TUESDAY, MARCH 10, 2020

Event Emitters Component Interactions in Angular Ionic

ANGULAR COMPONENTS EVENT EMITTERS IONIC JAVASCRIPT TYPESCRIPT

{ 2 comments } - SRINIVAS TAMADA

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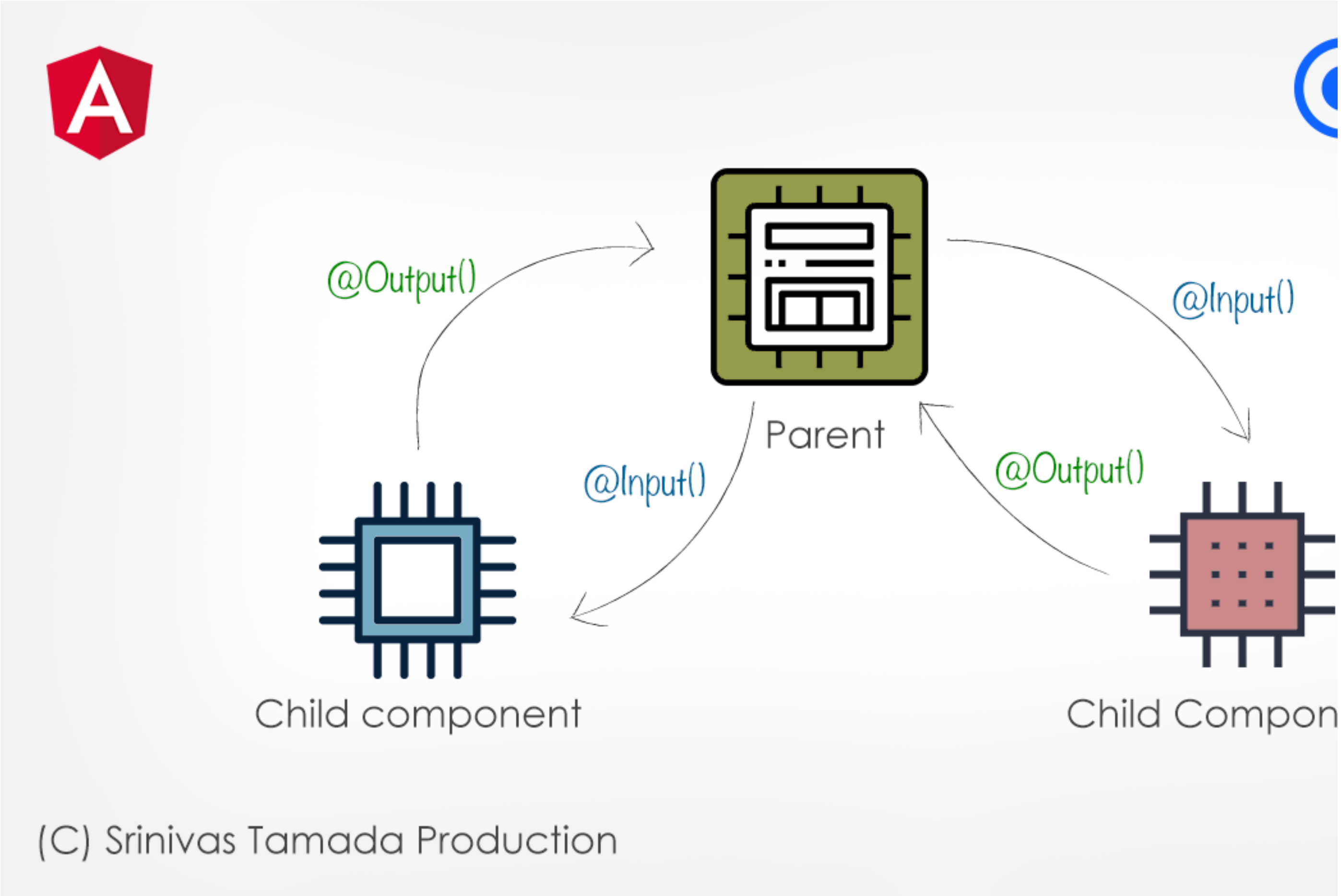
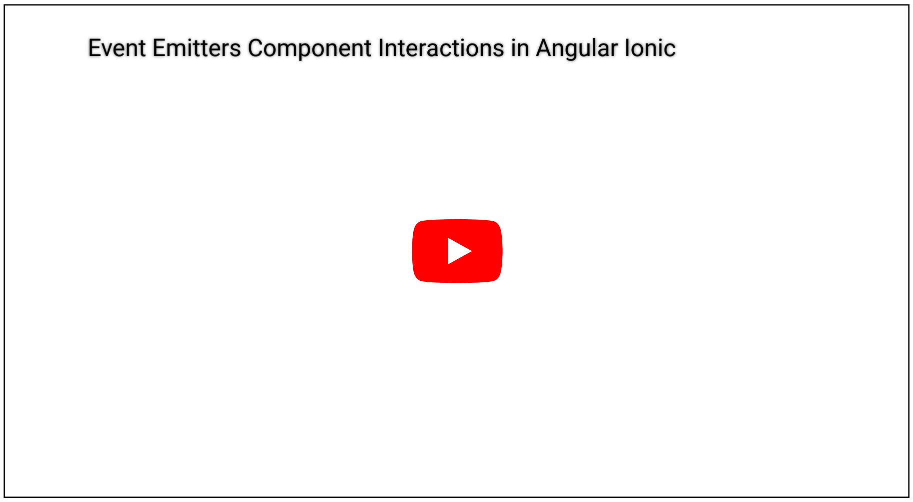
This article is more about understanding the Event Emitters in Angular and Ionic. Data flow is the most important when you build an application to communicate with components. Event Emitters will help you to even bind using @Input @Output decorators. Here is a simple example to display and update the user profile using Angular Event Emitters. For this demo I choose Ionic framework for better experience. Take a quick look at the live demo.



Live Demo

Angular Ionic Event Emitters
Download this project on Github

Video Tutorial



Prerequisites

You need to have the following software installed:

- Node 12+
- Ionic 5+
- @angular/cli
- Ionic

Note: You can try this project with both Angular and Ionic(Angular project with mobile components). For this article, I choose Ionic for the better user experience.

Create Angular Project

Generate an Angular project.

```
$ng new projectName
```

Run the Project

Project server will run at 4200 port.

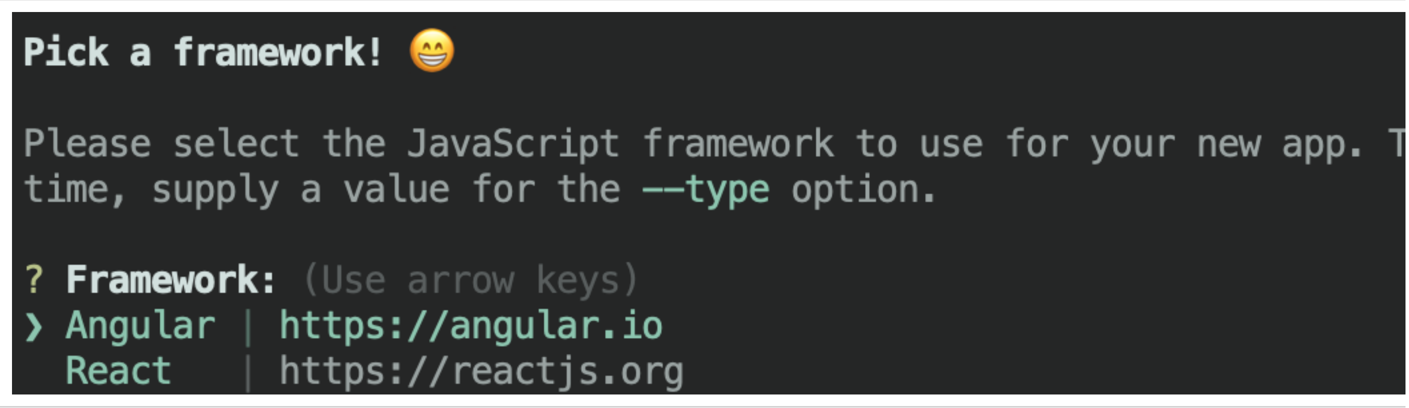
```
$ng serve
```

OR

Create Ionic Project

Generate an Ionic project with tabs feature. Choose Angular framework to initiate.

```
$ionic start projectName tabs
```

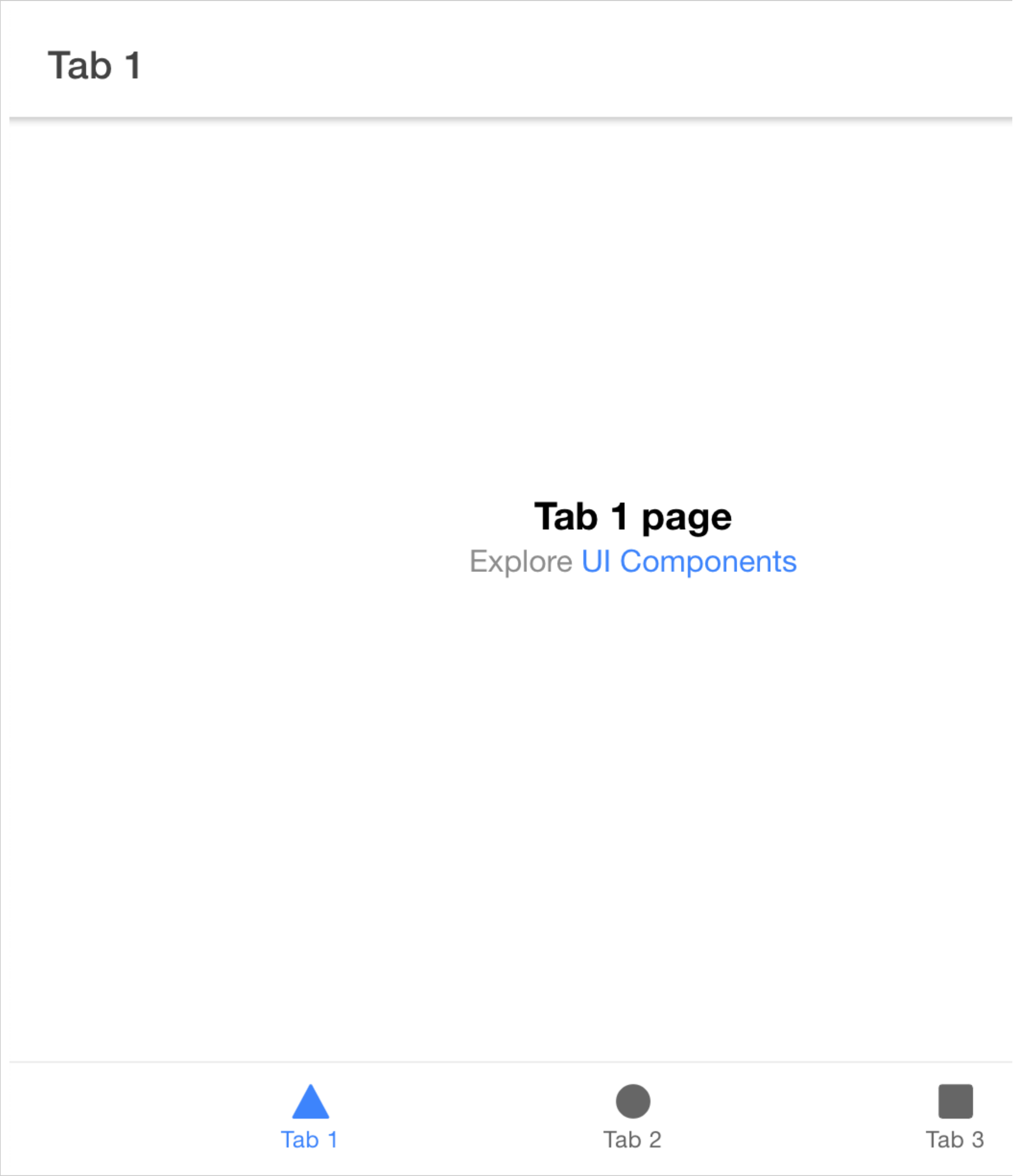


```
Pick a framework! 😁

Please select the JavaScript framework to use for your new app. T
time, supply a value for the --type option.

? Framework: (Use arrow keys)
❯ Angular | https://angular.io
  React   | https://reactjs.org
```

Run the Project

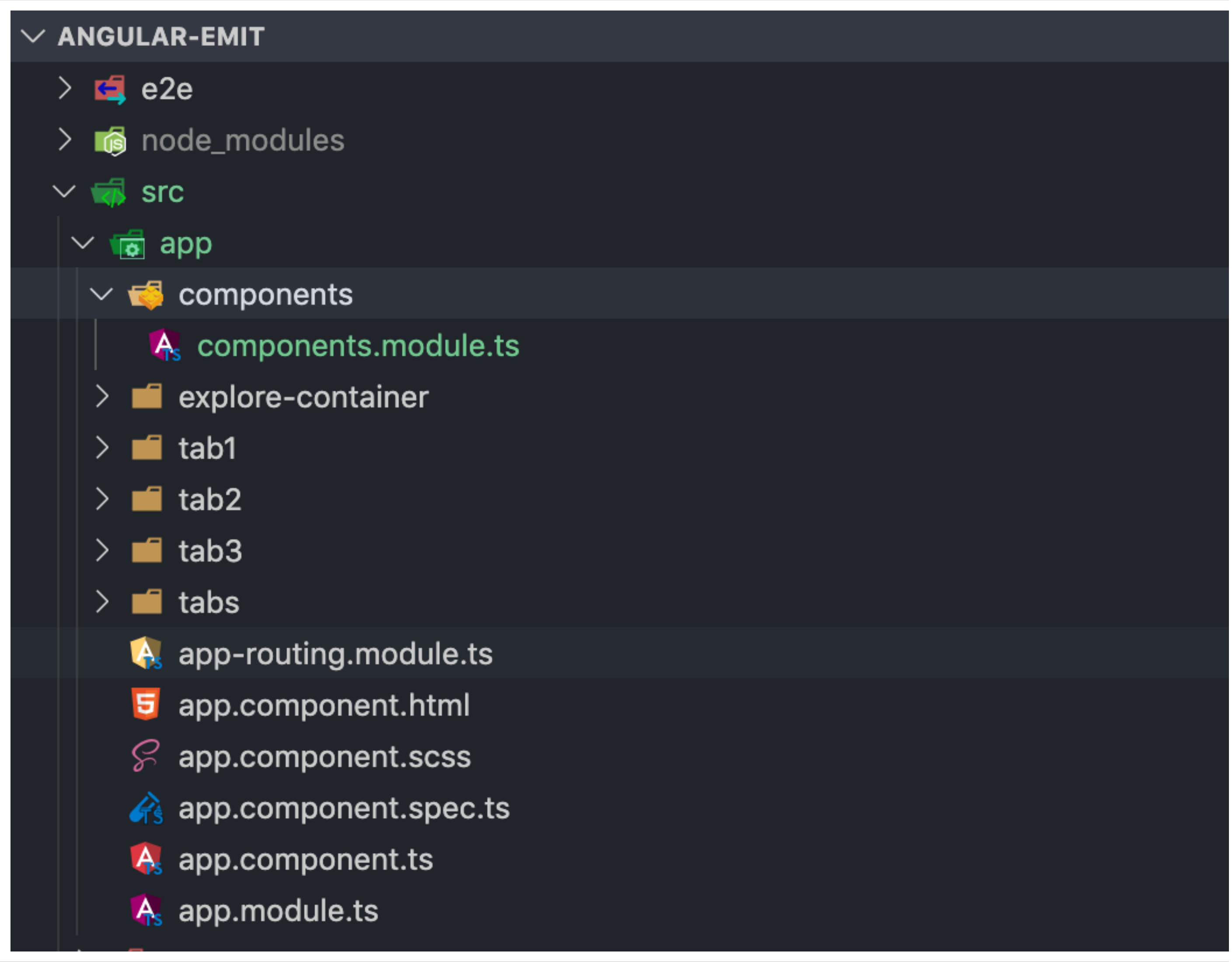
Project server will run at 8100 port.

```
$ionic serve
```



Create a components folder for organizing all of the child components. Generate a components module using ng command.

```
$ ng generate module components

CREATE src/app/components/components.module.ts (196 bytes)
```



This demo is about displaying an user profile with name and about with edit feature to modify the user data.

Creating Child Components

Use ng command and generate all of the child components under the components folder.

User Profile

This is component for displaying the user information.

```
$ng generate component components/user-profile

CREATE src/app/components/user-profile/user-profile.component.scss (0 bytes)
CREATE src/app/components/user-profile/user-profile.component.html (31 bytes)
CREATE src/app/components/user-profile/user-profile.component.spec.ts (718 bytes)
CREATE src/app/components/user-profile/user-profile.component.ts (291 bytes)
```

Edit Profile

Component for updating the user profile.

```
$ng generate component components/edit-profile

CREATE src/app/components/edit-profile/edit-profile.component.scss (0 bytes)
CREATE src/app/components/edit-profile/edit-profile.component.html (31 bytes)
CREATE src/app/components/edit-profile/edit-profile.component.spec.ts (718 bytes)
CREATE src/app/components/edit-profile/edit-profile.component.ts (291 bytes)
```

components.module.ts

Here you have to import the components and include these in declarations and exports. Using this module you can easily export these child components to other components or pages. Basic Angular Cli project imports by default.

```
import { CommonModule } from '@angular/common';
import { NgModule } from '@angular/core';
import { FormsModule } from '@angular/forms';
import { IonicModule } from '@ionic/angular';
import { EditProfileComponent } from './edit-profile/edit-profile.component';
import { UserProfileComponent } from './user-profile/user-profile.component';
@NgModule({
declarations: [UserProfileComponent, EditProfileComponent],
exports: [UserProfileComponent, EditProfileComponent],
imports: [CommonModule, IonicModule, FormsModule]
})
export class ComponentsModule {}
```

Note: Import the Angular FormsModule and IonicModule for importing the Ionic UI components.

Parent Component or Page

Here the tab1 is the parent component for the above newly generated child components.

tab1.module.ts

Parent component module.

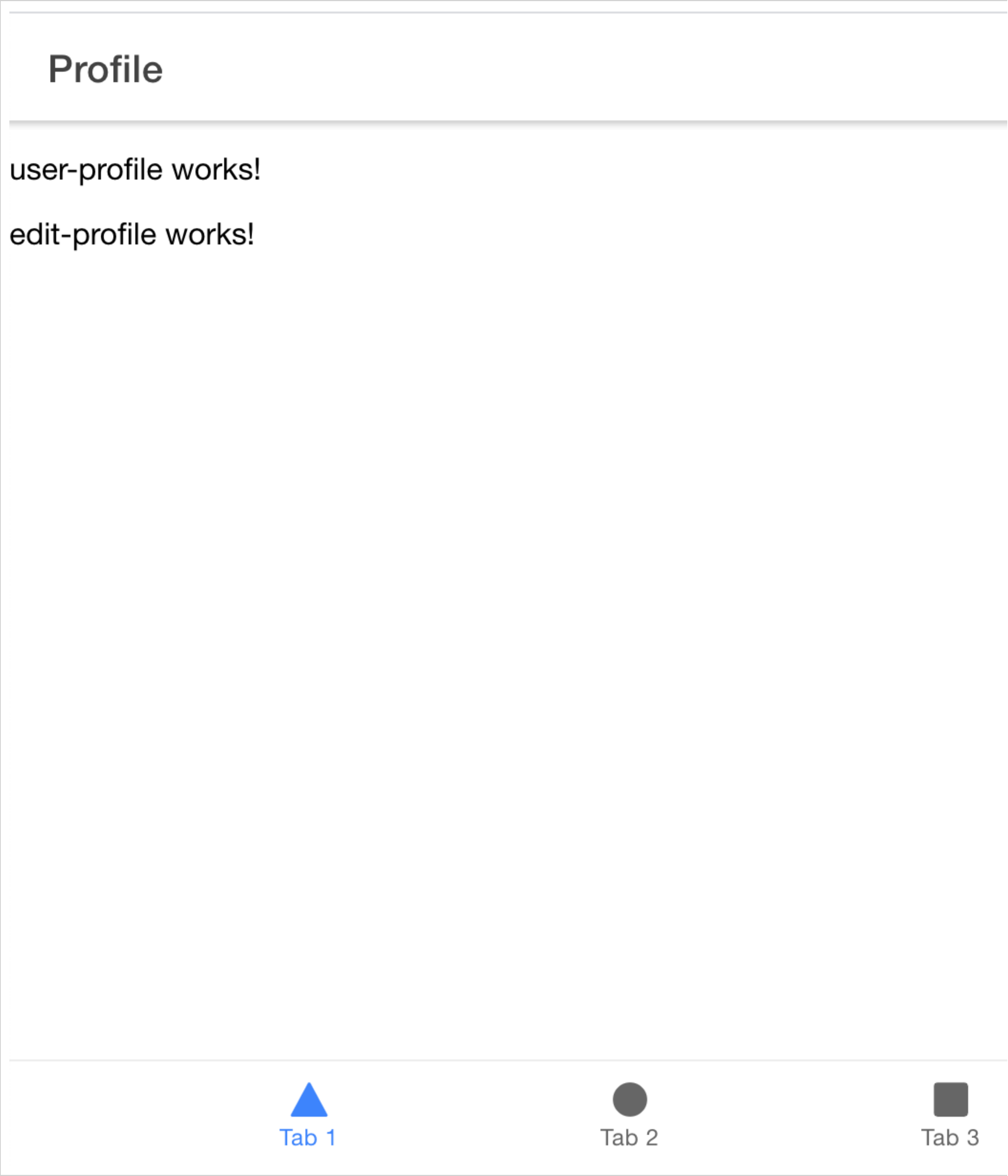
```
import { CommonModule } from '@angular/common';
import { NgModule } from '@angular/core';
import { FormsModule } from '@angular/forms';
import { RouterModule } from '@angular/router';
import { IonicModule } from '@ionic/angular';
import { ComponentsModule } from './../components/components.module';
import { Tab1Page } from './tab1.page';

@NgModule({
imports: [
IonicModule,
CommonModule,
FormsModule,
ComponentsModule,
RouterModule.forChild([{ path: '', component: Tab1Page }])
],
declarations: [Tab1Page]
})
export class Tab1PageModule {}
```

tab1.page.html

Include the child component tags in the following way and remove the app-explore-container default component tag.

```
<ion-header [translucent]="true">
<ion-toolbar>
<ion-title>
Profile
</ion-title>
</ion-toolbar>
</ion-header>

<ion-content [fullscreen]="true">
<ion-header collapse="condense">
<ion-toolbar>
<ion-title size="large">Profile</ion-title>
</ion-toolbar>
</ion-header>
<app-user-profile></app-user-profile>
<app-edit-profile></app-edit-profile>
```

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


Profile

user-profile works!

edit-profile works!

tab1.page.ts
Get the user profile information the API call and assign it to userProfileData variable. For this demo, setting up the user values directly.

```
import { Component, OnInit } from '@angular/core';
```

```
@Component({
selector: 'app-tab1',
templateUrl: 'tab1.page.html',
styleUrls: ['tab1.page.scss']
})
export class Tab1Page implements OnInit {
userProfileData = {
name: '',
about: ''
};

constructor() {}

ngOnInit() {
this.getUserProfileData();
console.log(this.userProfileData);
}

getUserProfileData() {
/* Get this data from the API */
this.userProfileData.name = 'Srinivas Tamada';
this.userProfileData.about = 'Make people fall in love with your ideas.';
}
}
```

tab1.page.html

Inject the userProfileDate into <app-user-profile> component with [userProfile] input attribute.

```
<app-user-profile [userProfile]="userProfileData"></app-user-profile>
```

user-profile.component.ts

Use the @Input() Event Emitter, you can receive the userProfile data.

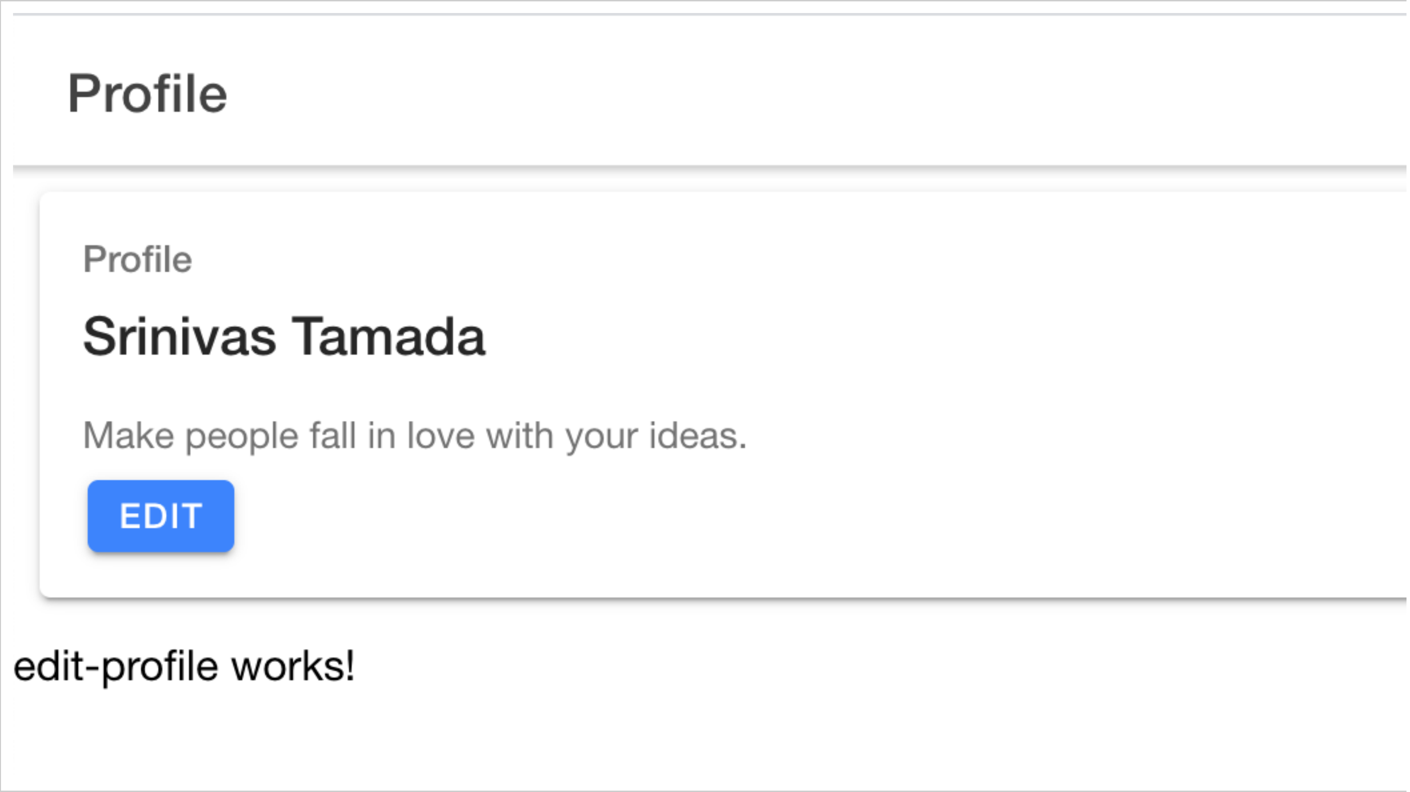
```
import { Component, OnInit, Input } from '@angular/core';

@Component({
selector: 'app-user-profile',
templateUrl: './user-profile.component.html',
styleUrls: ['./user-profile.component.scss'],
})
export class UserProfileComponent implements OnInit {
@Input() userProfile: any;
constructor() { }

ngOnInit() {}

}
```

user-profile.component.html

Updated the design with Ionic UI components and displaying user information using the userProfile @Input event emitter. In this design included a button for showing and hiding the edit profile component.

```
<ion-card>
<ion-card-header>
<ion-card-subtitle>Profile</ion-card-subtitle>
<ion-card-title [innerHTML]="userProfile.name"></ion-card-title>
</ion-card-header>

<ion-card-content>
<p [innerHTML]="userProfile.about"></p>
<ion-button size="small">Edit</ion-button>
</ion-card-content>
</ion-card>
```

You will find the updated design with user information.



Profile

Profile

Srinivas Tamada

Make people fall in love with your ideas.

edit-profile works!

Working with Edit Profile Button

tab1.page.ts

Introducing the editProfileStatus variable with false value. Using editProfileToggle method, toggling the status value to show and hide the components.

```
import { Component, OnInit } from '@angular/core';

@Component({
selector: 'app-tab1',
templateUrl: 'tab1.page.html',
styleUrls: ['tab1.page.scss']
})
export class Tab1Page implements OnInit {
userProfileData = {
name: '',
about: ''
};

editProfileStatus = false;

constructor() {}

ngOnInit() {
this.getUserProfileData();
console.log(this.userProfileData);
}

getUserProfileData() {
/* Get this data from the API */
this.userProfileData.name = 'Srinivas Tamada';
this.userProfileData.about = 'Make people fall in love with your ideas.';
}

editProfileToggle() {
this.editProfileStatus = !this.editProfileStatus;
}
}
```

tab1.page.html

Add the *ngIf condition and use ng-template for else condition. Added the editProfileToggle method to app-user-profile component for edit button action.

```
<app-user-profile [userProfile]="userProfileData"
*ngIf="!editProfileStatus; else editProfile"
(editProfile)="editProfileToggle()"></app-user-profile>
<ng-template #editProfile>
<app-edit-profile></app-edit-profile>
</ng-template>
```

user-profile.component.html

Using @Output Event Emitters, edit button action executing the parent editProfileToggle method.

```
import { Component, EventEmitter, Input, OnInit, Output } from '@angular/core';

@Component({
selector: 'app-user-profile',
templateUrl: './user-profile.component.html',
styleUrls: ['./user-profile.component.scss']
})
export class UserProfileComponent implements OnInit {
@Input() userProfile: any;
@Output() editProfile = new EventEmitter();
constructor() {}

ngOnInit() {}

editProfileAction() {
this.editProfile.emit();
}
}
```

user-profile.component.ts

Add a click action for the edit button.

```
<ion-button size="small" (click)="editProfileAction()">Edit</ion-button>
```

edit-profile.component.html

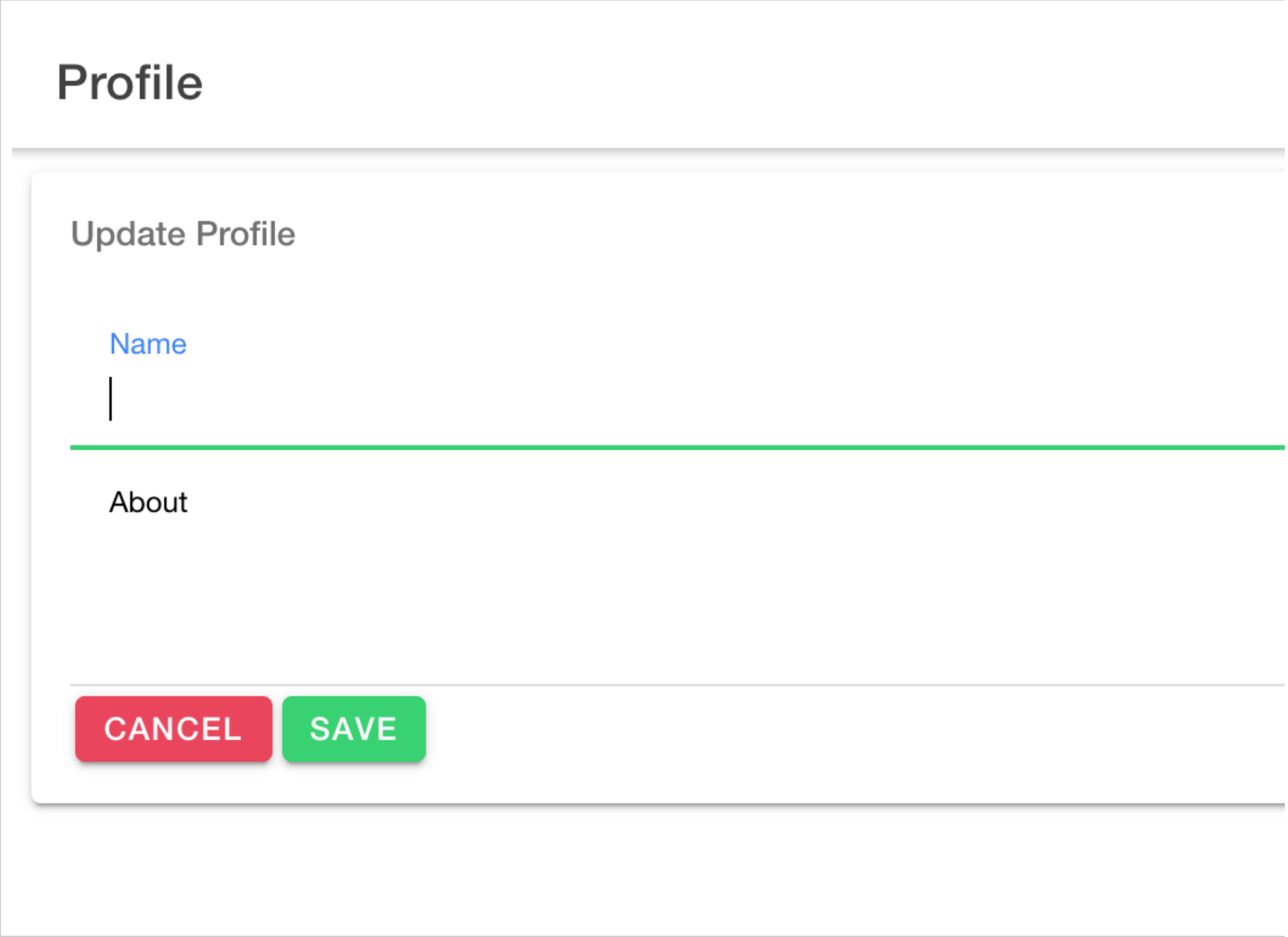
Create an edit profile form using Ionic Form components. Here #profileName is a reference for the user name input, use the for focusing the user profile name input. newUserProfileData is the empty object to get the user edit information.

```
<ion-card id="profile-card">
<ion-card-header>
<ion-card-subtitle>Update Profile</ion-card-subtitle>
</ion-card-header>

<ion-card-content>
<ion-item>
<ion-label position="stacked">Name</ion-label>
<ion-input [(ngModel)]="newUserProfileData.name" #profileName></ion-input>
</ion-item>
<ion-item>
<ion-label position="stacked">About</ion-label>
<ion-textarea [(ngModel)]="newUserProfileData.about"></ion-textarea>
</ion-item>

<ion-button size="small" color='danger'>Cancel</ion-button>
<ion-button size="small" color="success">Save</ion-button>

</ion-card-content>
</ion-card>
```

edit-profile.component.ts

Here @ViewChild helps you to focus the input. Now the new user information stores at newProfileUserData object.

```
import { AfterViewInit, Component, ViewChild } from '@angular/core';
import { IonInput } from '@ionic/angular';

@Component({
selector: 'app-edit-profile',
templateUrl: './edit-profile.component.html',
styleUrls: ['./edit-profile.component.scss']
})
export class EditProfileComponent implements AfterViewInit {
@ViewChild('profileName', {static: true}) inputElement: IonInput;
public newUserProfileData = {
name: '',
about: ''
};
constructor() {}

ngAfterViewInit() {
setTimeout(() => {
this.inputElement.setFocus();
}, 400);
}
}
```



tab1.page.ts

Added a new method updateProfile to updating the user information and it hits the editProfileToggle method to go previous state.

```
import { Component, OnInit } from '@angular/core';

@Component({
selector: 'app-tab1',
templateUrl: 'tab1.page.html',
styleUrls: ['tab1.page.scss']
})
```

```
export class Tab1Page implements OnInit {
userProfileData = {
name: '',
about: ''
};

editProfileStatus = false;

constructor() {}

ngOnInit() {
this.getUserProfileData();
console.log(this.userProfileData);
}

getUserProfileData() {
/* Get this data from the API */
this.userProfileData.name = 'Srinivas Tamada';
this.userProfileData.about = 'Make people fall in love with your ideas.';
}

/* toggle the edit profile status */
editProfileToggle() {
this.editProfileStatus = !this.editProfileStatus;
}

/* update the user profile */
updateProfile(data: any) {
this.userProfileData.name = data.name;
this.userProfileData.about = data.about;
this.editProfileToggle();
}
}
```

tab1.page.html

Add event emit output method for cancel and save actions.

```
<app-edit-profile (cancelEditProfile)="editProfileToggle()" (updateProfileData)="updateProfile($event)">
</app-edit-profile>
```

edit-profile.component.ts

Here cancelEditProfileAction emits the parent editProfileToggle. Form update profile action emits the updateProfileDate with new updated profile date(newUserProfileData).

```
import { AfterViewInit, Component, ViewChild, Output, EventEmitter } from '@angular/core';
import { IonInput } from '@ionic/angular';

@Component({
selector: 'app-edit-profile',
templateUrl: './edit-profile.component.html',
styleUrls: ['./edit-profile.component.scss']
})
export class EditProfileComponent implements AfterViewInit {
@ViewChild('profileName', {static: true}) inputElement: IonInput;
@Output() cancelEditProfile = new EventEmitter();
@Output() updateProfileData = new EventEmitter<any>();
public newUserProfileData = {
name: '',
about: ''
};
constructor() {}

ngAfterViewInit() {
setTimeout(() => {
this.inputElement.setFocus();
}, 400);
}

cancelEditProfileAction() {
this.cancelEditProfile.emit();
}

updateProfileAction() {
```

```
if(this.newUserProfileData.name){
this.updateProfileData.emit(this.newUserProfileData);
}
}

}
```

edit-profile.component.html

Connect these action with cancel and save buttons.

```
<ion-button size="small" (click)="cancelEditProfileAction()" color='danger'>Cancel</ion-button>
<ion-button size="small" (click)="updateProfileAction()" color="success">Save</ion-button>
```

Production Build

```
$npm run build --prod
```

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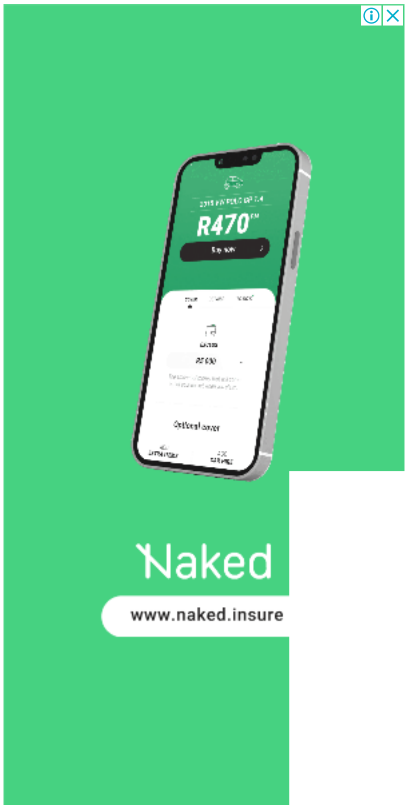

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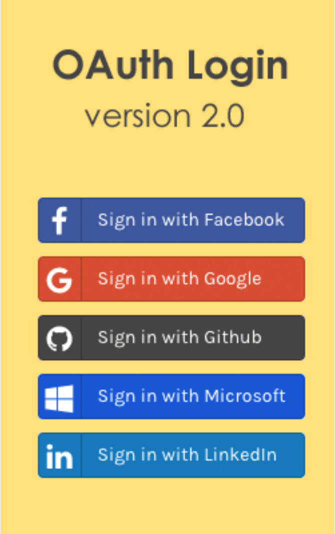

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