



Two way binding



The diagram shows a central green circle with a white double-headed arrow, representing two-way binding. This circle is enclosed in a dashed blue circle. The entire graphic is set against a light blue background with faint icons of a cloud, a target, and various electronic devices like a smartphone and a tablet.

- Allows the app to share data between a component class and template
- Sets a specific element property
- Listens to an element change event
- `[()]` represents two-way binding and is called 'banana in a box' notation
- Combines the brackets of property binding, `[]`, with the parentheses of event binding, `()`

1:14 / 2:50



The diagram shows a central green circle with a white double-headed arrow, representing two-way binding. This circle is enclosed in a dashed blue circle. The entire graphic is set against a light blue background with faint icons of a cloud, a target, and various electronic devices like a smartphone and a tablet.

- Example:

Template:
`<input [(ngModel)]=“fName” type=“text” />`

Component:
`public fName=“”`

Benefits of

Convenient in comparison to separate property and event binding

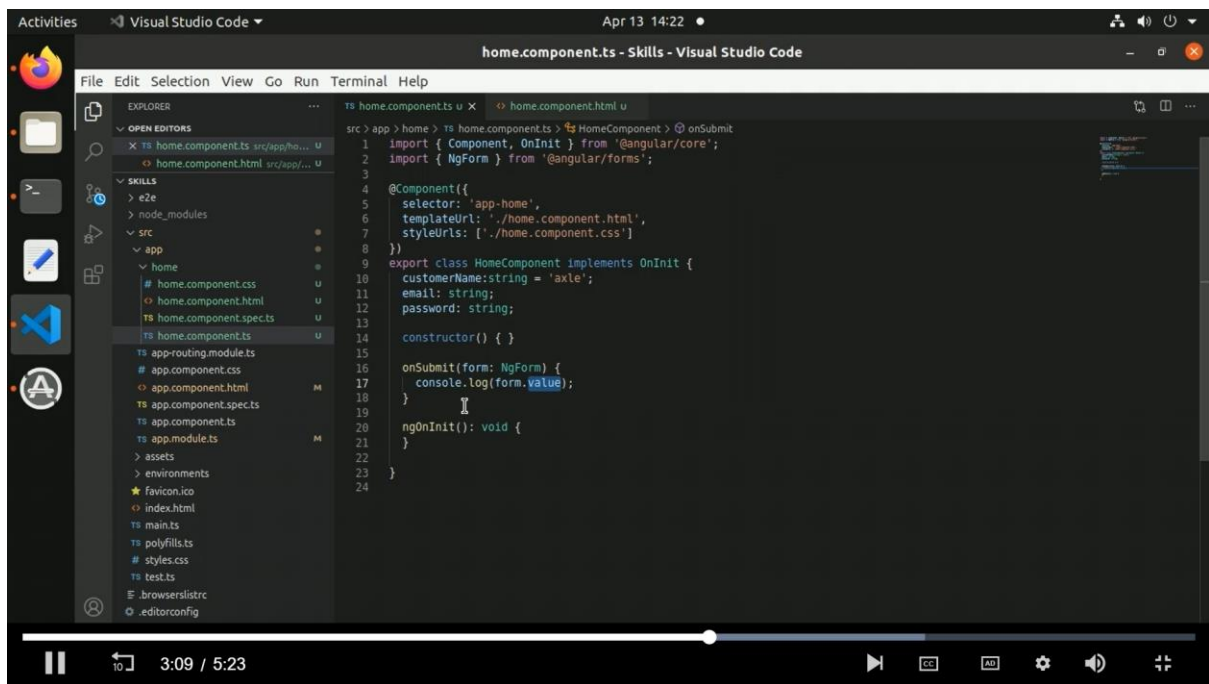
Allows us to display a property and update it when the user makes changes

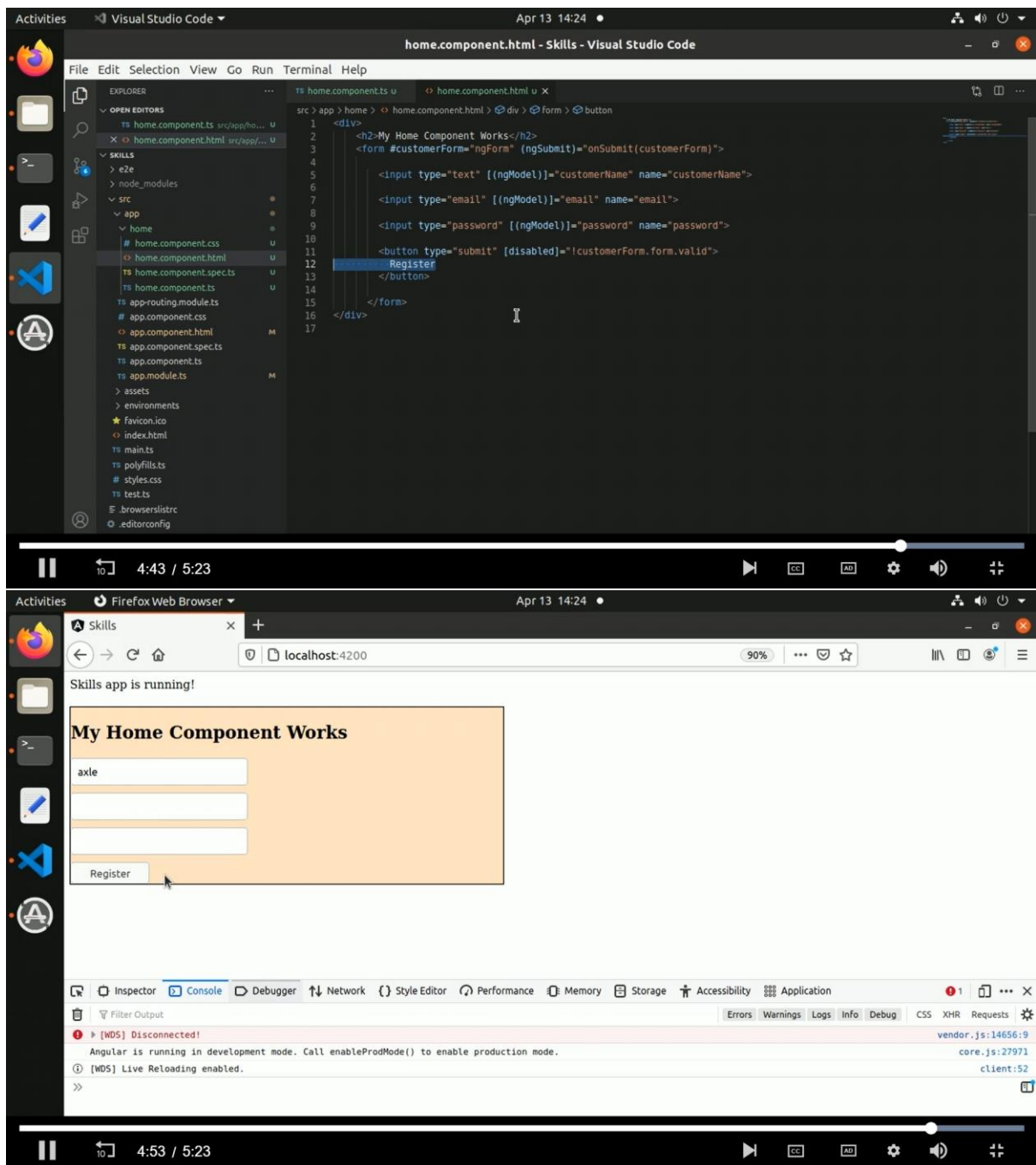
Provides synchronization between the model and view

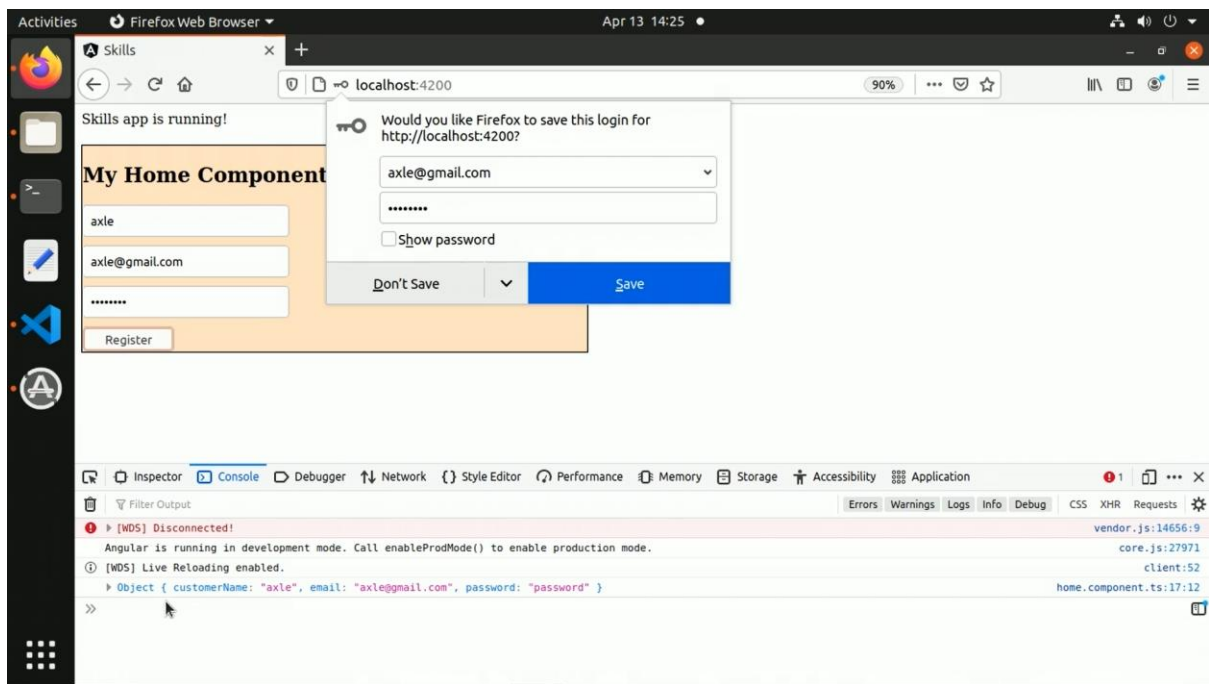
2:42 / 2:50

Handling form Events

```
src > app > Ts app.module.ts > AppModule
1  import { NgModule } from '@angular/core';
2  import { BrowserModule } from '@angular/platform-browser';
3  import { FormsModule } from '@angular/forms';
4  import { AppRoutingModule } from './app-routing.module';
5  import { AppComponent } from './app.component';
6  import { HomeComponent } from './home/home.component';
7
8  @NgModule({
9    declarations: [
10     AppComponent,
11     HomeComponent
12   ],
13   imports: [
14     BrowserModule,
15     AppRoutingModule,
16     FormsModule
17   ],
18   providers: [],
19   bootstrap: [AppComponent]
20 })
21 export class AppModule { }
22
```





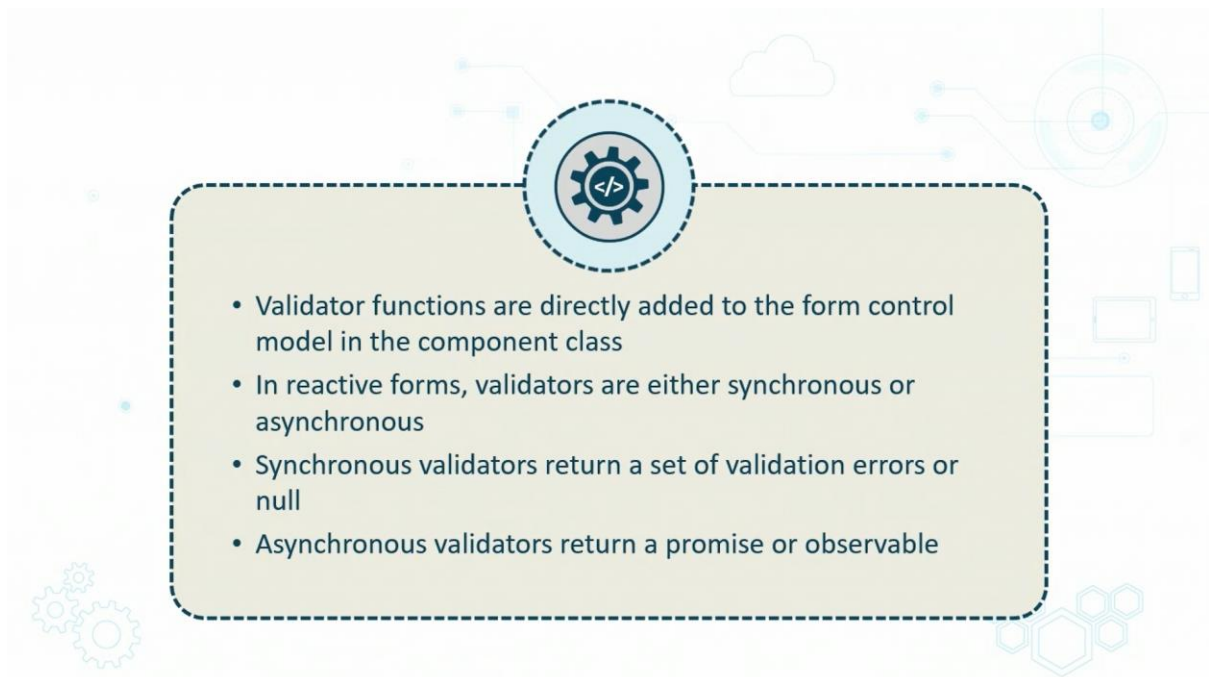


Validate forms for Errors.

Validations Inputs in Template-driven forms



Validating inputs in Reactive Forms



Installing server packages for testing

Json server for API Calls

Npm install Json-Server

Package.json file changes

The screenshot shows the Visual Studio Code interface with the 'package.json' file open. The file contains the following JSON structure:

```
{
  "name": "Skills",
  "version": "0.0.0",
  "scripts": {
    "ng": "ng",
    "start": "ng serve",
    "build": "ng build",
    "test": "ng test",
    "lint": "ng lint",
    "e2e": "ng e2e",
    "Server": "json-server --watch ./src/app/data/db.json"
  },
  "private": true,
  "dependencies": {
    "@angular/animations": "~11.2.6",
    "@angular/common": "~11.2.6",
    "@angular/compiler": "~11.2.6",
    "@angular/core": "~11.2.6",
    "@angular/forms": "~11.2.6",
    "@angular/platform-browser": "~11.2.6",
    "@angular/platform-browser-dynamic": "~11.2.6",
    "@angular/router": "~11.2.6",
    "json-server": "^0.16.3",
    "rxjs": "~6.6.0",
    "tslib": "^2.0.0",
    "zone.js": "~0.11.3"
  },
  "devDependencies": {
    "@angular-devkit/build-angular": "~0.1102.5",
    "@angular/cli": "~11.2.5",
    "@angular/compiler-cli": "~11.2.6",
    "@types/jasmine": "~3.6.0"
  }
}
```

The Explorer sidebar on the left shows the project structure, including files like 'app.component.html', 'app.component.spec.ts', 'app.component.ts', 'app.module.ts', 'assets', 'environments', 'favicon.ico', 'index.html', 'main.ts', 'polyfills.ts', 'styles.css', 'test.ts', '.browserslistrc', '.editorconfig', '.gitignore', 'angular.json', 'karma.conf.js', 'package-lock.json', 'package.json', 'README.md', 'tsconfig.app.json', 'tsconfig.json', 'tsconfig.spec.json', and 'tslint.json'.

Db.json

The screenshot shows the Visual Studio Code interface with the 'db.json' file open in the 'src/app/data' directory. The file contains the following JSON structure:

```
{
  "customers": []
}
```

The Explorer sidebar on the left shows the project structure, including files like 'home.component.css', 'home.component.html', 'home.component.spec.ts', 'home.component.ts', 'app-routing.module.ts', 'app.component.css', 'app.component.html', 'app.component.spec.ts', 'app.component.ts', 'app.module.ts', 'assets', 'environments', 'favicon.ico', 'index.html', 'main.ts', and 'polyfills.ts'.

Npm run server

```
Activities Terminal Apr 14 12:35 axle@pc0481: ~/Documents/Skills
axle@pc0481: ~/Documents/Skills
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules/webpack-dev-server/node_modules/fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"linux","arch":"x64"})
+ json-server@0.16.3
updated 1 package and audited 1721 packages in 17.385s
95 packages are looking for funding
run 'npm fund' for details
found 0 vulnerabilities
axle@pc0481:~/Documents/Skills$ npm run Server
> skills@0.0.0 Server /home/axle/Documents/Skills
> json-server --watch ./src/app/data/db.json

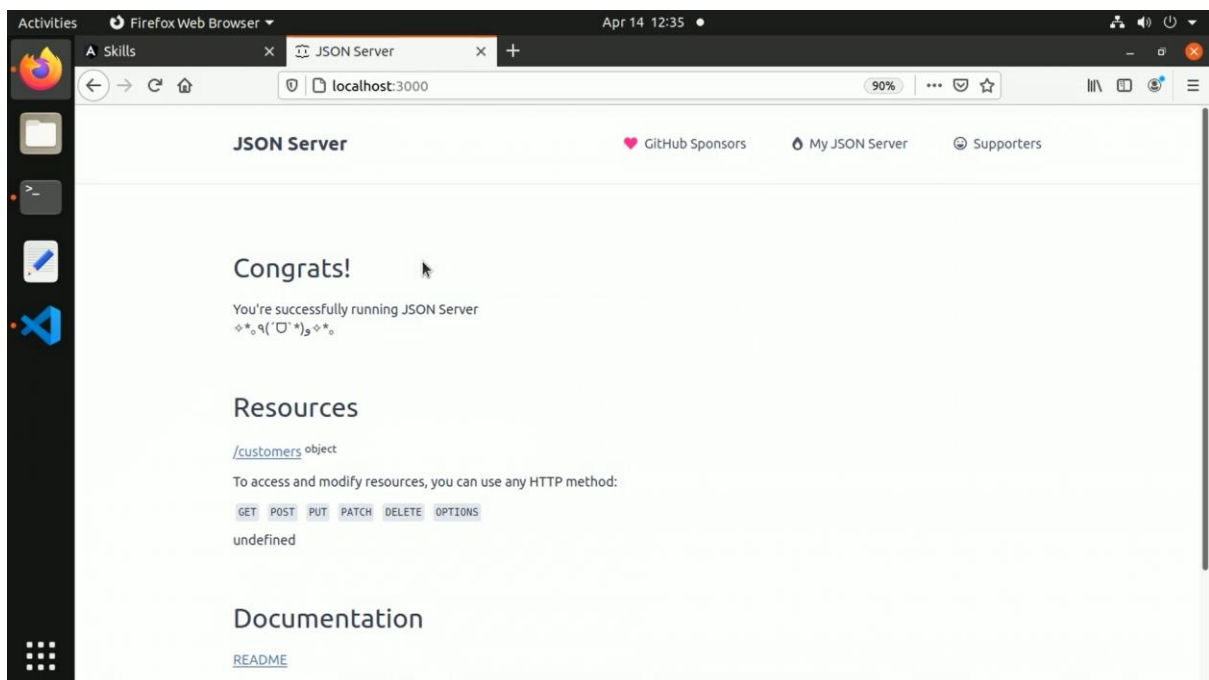
\{^_^)/ hi!

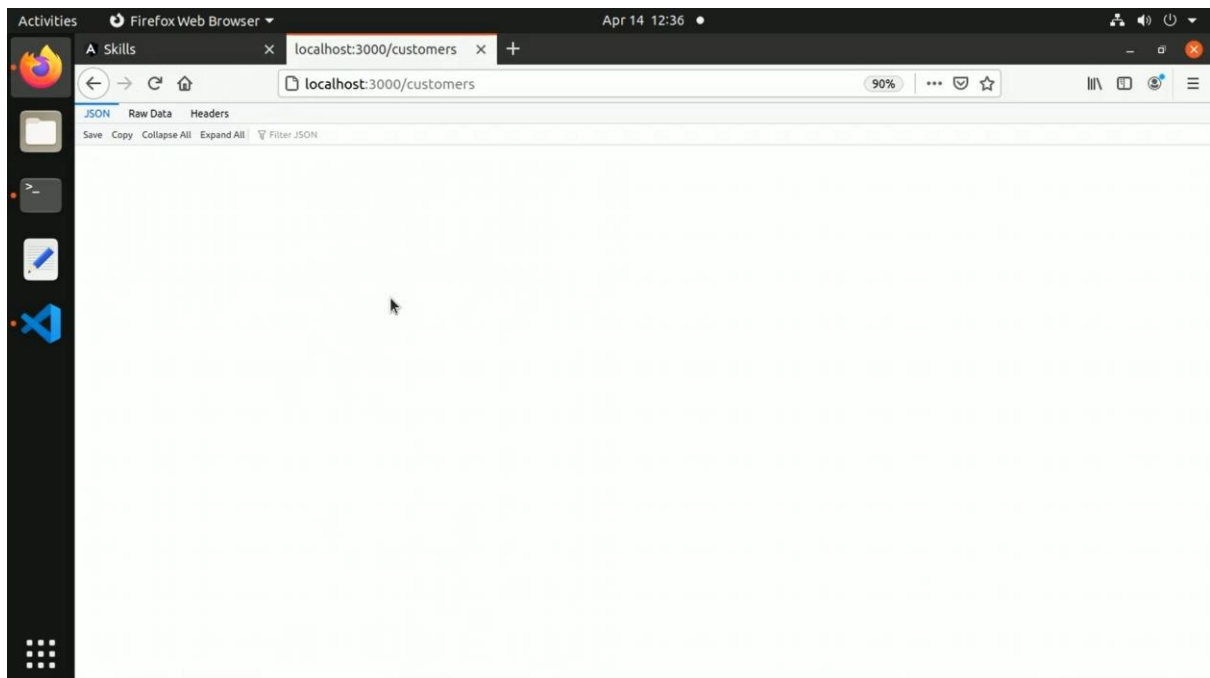
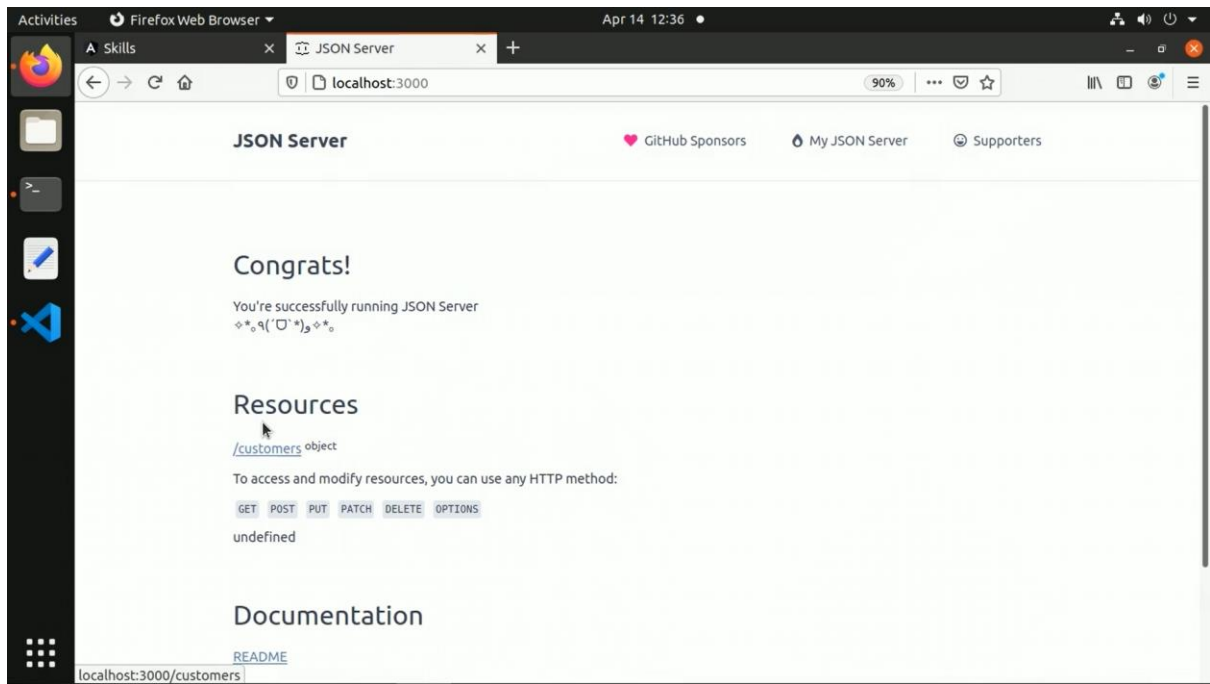
Loading ./src/app/data/db.json
Done

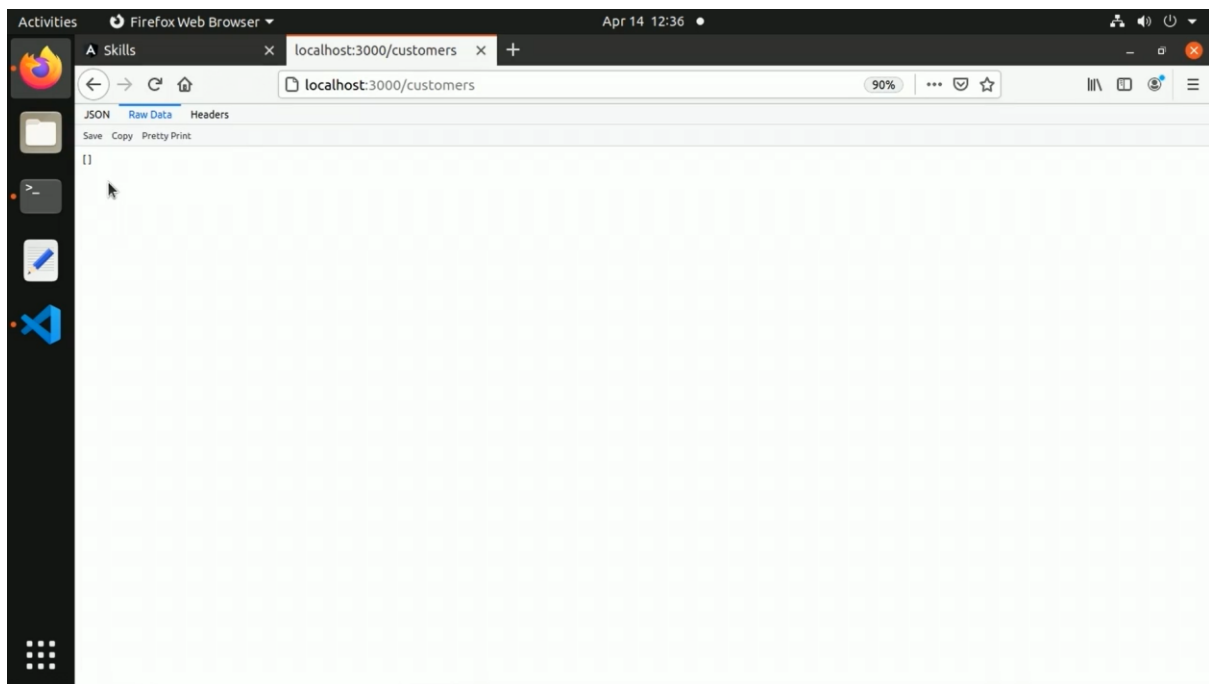
Resources
http://localhost:3000/customers

Home
http://localhost:3000

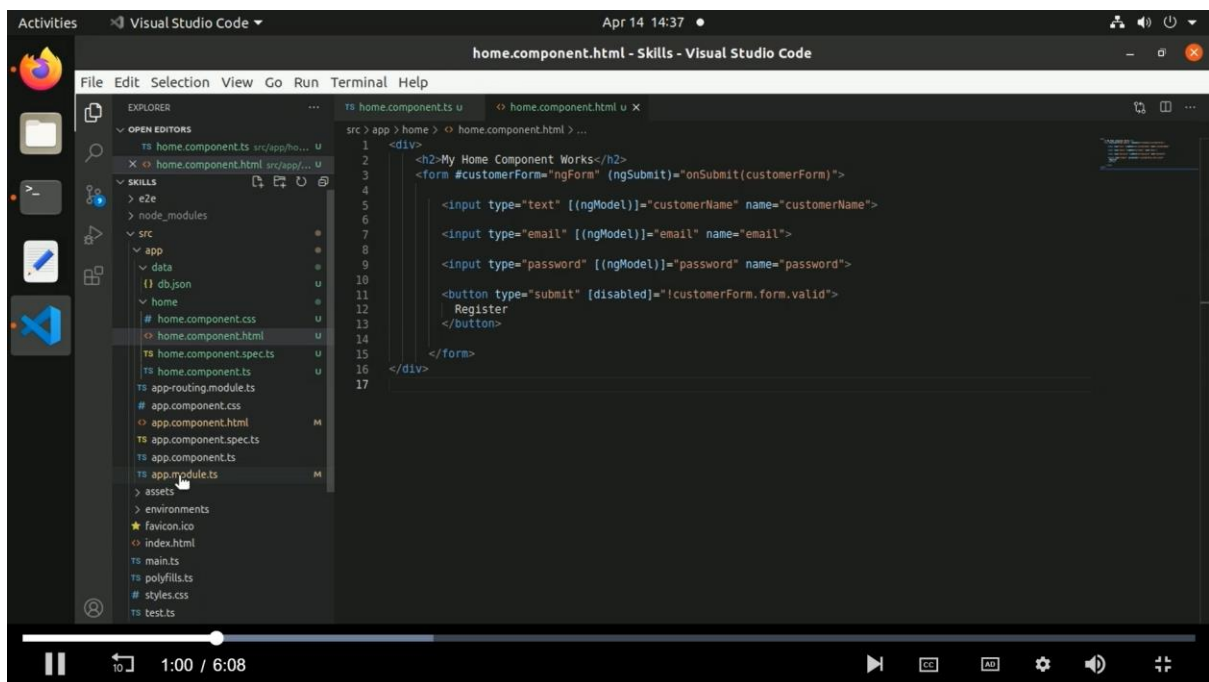
Type s + enter at any time to create a snapshot of the database
Matching...
```







Implementing Http Post Request



Form and HttpClient module

Activities Visual Studio Code Apr 14 14:38

app.module.ts - Skills - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER

OPEN EDITORS

TS home.component.ts src/app/home.component.ts
home.component.html src/app/home.component.html
X TS app.module.ts src/app/app.module.ts

SKILLS

e2e
node_modules
src
app
data
db.json
home
home.component.css
home.component.html
home.component.spec.ts
app-routing.module.ts
app.component.css
app.component.html
app.component.spec.ts
app.component.ts
app.module.ts

assets
environments
favicon.ico
index.html
main.ts
polyfills.ts
styles.css

```
src > app > TS app.module.ts > AppModule  
1 import { NgModule } from '@angular/core';  
2 import { BrowserModule } from '@angular/platform-browser';  
3 import { FormsModule } from '@angular/forms';  
4 import { AppRoutingModule } from './app-routing.module';  
5 import { AppComponent } from './app.component';  
6 import { HomeComponent } from './home/home.component';  
7 import { HttpClientModule } from '@angular/common/http';  
8  
9 @NgModule({  
10   declarations: [  
11     AppComponent,  
12     HomeComponent  
13   ] ,  
14   imports: [  
15     BrowserModule,  
16     AppRoutingModule,  
17     FormsModule,  
18     HttpClientModule  
19   ] ,  
20   providers: [],  
21   bootstrap: [AppComponent]  
22 })  
23 export class AppModule { }  
24
```

1:39 / 6:08

Activities Visual Studio Code Apr 14 14:39

home.component.ts - Skills - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER

OPEN EDITORS 1 UNSAVED

TS home.component.ts src/app/home.component.ts
home.component.html src/app/home.component.html

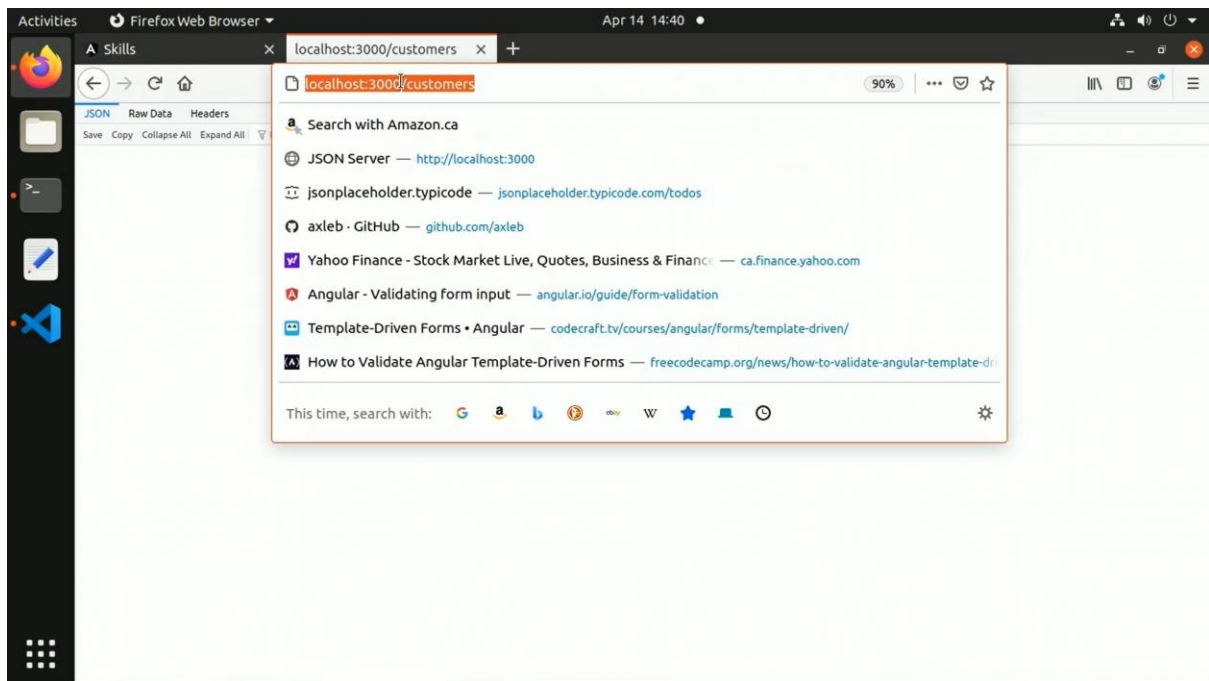
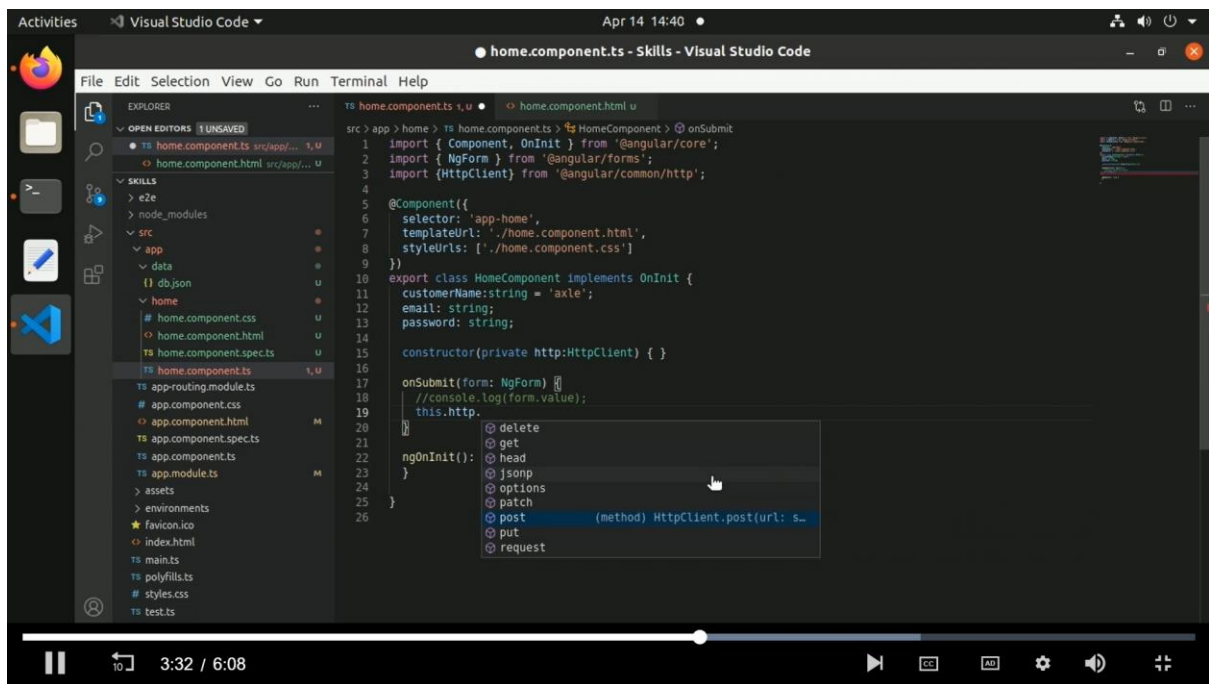
SKILLS

e2e
node_modules
src
app
data
db.json
home
home.component.css
home.component.html
home.component.spec.ts
app-routing.module.ts
app.component.css
app.component.html
app.component.spec.ts
app.component.ts
app.module.ts

assets
environments
favicon.ico
index.html
main.ts
polyfills.ts
styles.css
test.ts

```
src > app > home > TS home.component.ts > HomeComponent > constructor  
1 import { Component, OnInit } from '@angular/core';  
2 import { NgForm } from '@angular/forms';  
3 import { HttpClient } from '@angular/common/http';  
4  
5 @Component({  
6   selector: 'app-home',  
7   templateUrl: './home.component.html',  
8   styleUrls: ['./home.component.css']  
9 })  
10 export class HomeComponent implements OnInit {  
11   customerName:string = 'axle';  
12   email: string;  
13   password: string;  
14  
15   constructor(private http:HttpClient) { }  
16  
17   onSubmit(form: NgForm) {  
18     console.log(form.value);  
19   }  
20  
21   ngOnInit(): void {  
22   }  
23  
24  
25
```

2:49 / 6:08



Activities Visual Studio Code Apr 14 14:41

home.component.ts - Skills - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER

- OPEN EDITORS (1 UNSAVED)
- TS home.component.ts src/app/home.component.ts
- home.component.html src/app/home.component.html

SKILLS

- e2e
- node_modules
- src
 - app
 - data
 - db.json
 - home
 - home.component.css
 - home.component.html
 - home.component.spec.ts
 - home.component.ts
 - app-routing.module.ts
 - app.component.css
 - app.component.html
 - app.component.spec.ts
 - app.component.ts
 - app.module.ts
 - assets
 - environments
 - favicon.ico
 - index.html
 - main.ts
 - polyfills.ts
 - styles.css
 - test.ts
 - browserlistrc

OUTLINE

MEETING: 58 / 6:08

```
src > app > home > TS home.component.ts > HomeComponent > onSubmit
1 import { Component, OnInit } from '@angular/core';
2 import { NgForm } from '@angular/forms';
3 import { HttpClient } from '@angular/common/http';
4
5 @Component({
6   selector: 'app-home',
7   templateUrl: './home.component.html',
8   styleUrls: ['./home.component.css']
9 })
10 export class HomeComponent implements OnInit {
11   customerName:string = 'axle';
12   email: string;
13   password: string;
14
15   constructor(private http:HttpClient) { }
16
17   onSubmit(form: NgForm) {
18     //console.log(form.value);
19     this.http.post('http://localhost:3000/customers', form.value)
20   }
21
22   ngOnInit(): void {
23   }
24
25 }
26
```

Activities Visual Studio Code Apr 14 14:42

home.component.ts - Skills - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER

- OPEN EDITORS
- TS home.component.ts src/app/home.component.ts
- home.component.html src/app/home.component.html

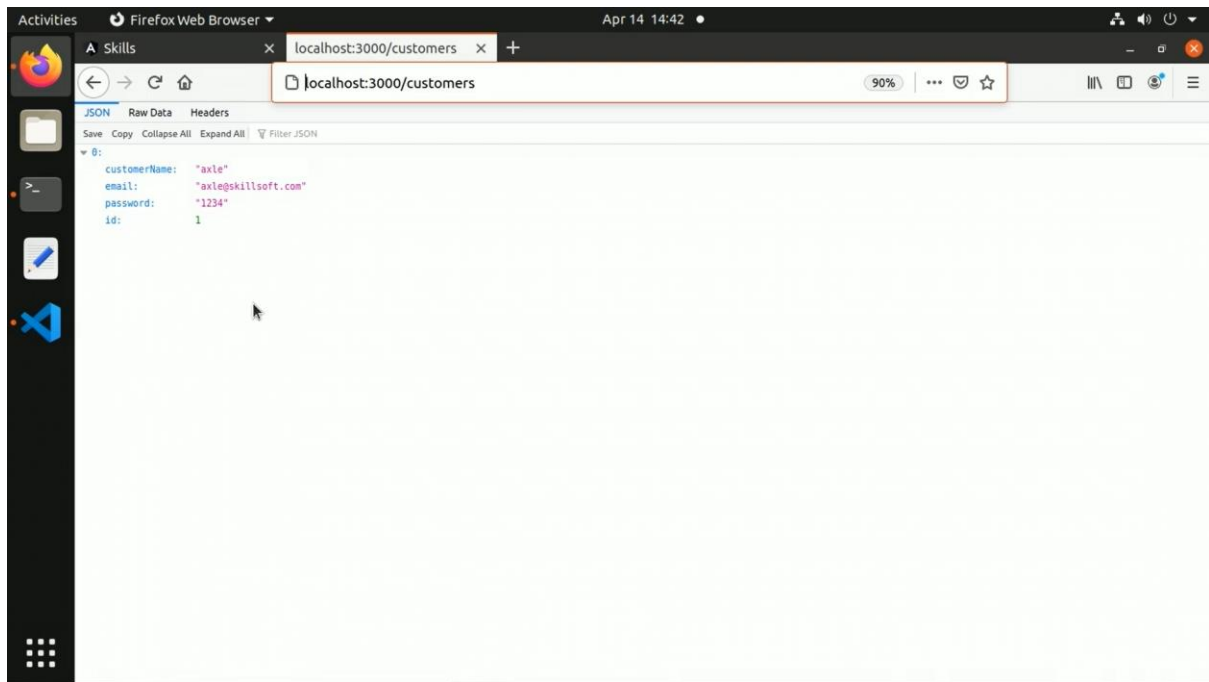
SKILLS

- e2e
- node_modules
- src
 - app
 - data
 - db.json
 - home
 - home.component.css
 - home.component.html
 - home.component.spec.ts
 - home.component.ts
 - app-routing.module.ts
 - app.component.css
 - app.component.html
 - app.component.spec.ts
 - app.component.ts
 - app.module.ts
 - assets
 - environments
 - favicon.ico
 - index.html
 - main.ts
 - polyfills.ts
 - styles.css
 - test.ts
 - browserlistrc

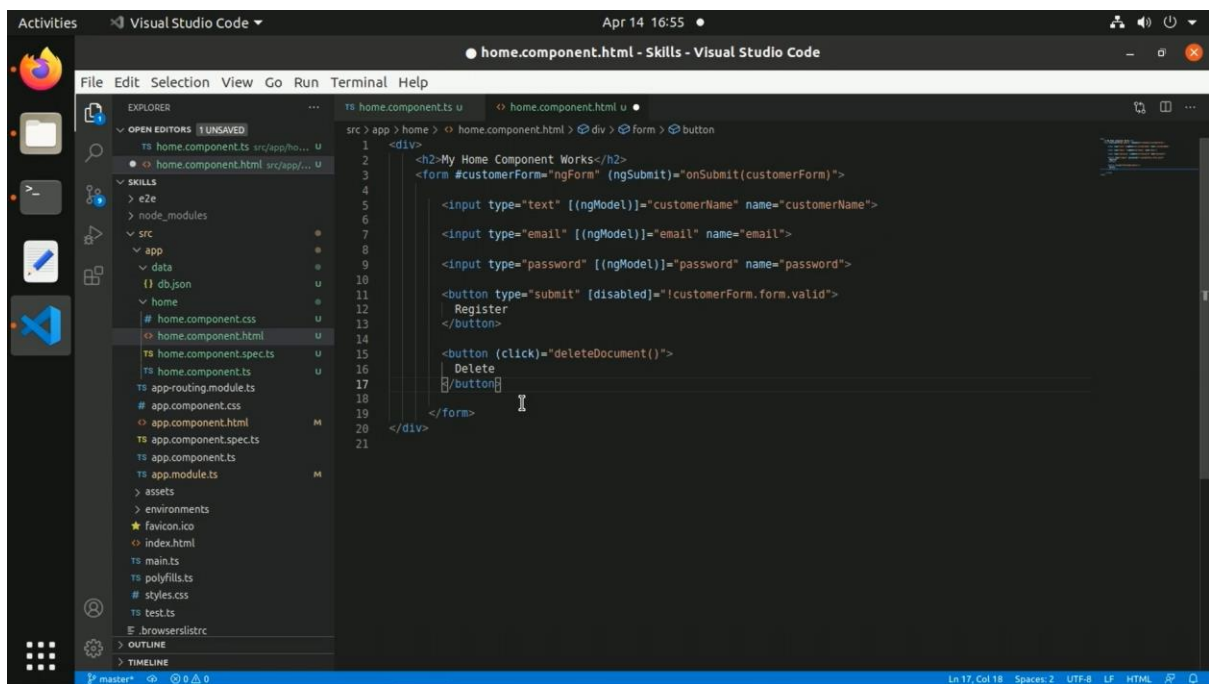
OUTLINE

MEETING: 58 / 6:08

```
src > app > home > TS home.component.ts > HomeComponent > onSubscribe
1 import { Component, OnInit } from '@angular/core';
2 import { NgForm } from '@angular/forms';
3 import { HttpClient } from '@angular/common/http';
4
5 @Component({
6   selector: 'app-home',
7   templateUrl: './home.component.html',
8   styleUrls: ['./home.component.css']
9 })
10 export class HomeComponent implements OnInit {
11   customerName:string = 'axle';
12   email: string;
13   password: string;
14
15   constructor(private http:HttpClient) { }
16
17   onSubscribe(form: NgForm) {
18     //console.log(form.value);
19     this.http.post('http://localhost:3000/customers', form.value).subscribe();
20   }
21
22   ngOnInit(): void {
23   }
24
25 }
26
```



Implementing Delete Request



Activities Visual Studio Code Apr 14 16:56 home.component.ts - Skills - Visual Studio Code

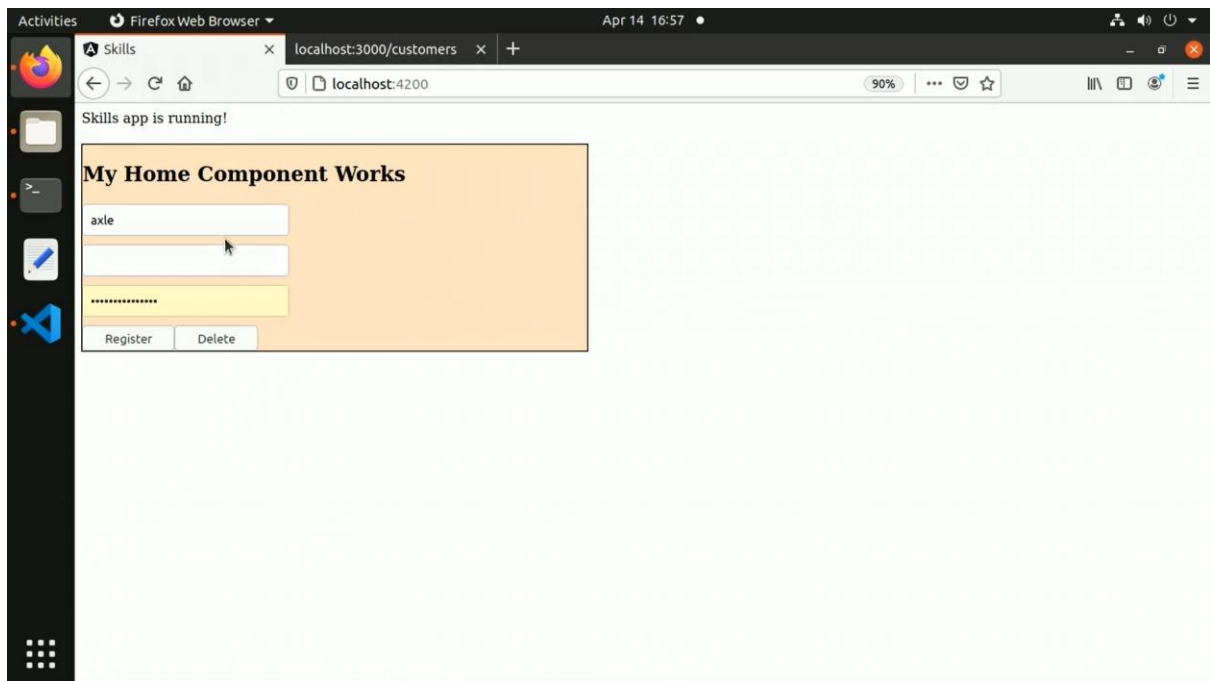
File Edit Selection View Go Run Terminal Help

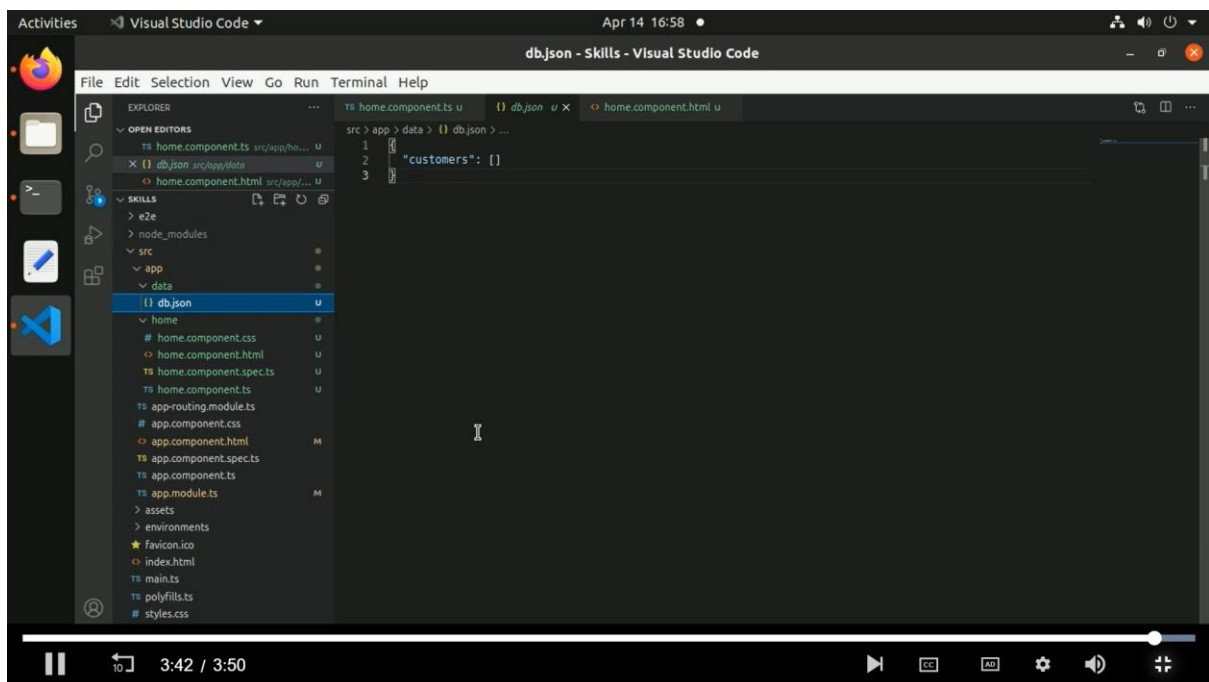
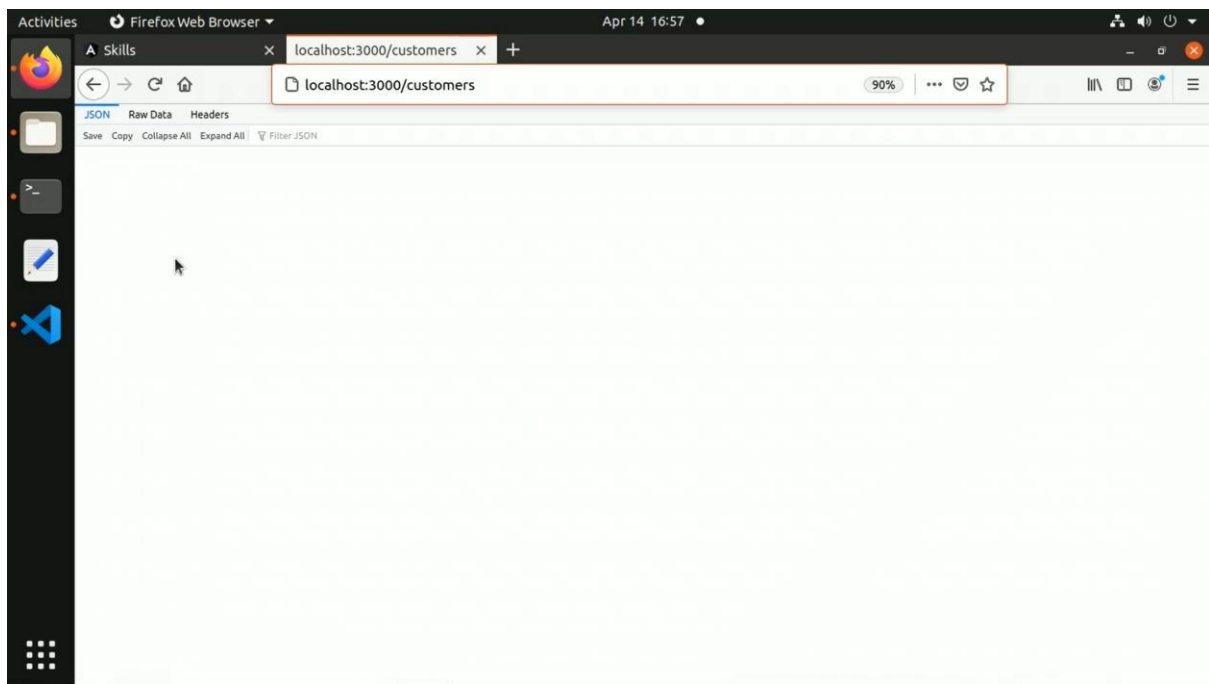
EXPLORER

- OPEN EDITORS
 - TS home.component.ts src/app/home.component.ts
 - home.component.html src/app/home.component.html
- SKILLS
 - e2e
 - node_modules
 - src
 - app
 - data
 - db.json
 - home
 - home.component.css
 - home.component.html
 - home.component.spec.ts
 - home.component.ts
 - app-routing.module.ts
 - app.component.css
 - app.component.html
 - app.component.spec.ts
 - app.module.ts
 - assets
 - environments
 - favicon.ico
 - index.html
 - main.ts
 - polyfills.ts
 - styles.css
 - test.ts
 - browserlistrc
 - OUTLINE
 - TIMELINE

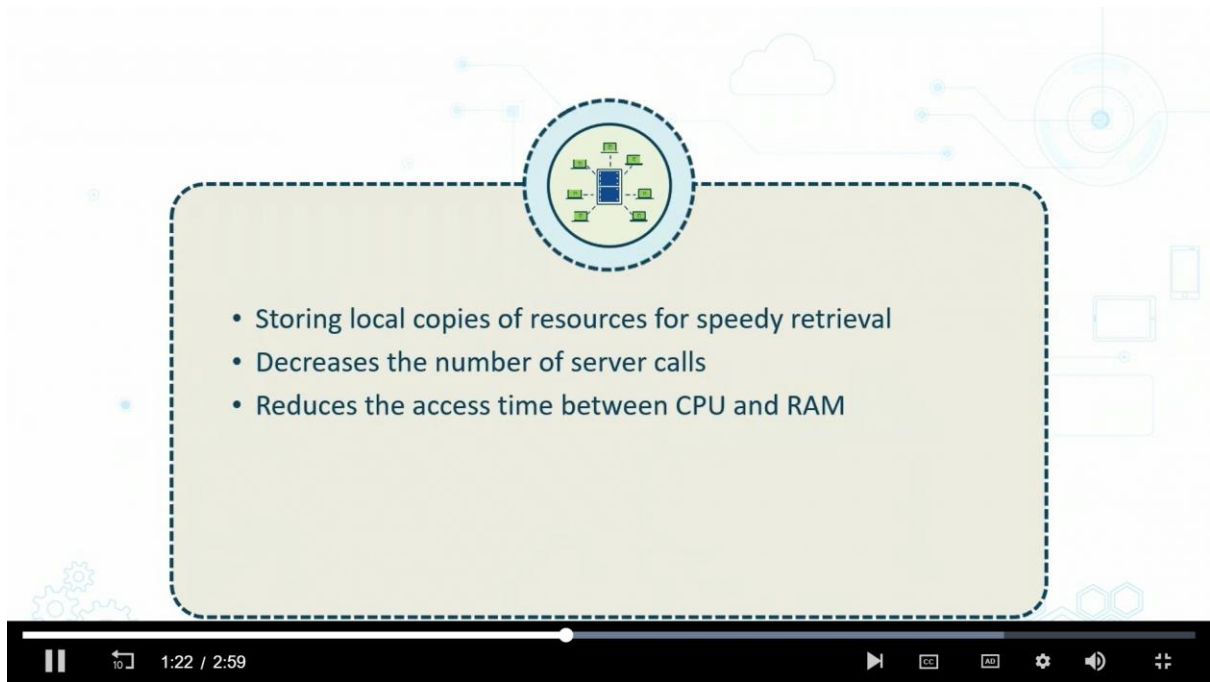
```
src > app > home > TS home.component.ts > HomeComponent > deleteDocument
1 import { Component, OnInit } from '@angular/core';
2 import { NgForm } from '@angular/forms';
3 import { HttpClient } from '@angular/common/http';
4
5 @Component({
6   selector: 'app-home',
7   templateUrl: './home.component.html',
8   styleUrls: ['./home.component.css']
9 })
10 export class HomeComponent implements OnInit {
11   customerName:string = 'axle';
12   email: string;
13   password: string;
14
15   constructor(private http:HttpClient) { }
16
17   onSubmit(form: NgForm) {
18     this.http.post("http://localhost:3000/customers", form.value).subscribe();
19   }
20
21   deleteDocument() {
22     this.http.delete("http://localhost:3000/customers/1").subscribe();
23   }
24
25   ngOnInit(): void {
26   }
27
28 }
```

Ln 22, Col 71 Spaces: 2 UTF-8 LF TypeScript 4.2.3

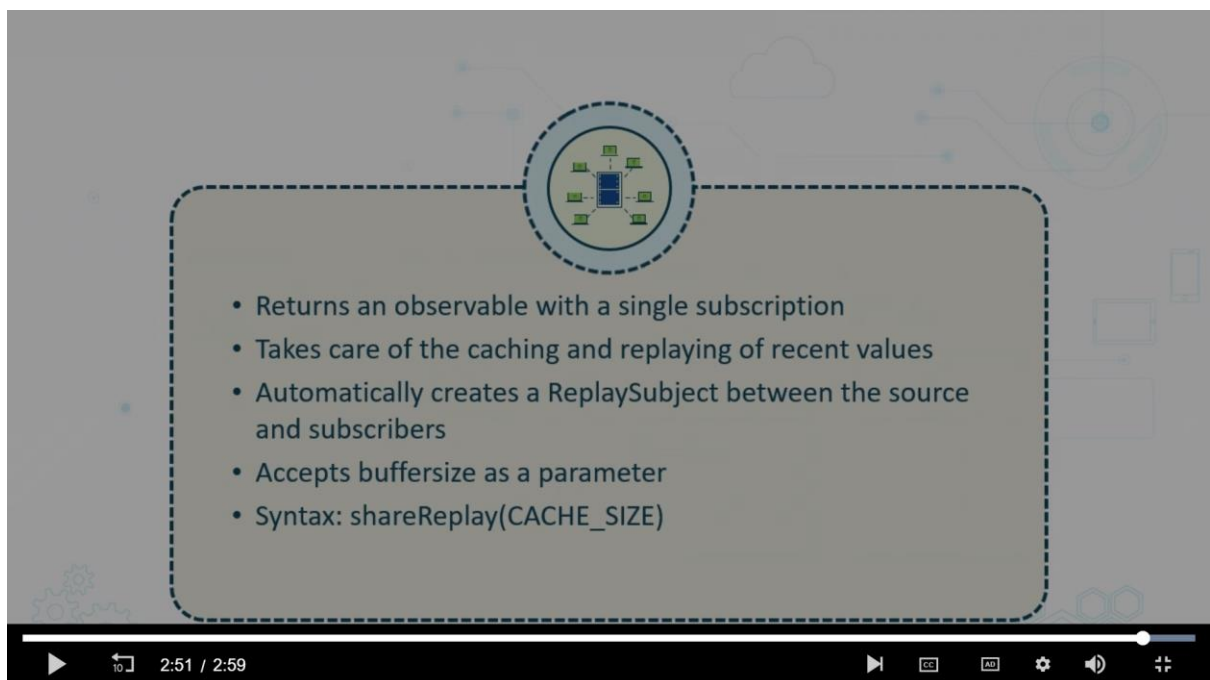




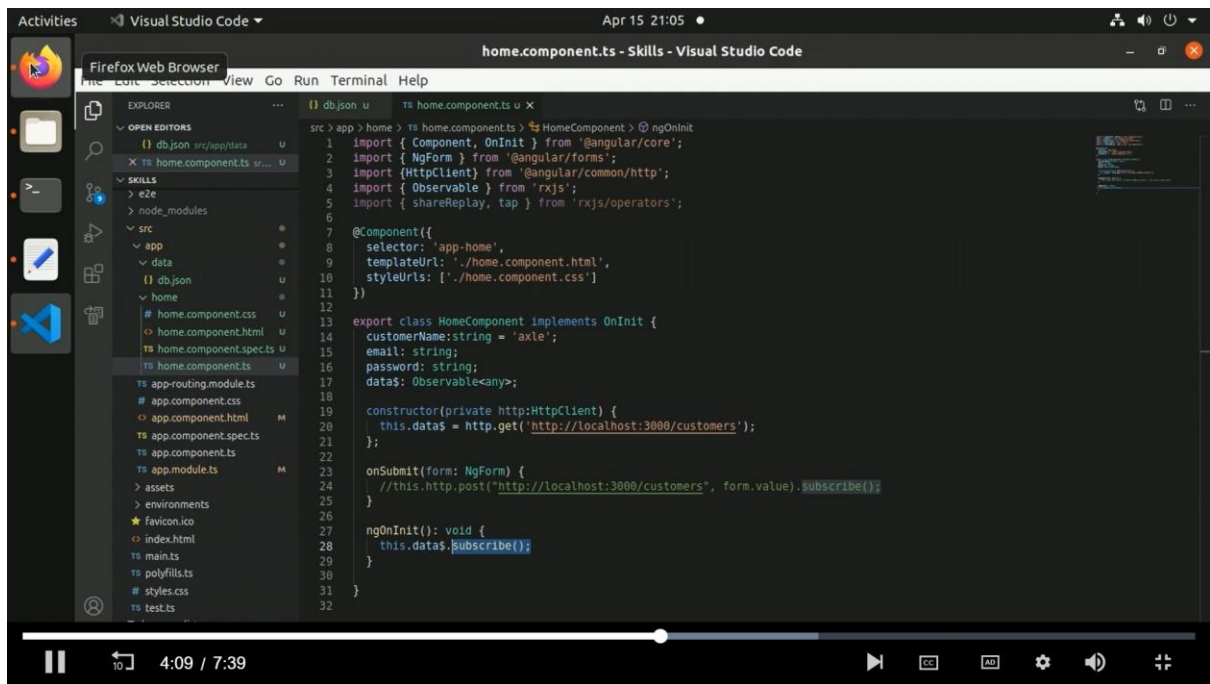
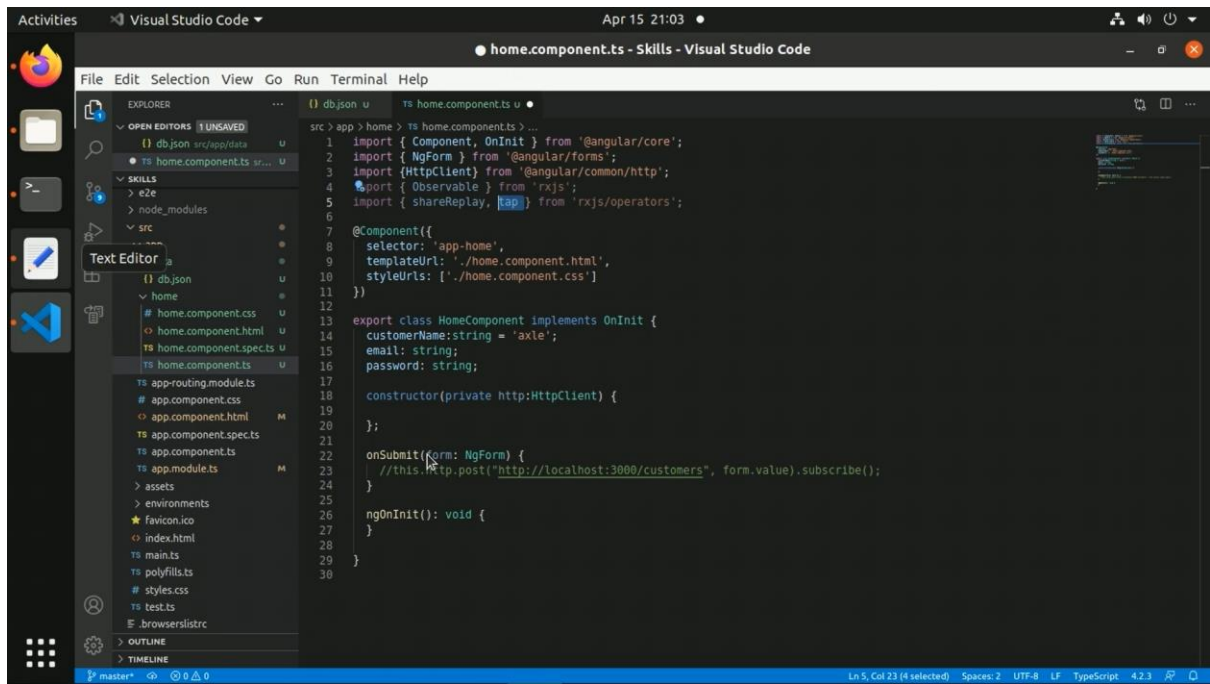
Chaching in Angular

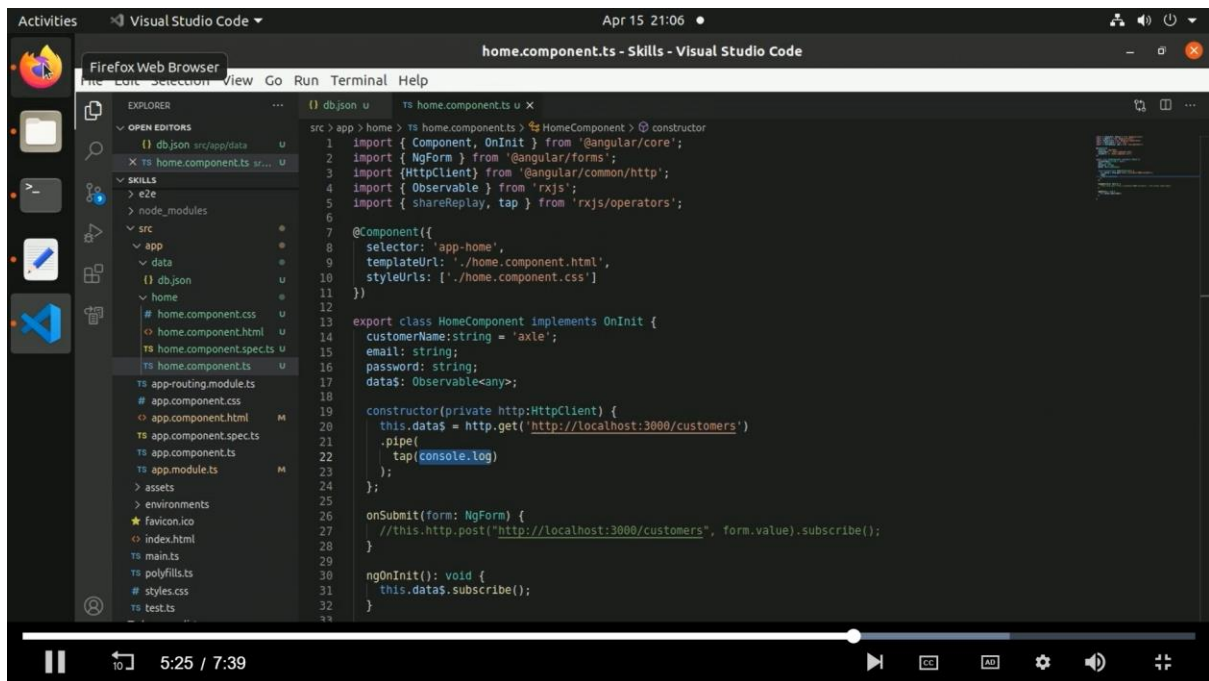
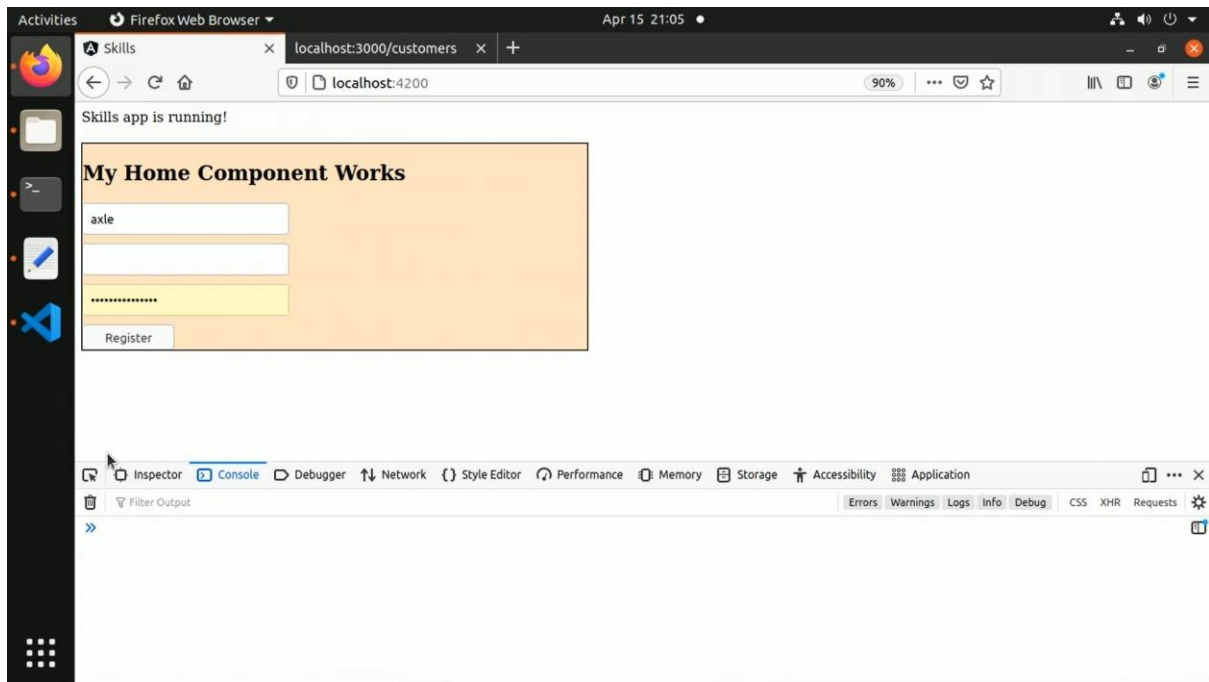


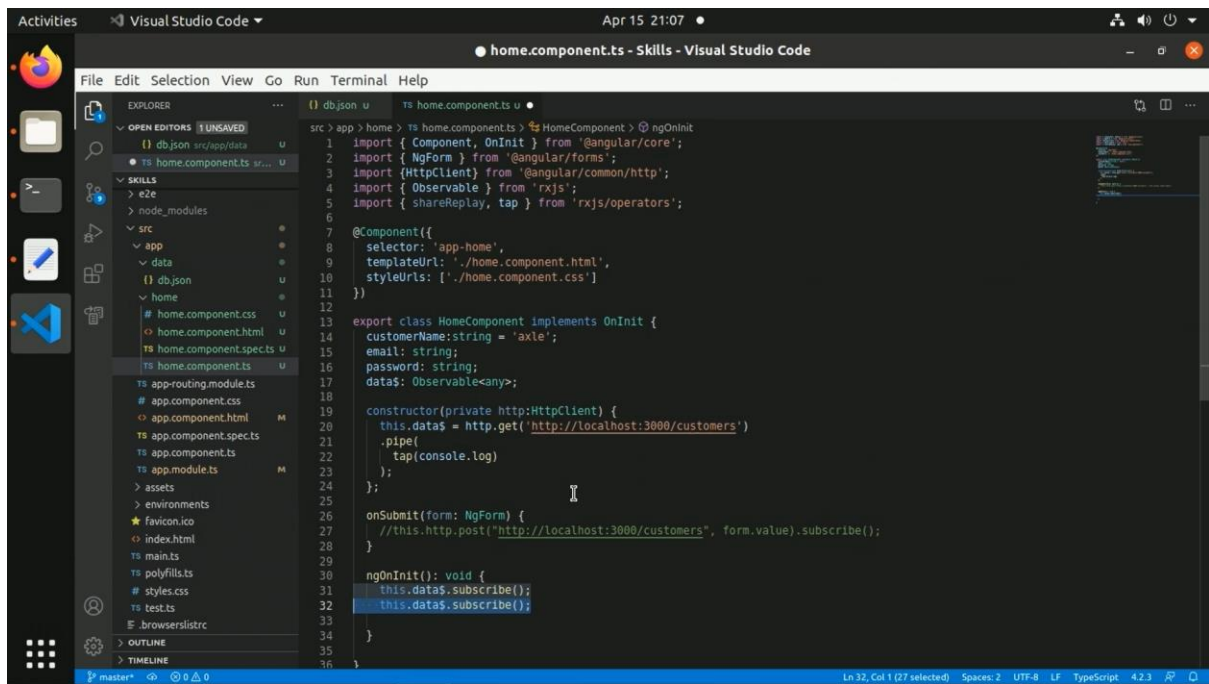
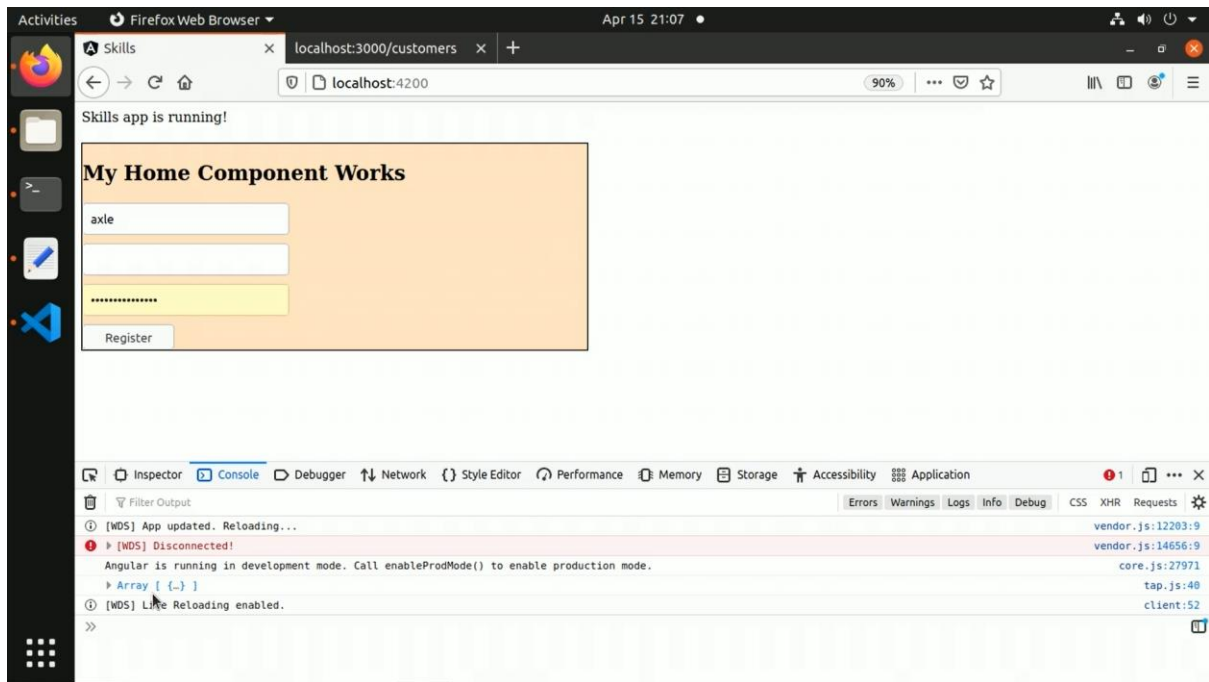
Using rxjs shareReplay

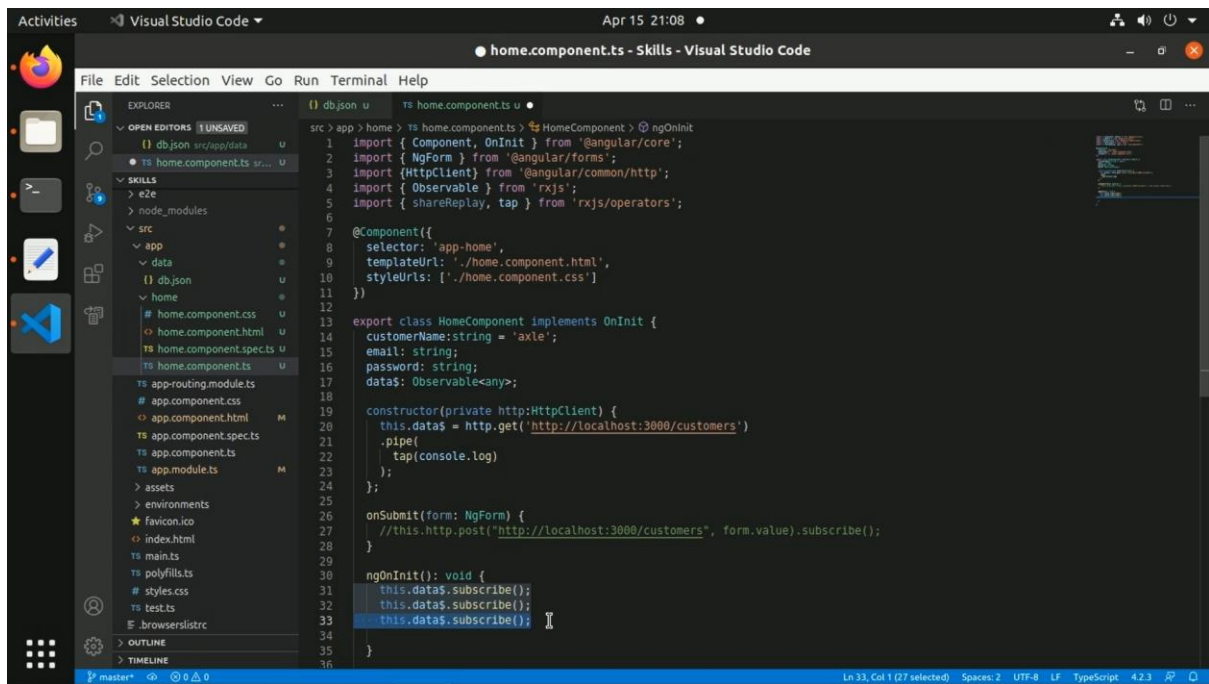
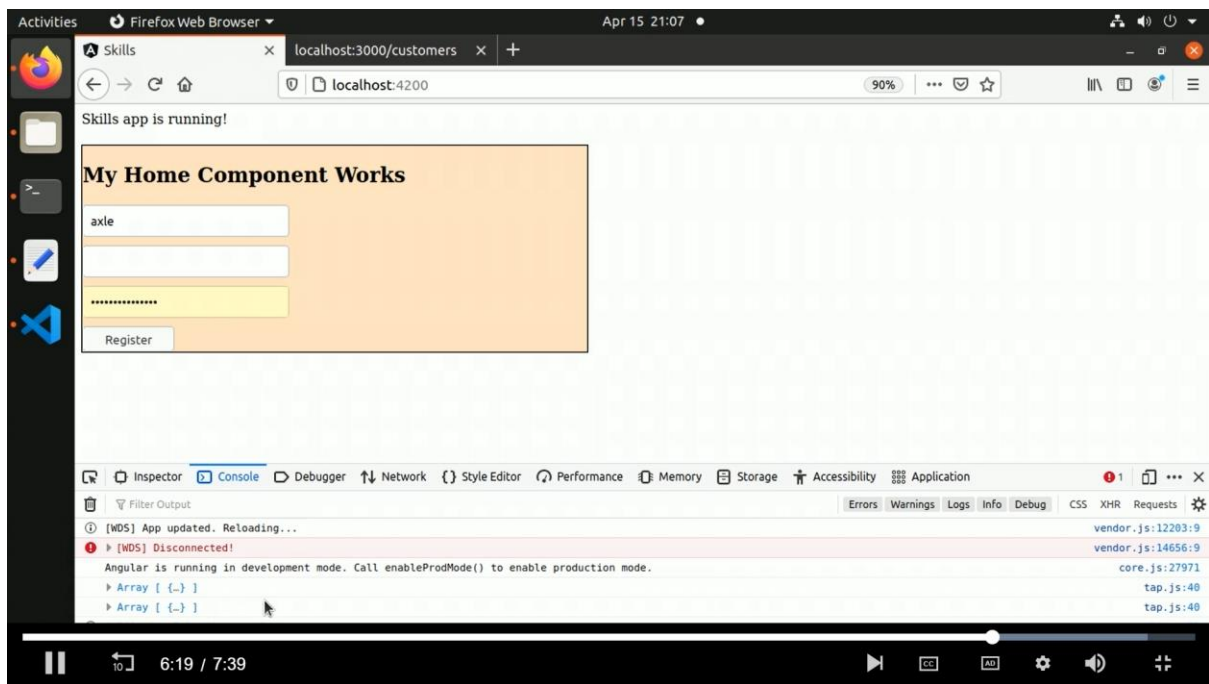


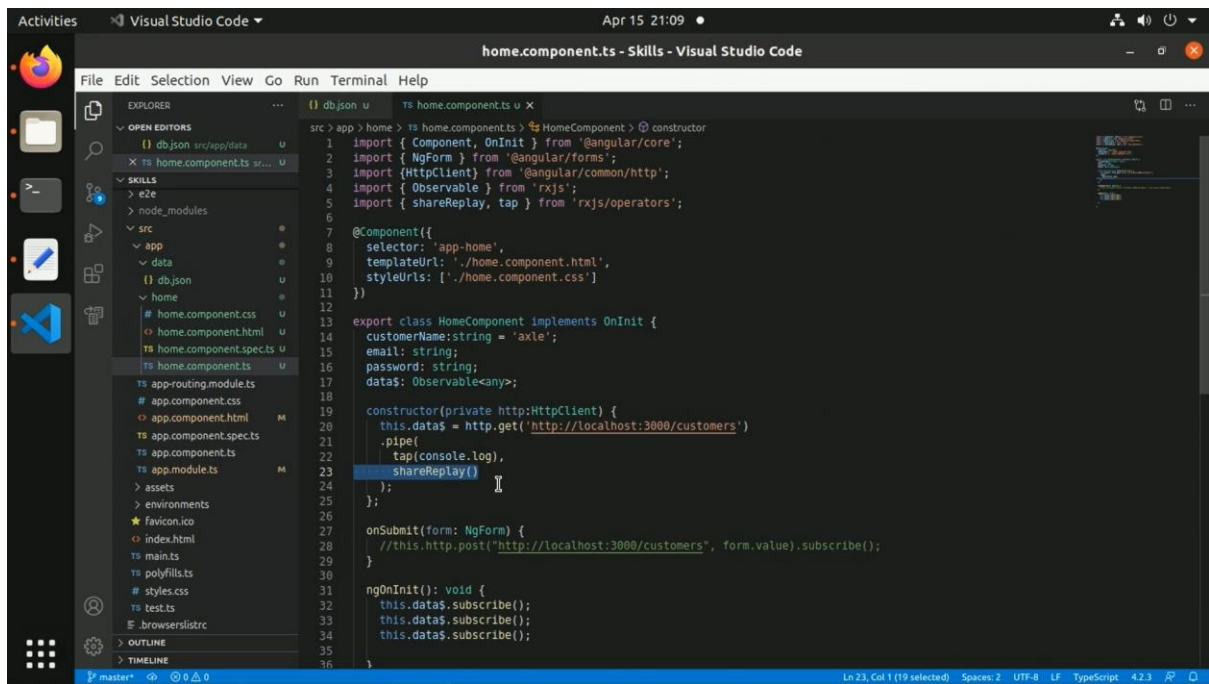
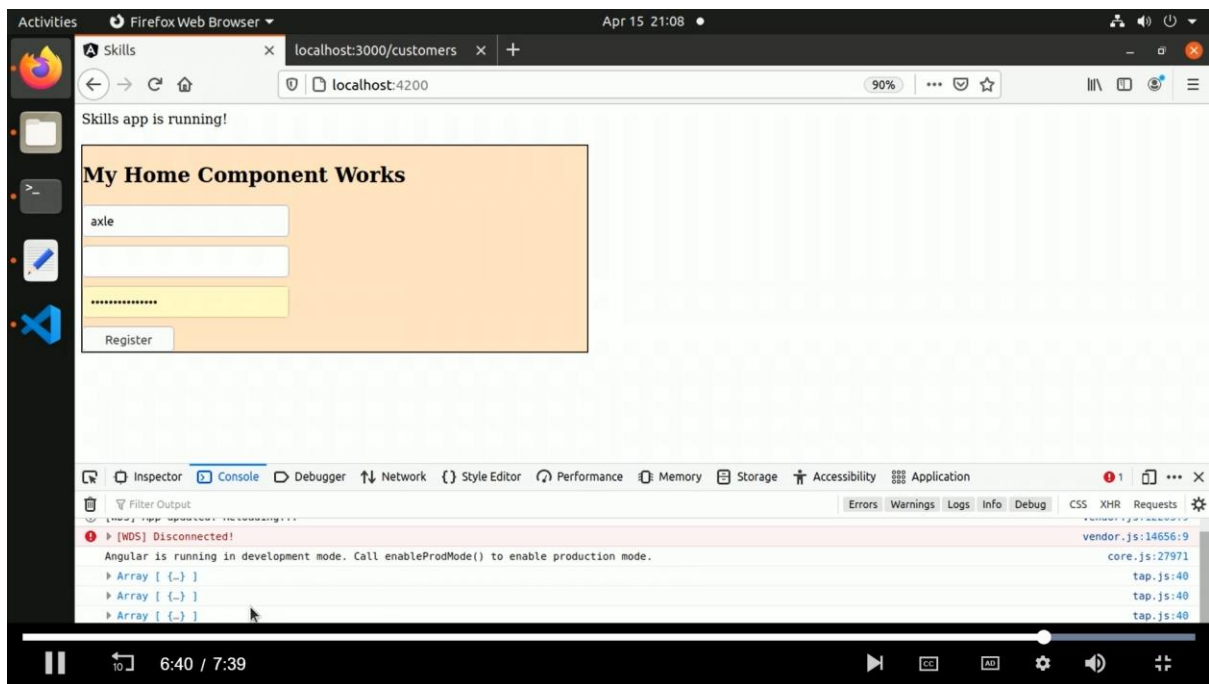
Performing Cache with with ShareReplay





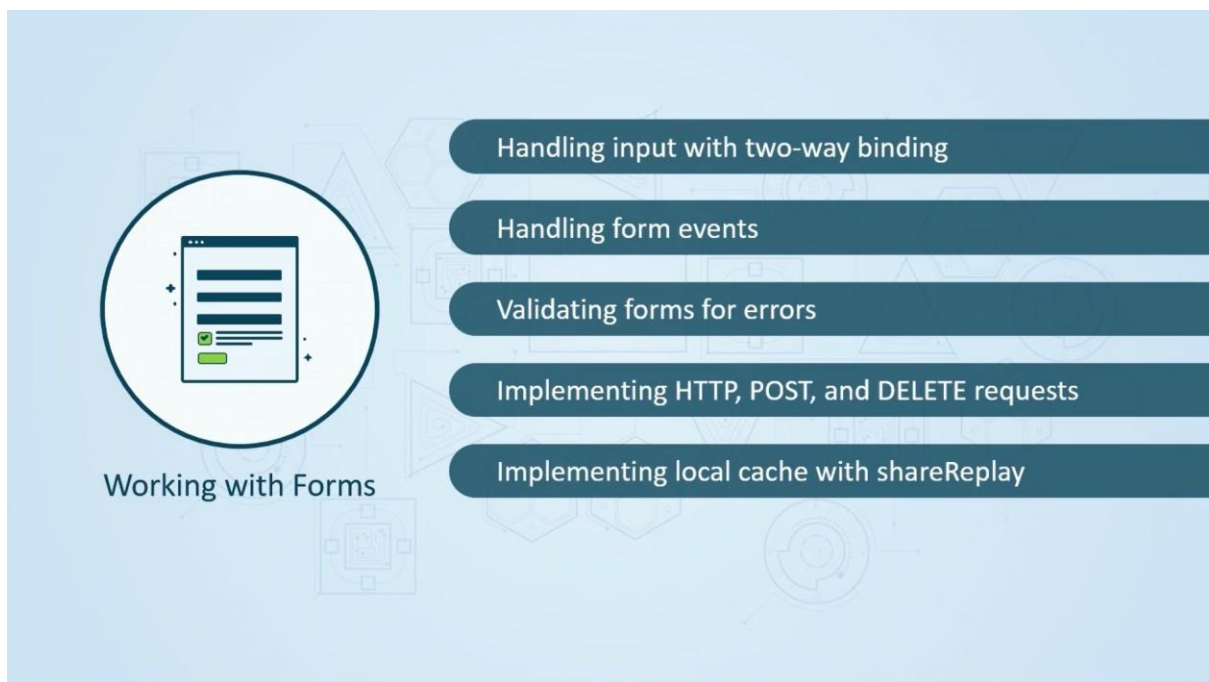
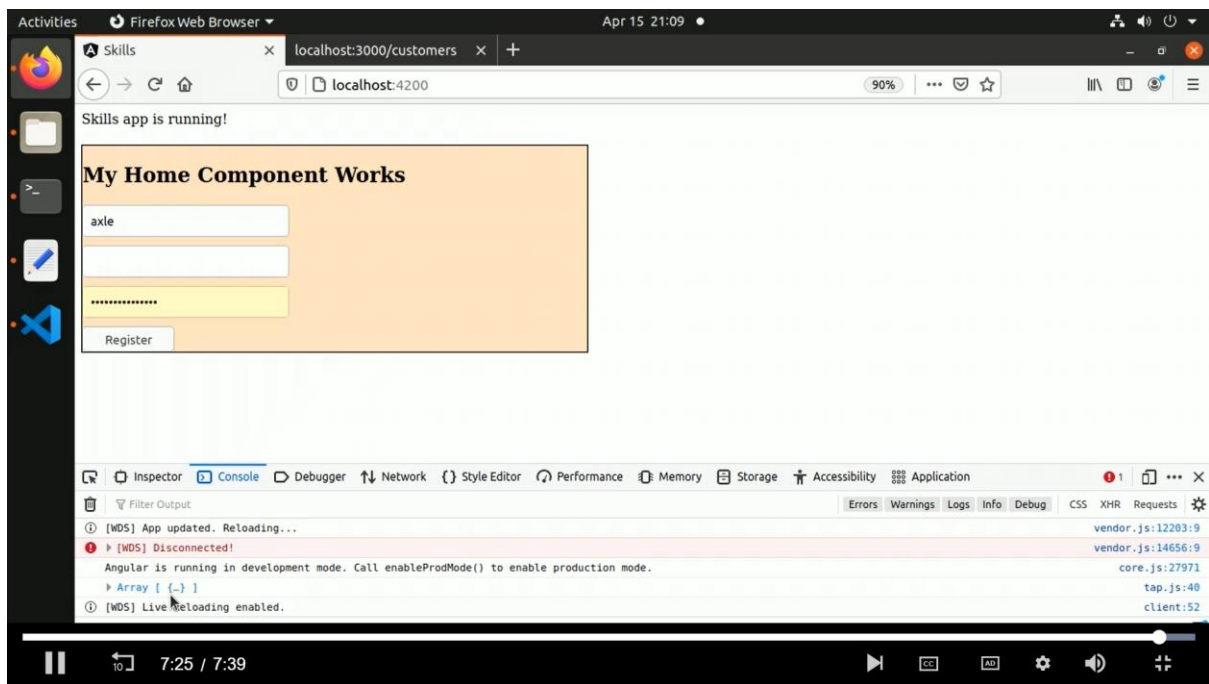






Sharereplay are used for Single call for same data like this.data\$.subscribe()

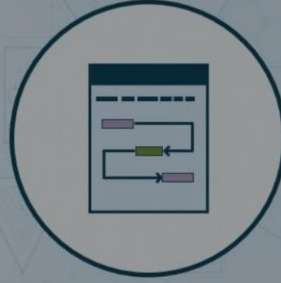
Earlier it returning multiple, so finally its making cache by using sharereplay



Coming Up Next . . .



Navigation in
Angular



Routing in
Angular



2:38 / 2:58

