شركـــة تحالـــف الإمـــارات للحـــلـــول التـقـنـيـــة ذ.م.م.
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Angular

Tahaluf Training Center 2021

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Chapter 2

What is Data Binding?

Data Binding

is **a technique, where the data stays in sync between the component and the view**. Whenever the user updates the data in the view, Angular updates the component. When the component gets new data, the Angular updates the view.

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What is Data Binding?

Data Binding

Allows to define communication between a component and the DOM, making it very easy to define interactive applications without worrying about pushing and pulling information.

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Chapter 2

One way data binding

One-way data binding will bind the data from the component to the view (DOM) or from view to the component.

One way data binding

One way data binding may be:

Input event → Read event .

OR

Output event→ Write event .

One way data binding

To bind data from component to view, we make use of Interpolation & Property Binding.

One way data binding

You can use these ways to read the value from variable.

In app.componemts.html

1- Interpolation

```
<input type ="text" placeholder="your name" value=
"{{name}}" />
```

2- **Property Binding**

```
<input type ="text" placeholder="your name" [valu
e]="name" />
```

One way data binding

To bind data from view to component, we will use event binding, By tracking the user events in the view and responding to it.

One way data binding

In app.component.html

```
<input type="text" placeholder="your name" [value]=
"name" (change)="handleNameInputChange()" />
```

In app.component.ts

```
handleNameInputChange() {
  alert('The value is changed!');
}
```

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One way data binding

Event Object :

You can display the input value by binding key event and displays the text back what the user types onto the screen.

One way data binding

In app.componemts.html

```
<input type="text" placeholder="your name" [valu
e]="name"(change)="handleNameInputChange($event)
"/>
```

In app.componemts.ts

```
handleNameInputChange = (e:any) =>
{
   console.log(e.target.value);
   this.name =e.target.value;
}
```

Chapter 2

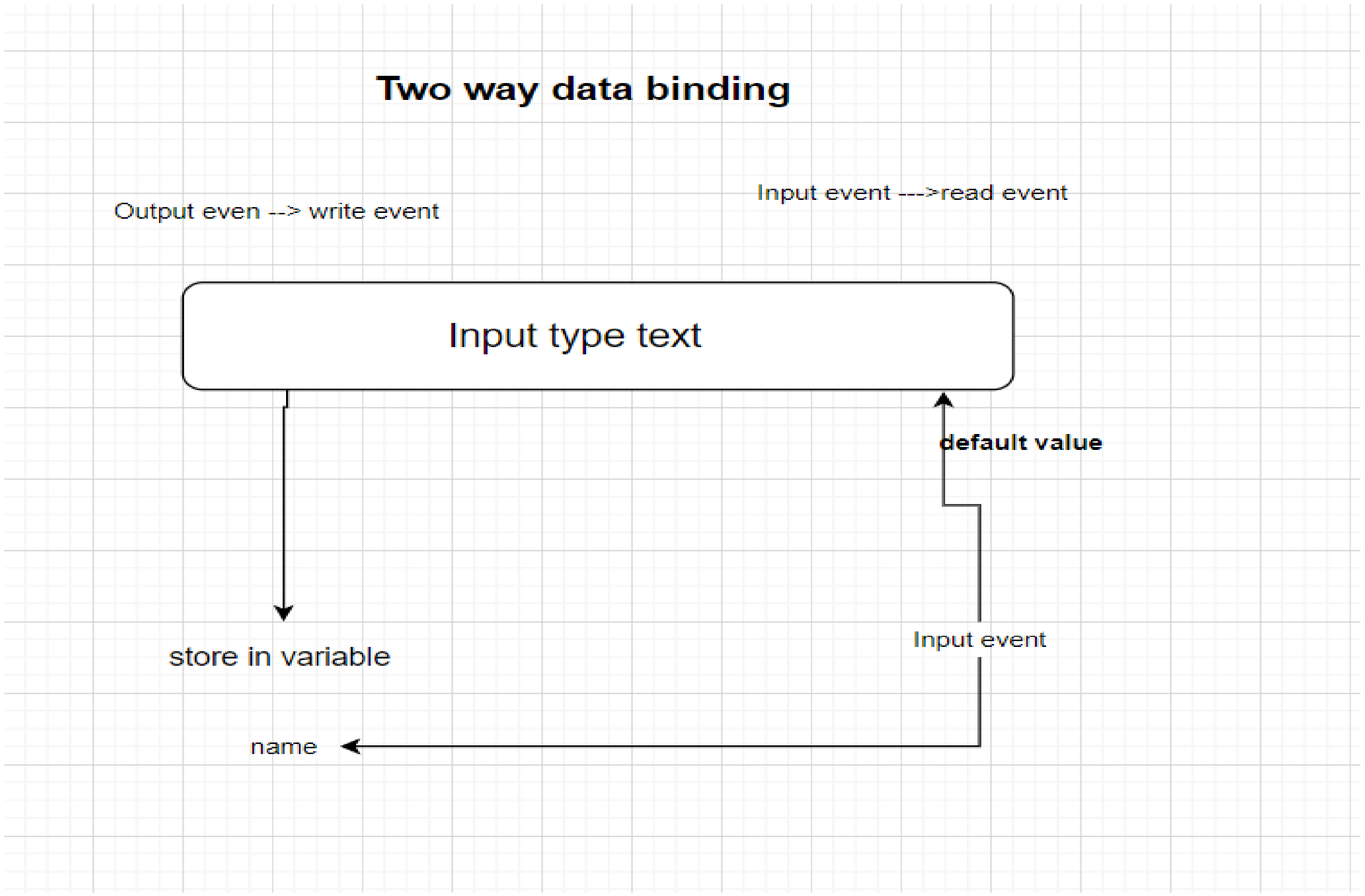
Two way data binding

Two-way data binding

Allows to have the data flow both ways (read and write event).

And it is a continuous synchronization of a data from view to the component and component to the view.

Two way data binding



Two way data binding

In two way data binding we will use Ngmodel Which creates a FormControl instance and binds it to a form control element.

First we will add the Forms module in app.module.ts in import section.

```
import { FormsModule } from '@angular/forms’;

imports: [
    BrowserModule,
    AppRoutingModule,
    FormsModule
],
```

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Two way data binding

Lets have a demo

Creates a simple form using two way data binding which contains :

- ✓ Name
- ✓ Email
- ✓ Salary
- ✓ And then calculate the annual salary.

Two way data binding

To use two way data binding you must use [(ngModle)] which means read and write in the same time.

```
<input type="text"  placeholder="your name"
[(ngModel)]="name" />

<input type="text"  placeholder="your email"
[(ngModel)]="email" />

<input type="number"  placeholder="your Salary"
[(ngModel)]="salary" />
```

Two way data binding

And this code to read the value from typescript file .

```
<h1>Current name is : {{name}}</h1>
<h1>Current email is : {{email}}</h1>
<h1>Current salary is : {{salary}}</h1>
<h1>Current annual salary is : {{salary*12}}</h1>
```

Two way data binding

In app.component.ts

```
export class AppComponent {
    title = 'TrainingWebSite';
    name: string = '';
    email: string = '';
    salary: number = 0;
}
```

Two way data binding

In app.component.css

```
input {
    display:  block;
    width:  300px;
    padding:  10px;
    font-size:  1em;
    margin-top:  10px;
}
```

Two way data binding

To do the logic.

In app.component.html

```
<input type="text"placeholder="your name"  [(ngModel)]=
"name"  (ngModelChange)="handlechange($event)" />
```

Two way data binding

In app.component.ts

```
handlechange(ev: any)
 {
     console.log(ev.length);
     if (ev.length > 15) {
         this.name = this.name.substr(0, 15);
         alert("you are writing along name  ")
     }
     if (ev.length > 20)
         alert("Stop writing !!")
 }
```

Two way data binding

Exercise:

Add button called clear to clear all data in html page use click event.

Two way data binding

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Exercise Solution:

In app.component.html

```
<button (click) ="clearValue()"> Clear </button>
```

In app.component.ts

```
 clearValue(){
   this.name = '';
   this.email = '';
   this.salary = 0;
}
```

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Chapter 2

Create module in angular

Module in Angular refers **to a place where you can group the components, directives, pipes, and services**, which are related to the application.

Create module in angular

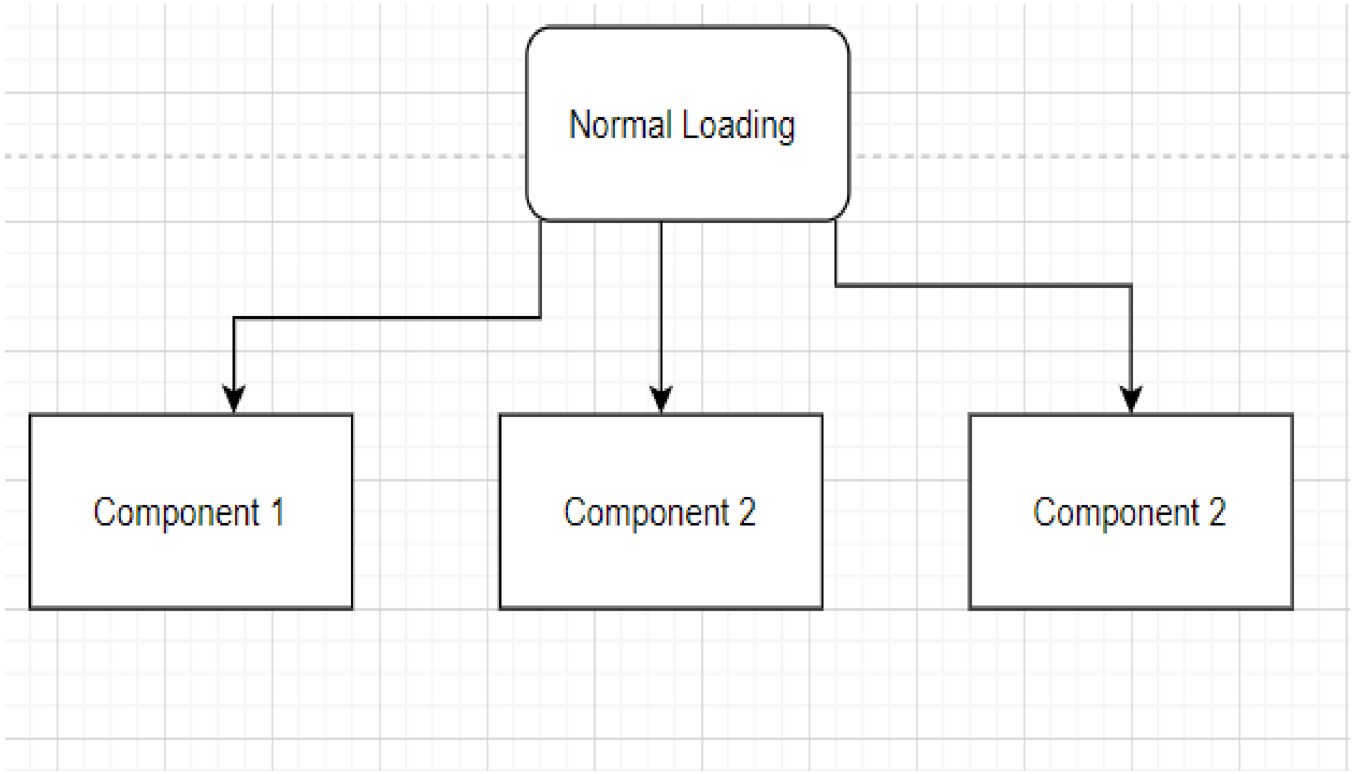
Before creating a new module, we will talk about the difference between **normal Loading** and **lazy loading.**

Create module in angular

Normal loading

More than one component, but to call these components it must be in the same module. Like navbar and footer.

Create module in angular



Create module in angular

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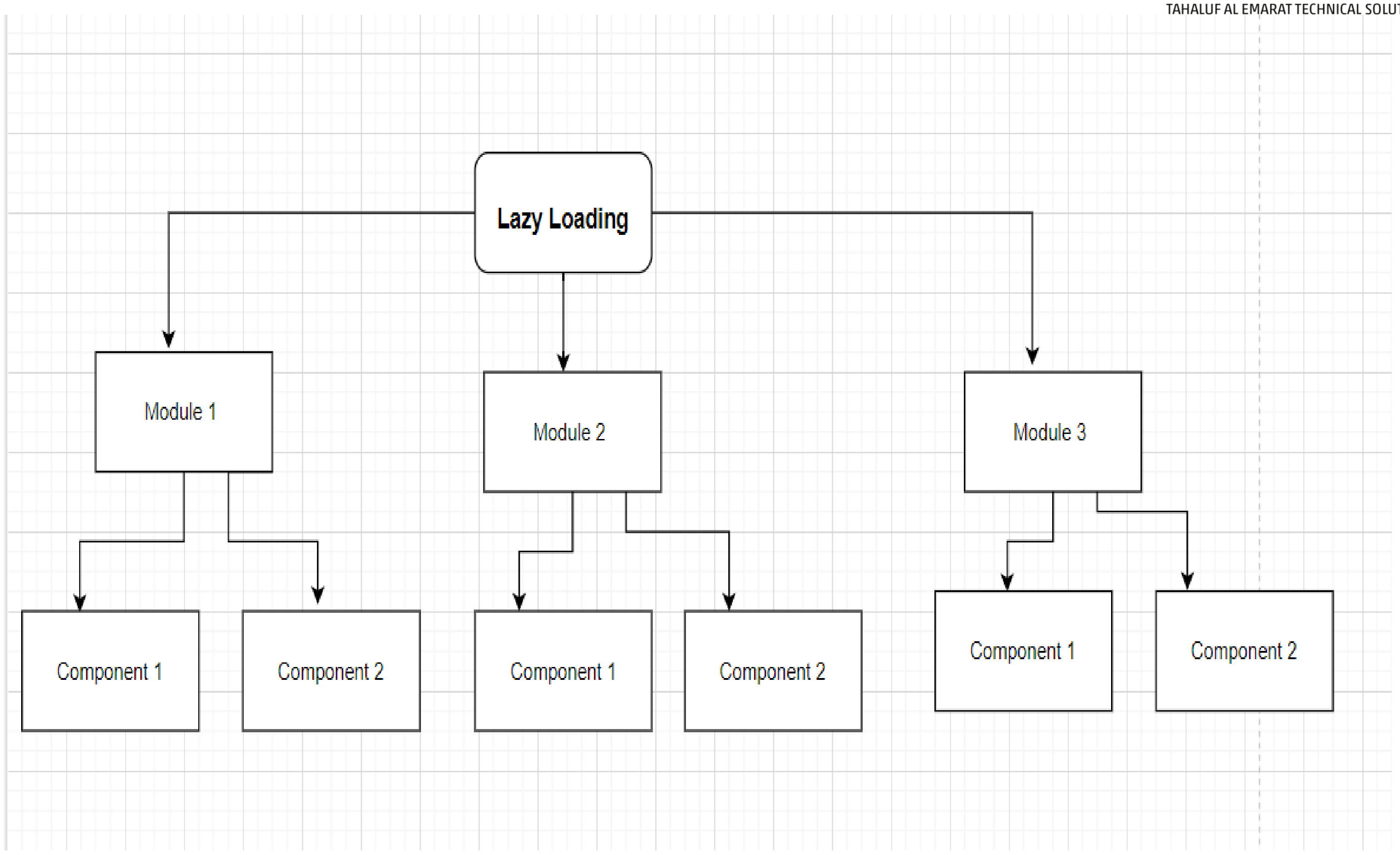
Lazy loading

It means more than one module and each module have their components and you can load the component when you need.

Create module in angular



Create module in angular

Use this command to generate new module.

ng generate module module _name **- -routing**

OR

ng g m module _name **- -routing**

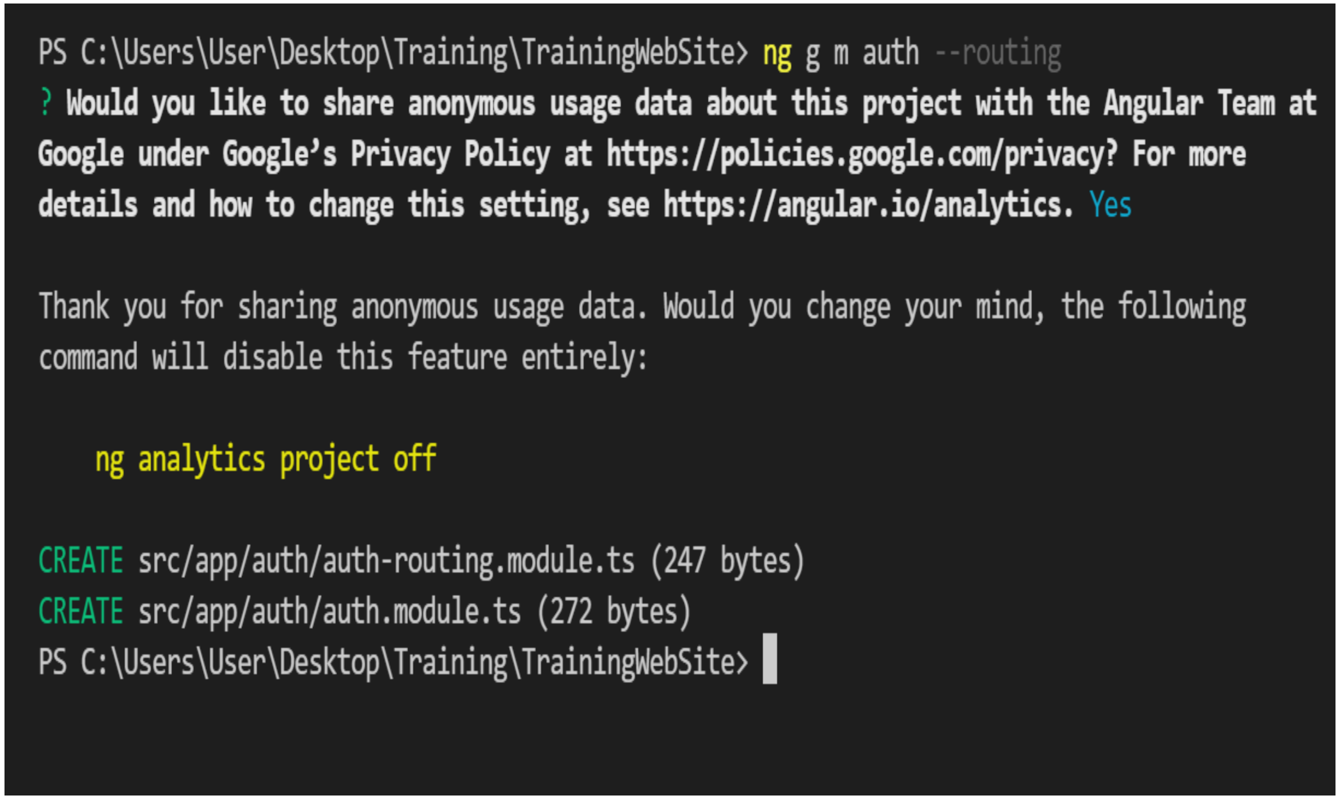
Generate components for a specific module

In our project **(TraningWebSite)**, create a new module called **auth** and for this module generate two components:

login and **register**.

Generate components for a specific module

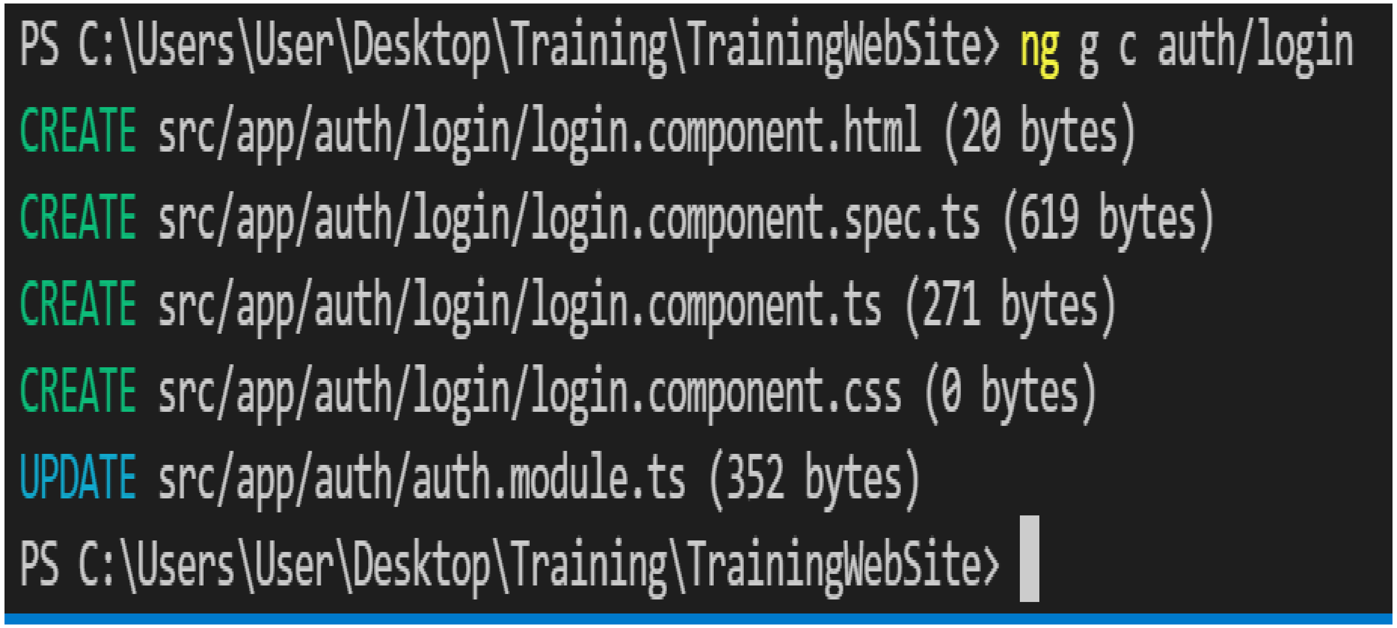
Create a new module called auth.



```
PS C:\Users\User\Desktop\Training\TrainingWebSite> ng g m auth --routing
? Would you like to share anonymous usage data about this project with the Angular Team at
Google under Google's Privacy Policy at https://policies.google.com/privacy? For more
details and how to change this setting, see https://angular.io/analytics. Yes

Thank you for sharing anonymous usage data. Would you change your mind, the following
command will disable this feature entirely:

    ng analytics project off

CREATE src/app/auth/auth-routing.module.ts (247 bytes)
CREATE src/app/auth/auth.module.ts (272 bytes)
PS C:\Users\User\Desktop\Training\TrainingWebSite>
```

Generate components for a specific module

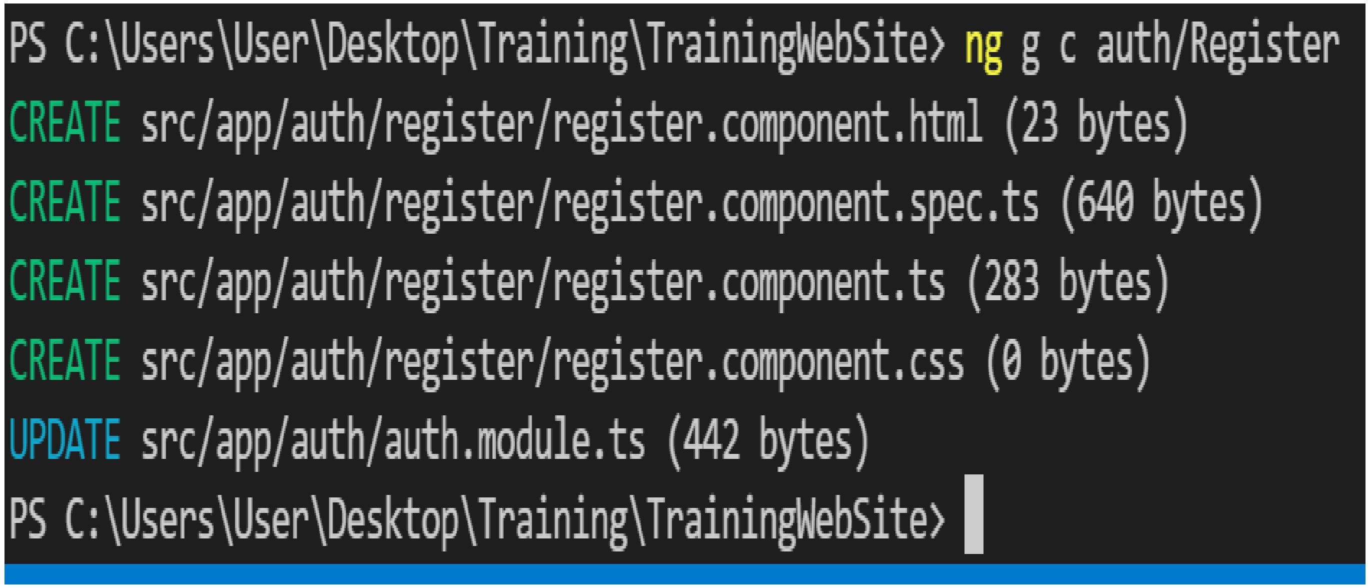
Create login component in auth module. To determents these components for this module you must write moduleName/componentsName.



```
PS C:\Users\User\Desktop\Training\TrainingWebSite> ng g c auth/login
CREATE src/app/auth/login/login.component.html (20 bytes)
CREATE src/app/auth/login/login.component.spec.ts (619 bytes)
CREATE src/app/auth/login/login.component.ts (271 bytes)
CREATE src/app/auth/login/login.component.css (0 bytes)
UPDATE src/app/auth/auth.module.ts (352 bytes)
PS C:\Users\User\Desktop\Training\TrainingWebSite>
```

Generate components for a specific module

Create a register component.



```
PS C:\Users\User\Desktop\Training\TrainingWebSite> ng g c auth/Register
CREATE src/app/auth/register/register.component.html (23 bytes)
CREATE src/app/auth/register/register.component.spec.ts (640 bytes)
CREATE src/app/auth/register/register.component.ts (283 bytes)
CREATE src/app/auth/register/register.component.css (0 bytes)
UPDATE src/app/auth/auth.module.ts (442 bytes)
PS C:\Users\User\Desktop\Training\TrainingWebSite>
```