> <ion-toast> <ion-modal> ...</pre>	<pre><ion-grid> <ion-row> <ion-col> <ion-list> <ion-card> <ion-infinite-scroll> <ion-tabs> ...</pre>	<pre><ion-button> <ion-input> <ion-textarea> <ion-menu> <ion-select> <ion-datetime> <ion-fab> <ion-toggle> ...</pre>

Introduction to Ionic Components

- We will look at the documentation at <https://ionicframework.com/docs> and go through some of the common ones we see in mobile apps.
- Lets create Signup page for a student.

Introduction to Ionic Components



```
C:\Users\Alamgir\Desktop\MAD-Workbooks\mad-workbooks (lecture12 -> origin)
λ ionic g
? What would you like to generate? page
? Name/path of page: signup
> ng.cmd generate page signup
CREATE src/app/signup/signup.module.ts (543 bytes)
CREATE src/app/signup/signup.page.html (125 bytes)
CREATE src/app/signup/signup.page.spec.ts (691 bytes)
CREATE src/app/signup/signup.page.ts (256 bytes)
CREATE src/app/signup/signup.page.scss (0 bytes)
UPDATE src/app/app-routing.module.ts (903 bytes)
[OK] Generated page!

C:\Users\Alamgir\Desktop\MAD-Workbooks\mad-workbooks (lecture12 -> origin)
λ |
```

The screenshot shows a Windows Command Prompt window titled 'Cmder'. The user is in the directory 'C:\Users\Alamgir\Desktop\MAD-Workbooks\mad-workbooks'. They run the command 'ionic g', which prompts them for what to generate ('page') and the name/path ('signup'). The command 'ng.cmd generate page signup' is then executed, resulting in the creation of several files in the 'src/app/signup/' directory and an update to 'src/app/app-routing.module.ts'. The window's taskbar at the bottom shows 'cmd.exe' and a search bar.

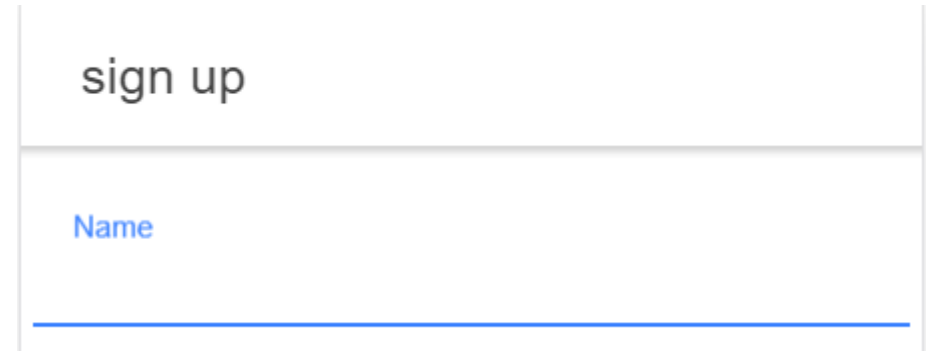
Introduction to Ionic Components

- We need name, email, date of birth, address, city, for signup. We will be using different ionic components for this. And we will setup all of it using Reactive Forms.
- We will also take a look at styling our components using built-in ionic utilities such as CSS utilities (<https://ionicframework.com/docs/layout/css-utilities>)

Introduction to Ionic Components

- Name – We will use ion-input

```
<ion-item>  
  <ion-label position="floating">Name</ion-label>  
  <ion-input></ion-input>  
</ion-item>
```

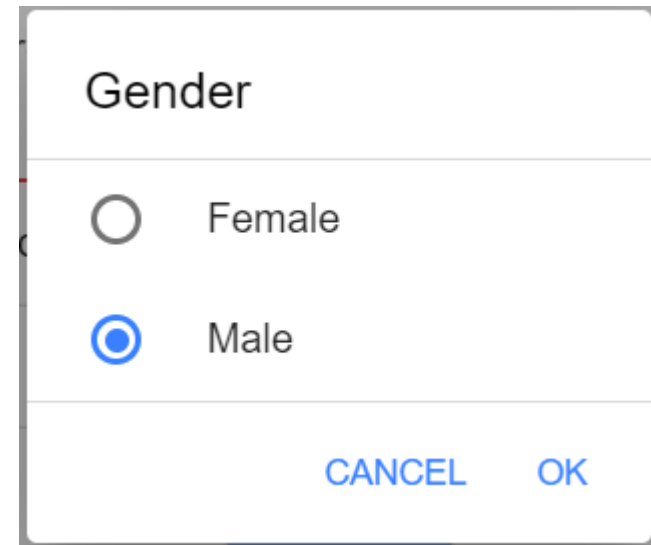


- Email – again same
- Address – for address, we will use <ion-text-area>

Introduction to Ionic Components

- Gender – We will need a dropdown for this so we will use `<ion-select>`

```
<ion-item>
  <ion-label>Gender</ion-label>
  <ion-select formControlName="gender" placeholder="Select One">
    <ion-select-option value="f">Female</ion-select-option>
    <ion-select-option value="m">Male</ion-select-option>
  </ion-select>
</ion-item>
```



Gender

☐ Female

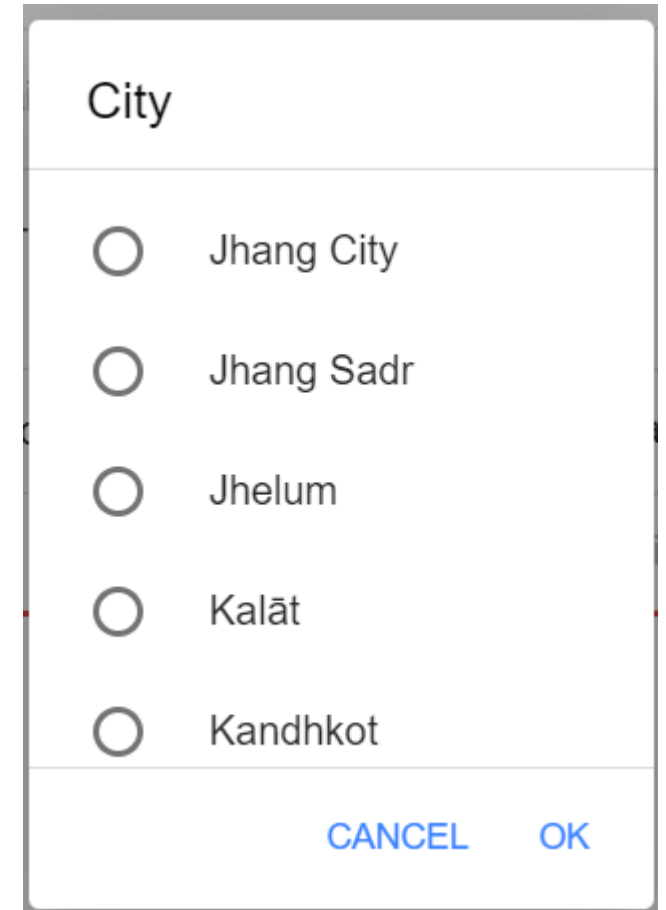
☒ Male

CANCEL OK

Introduction to Ionic Components

- Cities– We will again need `<ion-select>`. But because there will be plenty of cities, we can just type them in html. We will use `*ngFor` and use a JSON.

```
<ion-item>  
  <ion-label>City</ion-label>  
  <ion-select formControlName="city" placeholder="Select City">  
    <ion-select-option *ngFor="let city of cities" [value]="city.city">{{city?.city}}</ion-select-option>  
  </ion-select>  
</ion-item>
```



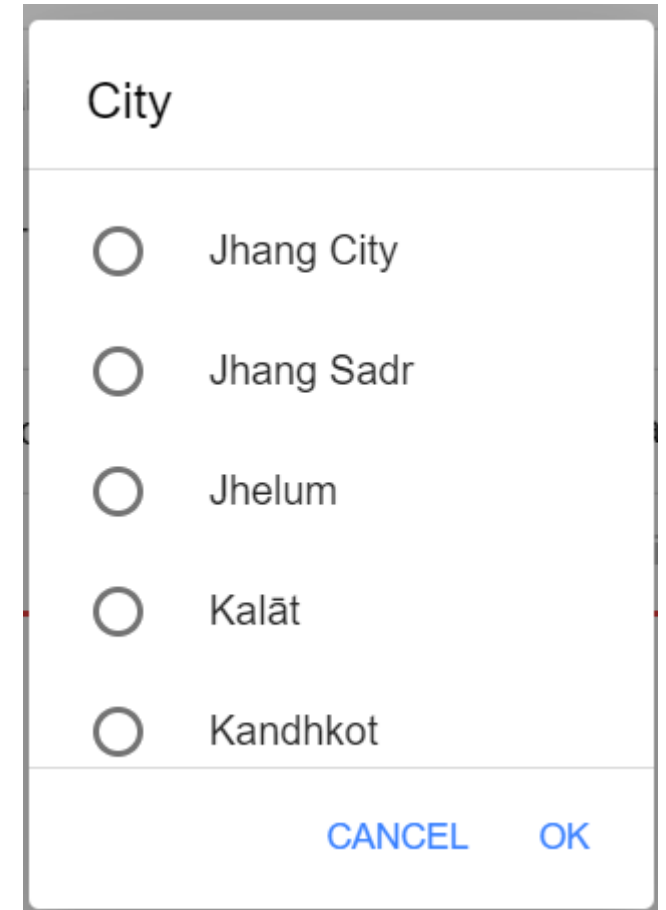
A screenshot of an Ionic dialog box titled "City". The dialog contains a list of five radio button options: "Jhang City", "Jhang Sadr", "Jhelum", "Kalāt", and "Kandhkot". At the bottom right of the dialog, there are two buttons: "CANCEL" and "OK".

people will forget what you said, people will forget what you did, but people will never forget how you made them feel. ~
Maya Angelou

Introduction to Ionic Components

- Cities– We will again need `<ion-select>`. But because there will be plenty of cities, we can just type them in html. We will use `*ngFor` and use a JSON.

```
<ion-item>  
  <ion-label>City</ion-label>  
  <ion-select formControlName="city" placeholder="Select City">  
    <ion-select-option *ngFor="let city of cities" [value]="city.city">{{city?.city}}</ion-select-option>  
  </ion-select>  
</ion-item>
```



A screenshot of an Ionic dialog box titled "City". The dialog contains a list of five radio button options: "Jhang City", "Jhang Sadr", "Jhelum", "Kalāt", and "Kandhkot". At the bottom right of the dialog, there are two buttons: "CANCEL" and "OK".

Introduction to Ionic Components

- Cities– I have a pk.json file which has cities list of pakistan.
- In order to use it in TypeScript, I had to add one line to **tsconfig.json**
- "compilerOptions": {

```
    "resolveJsonModule": true,  
  }
```

```
[  
  {  
    "city": "Karachi",  
    "admin": "Sindh",  
    "country": "Pakistan",  
    "population_proper": "11624219",  
    "iso2": "PK",  
    "capital": "admin",  
    "lat": "24.9056",  
    "lng": "67.0822",  
    "population": "12130000"  
  },  
  {  
    "city": "Lahore",  
    "admin": "Punjab",  
    "country": "Pakistan",  
    "population_proper": "6310888",  
    "iso2": "PK",  
    "capital": "admin",  
    "lat": "31.549722",  
    "lng": "74.343611",  
    "population": "6577000"  
  },  
]
```

Introduction to Ionic Components

Cities– we will import it like this

```
import * as citiesList from './../pk.json';
```

And in ngOnInit

```
this.cities = citiesList['default'];
```

Then we can sort alphabetically using

```
this.cities.sort((a, b) => a.city.localeCompare(b.city));
```

```
import * as citiesList from './../pk.json';

import { Component, OnInit } from '@angular/core';
import { FormBuilder, FormGroup, Validators } from '@angular/forms';

@Component({
  selector: 'app-signup',
  templateUrl: './signup.page.html',
  styleUrls: ['./signup.page.scss']
})
export class SignupPage implements OnInit {
  cities = [];
  signupForm: FormGroup;

  constructor(private formBuilder: FormBuilder) {}

  ngOnInit() {
    console.log(citiesList['default']);
    this.cities = citiesList['default'];
    this.cities.sort((a, b) => a.city.localeCompare(b.city));
  }
}
```

Introduction to Ionic Components

- Now in order to save all this profile data, we will use Reactive Forms.
- In TypeScript, we create a formInitializer() function, and execute it on ngOnInit.
- We add appropriate validations

```
export class SignupPage implements OnInit {
  cities = [];
  signupForm: FormGroup;

  constructor(private formBuilder: FormBuilder) {}

  ngOnInit() {
    this.formInitializer();
    this.cities = citiesList['default'];
    this.cities.sort((a, b) => a.city.localeCompare(b.city));
  }

  formInitializer() {
    this.signupForm = this.formBuilder.group({
      name: [null, [Validators.required]],
      email: [null, [Validators.required, Validators.email]],
      address: [null, [Validators.required]],
      gender: ['m', [Validators.required]],
      city: [null, [Validators.required]]
    });
  }
}
```

Introduction to Ionic Components

- In Html, we add a formGroup with the name signupForm
- we added a save button at the button using <ion-button>
- take a look at that disabled property.

```
<ion-content>
  <ion-grid class="ion-padding-top">
    <ion-text> Please fill up the information</ion-text>
    <div [formGroup]="signupForm">
      <ion-item>...
    </ion-item>
    <ion-item>...
    </ion-item>
    <ion-item>...
    </ion-item>

    <ion-item>...
    </ion-item>

    <ion-item>...
    </ion-item>

    <ion-grid class="ion-padding-top">
      <ion-row class="ion-justify-content-center">
        <ion-button shape="round" [disabled]="!signupForm.valid">Save</ion-button>
      </ion-row>
    </ion-grid>
  </div>
</ion-grid>
</ion-content>
```

Introduction to Ionic Components

- Here's how it looks like

sign up

Please fill up the information

Name

Alamgir

Email

asd

Address

Gender

Male ▾

City

Rāwalpindi ▾

SAVE

sign up

Please fill up the information

Name

Alamgir

Email

alamgirmunirqazi@gmail.com

Address

House # something

Gender

Male ▾

City

Rāwalpindi ▾

SAVE

Introduction to Ionic Components

- There are other ionic components that you would have to use depending on your requirement

e.g ion-loading, ion-radio, ion-refresher, ion-skeleton-text, ion-modal, ion-fab etc.

Take a look at <https://ionicframework.com/docs/api>