academeez

Change Detection

When and how angular detect change and update the DOM

What is Change Detection

academeez

- Change detection is:
  - The ability to know that something happened in our app
  - Refresh the DOM if needed

Change Detection in angular

academeez

- Let’s review a simple change detection in angular
  - Start a new project with @angular/cli
  - Place an interval timer that will update a counter
  - The count will be displayed on screen

Automatic change detection

- In manual change detection you have to tell the framework that something happened, and only than the framework will activate cd.
- With automatic CD the framework automatically detects that something happened and activate CD
- Angular has automatic change detection
- React for example has manual change detection
- What do you think is the downside of automatic change detection in comparison to manual?

What triggers angular's CD?

academeez

- If these things happen it will trigger CD in angular
  - Timers - setInterval, setTimeout
  - Events - that we connect to in our angular components/directives
  - Promise/Observable
- Pretty much any async event that we are subscribing to

Cd trigger not caught by Angular

academeez

- Will angular catch all the trigger? Or is it possible for a CD trigger to happen and angular won’t catch it?
- Let’s examine a case where we place a timer that angular won’t detect

Cd trigger originated from Angular

academeez

- Our previous experiment shown that angular will catch the triggers only if they originated from within angular
- External trigger might not be caught, also other libraries like jQuery and jQuery plugins might not activate the CD

Summary

- Angular has automatic change detection
- Angular will know to refresh the DOM by auto detecting certain triggers
- Automatic change detection will trigger frequently and might not be too performant

academeez

Thank You

Next Lesson: CD Order