

Exercise (Instructions): End-to-End Testing Angular Applications

Objectives and Outcomes

In this exercise, you will learn about end-to-end (e2e) testing in your Angular applications. You will learn about Protractor and learn how to use them to carry out e2e testing. At the end of this exercise, you should be able to:

- Configure a protractor configuration file
- Set up e2e tests using Jasmine and carry out the e2e test automatically

Performing the First End-to-end Test

- Open `app.po.ts` in the `e2e` folder and update it as follows:

```
1  . . .
2    navigateTo(link: string) {
3      return browser.get(link);
4    }
5
6    getParagraphText(selector: string) {
7      return element(by.css(selector)).getText();
8    }
9
10  . . .
```

- Then open `app.e2e-spec.ts` and update it as follows:

```
1  . . .
2
3    it('should display message saying Ristorante Con Fusion', () => {
4      page.navigateTo('/');
5      expect(page.getParagraphText('app-root h1')).toEqual('Ristorante Con Fusion'
6    });
7
8  . . .
```

- To execute the test, type the following at the prompt:

```
1  ng e2e
```

Second End-to-end Test

- Update app.po.ts as follows:

```
1  . . .
2
3
4  getElement(selector: string) {
5      return element(by.css(selector));
6  }
7
8  getAllElements(selector: string) {
9      return element.all(by.css(selector));
10 }
11
12 . . .
```

- Then open app.e2e-spec.ts and update it as follows:

```
1  . . .
2
3  it('should navigate to about us page by clicking on the link', () => {
4      page.navigateTo('/');
5
6      let navlink = page.getAllElements('a').get(1);
7      navlink.click();
8
9      expect(page.getParagraphText('h3')).toBe('About Us')
10 });
11
12 . . .
```

- Run the e2e test again and see the result.

Third End-to-end Test

- Add another test to app.e2e-spec.ts to enable submission of a form:

```
1  . . .
2  import { browser } from 'protractor';
3
4  . . .
5
6  it('should enter a new comment for the first dish', () => {
7      page.navigateTo('/dishdetail/0');
8
9      let newAuthor = page.getElement('input[type=text]');
10     newAuthor.sendKeys('Test Author');
11
12     let newComment = page.getElement('textarea');
13     newComment.sendKeys('Test Comment');
14
15     let newSubmitButton = page.getElement("button[type=submit]");
16     newSubmitButton.click();
17
18     browser.pause();
19 });
20
21 . . .
```

- Run the e2e test again and see the result.

- Save the changes and do a Git commit with the message "End-to-End Test"

Conclusions

In this exercise you learnt to write end-to-end test using Protractor and carry out the testing.

Mark as completed