



Global Knowledge®

Angular Korte herhaling dag #1

Peter Kassenaar –
info@kassenaar.com

WORLDWIDE LOCATIONS

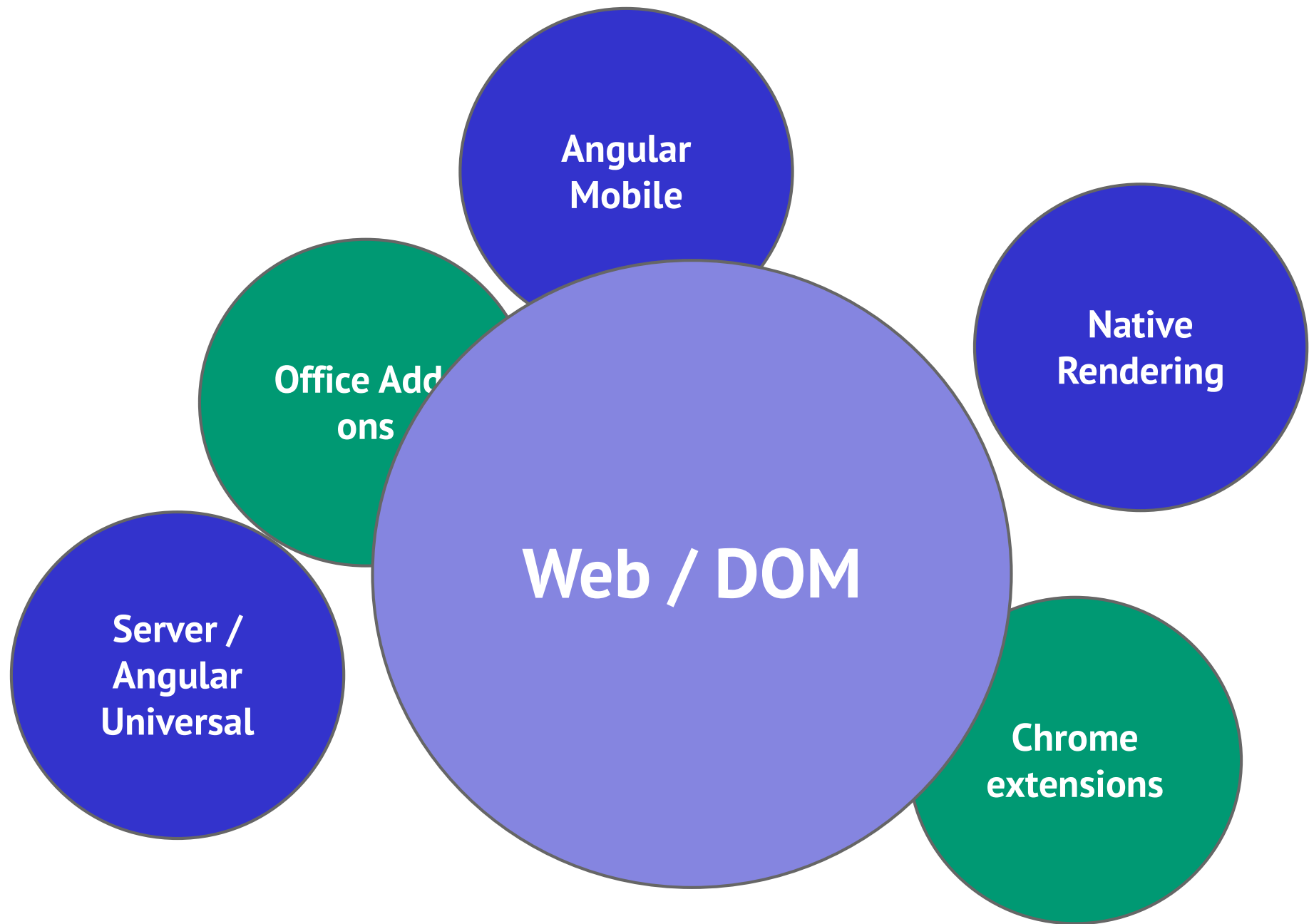
BELGIUM CANADA COLOMBIA DENMARK EGYPT FRANCE IRELAND JAPAN KOREA MALAYSIA MEXICO NETHERLANDS NORWAY QATAR
SAUDI ARABIA SINGAPORE SPAIN SWEDEN UNITED ARAB EMIRATES UNITED KINGDOM UNITED STATES OF AMERICA

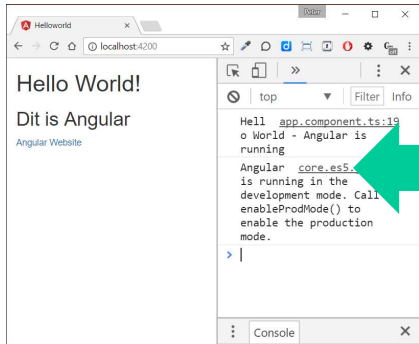
Agenda

- Day 1 – Intro & Data binding
 - Theorie - Introductie & geschiedenis
 - Angular vs Vue, React
 - Hello World in Angular –boilerplate-code
 - Concepts, context & architecture
 - Angular CLI, TypeScript
 - Components
 - Data binding

Framework to Platform

	Scaffolding	Code completion & Refactoring	Debugging
Tooling	Angular CLI	Language Services	DevTools
Libraries	Material 2	Mobile	Universal
	Compile	Change Detection	Renderer
Core	Components & Dependency Injection	Decorators	Zones





main.ts / bootstrapper

ngModule / root module

AppComponent

Services

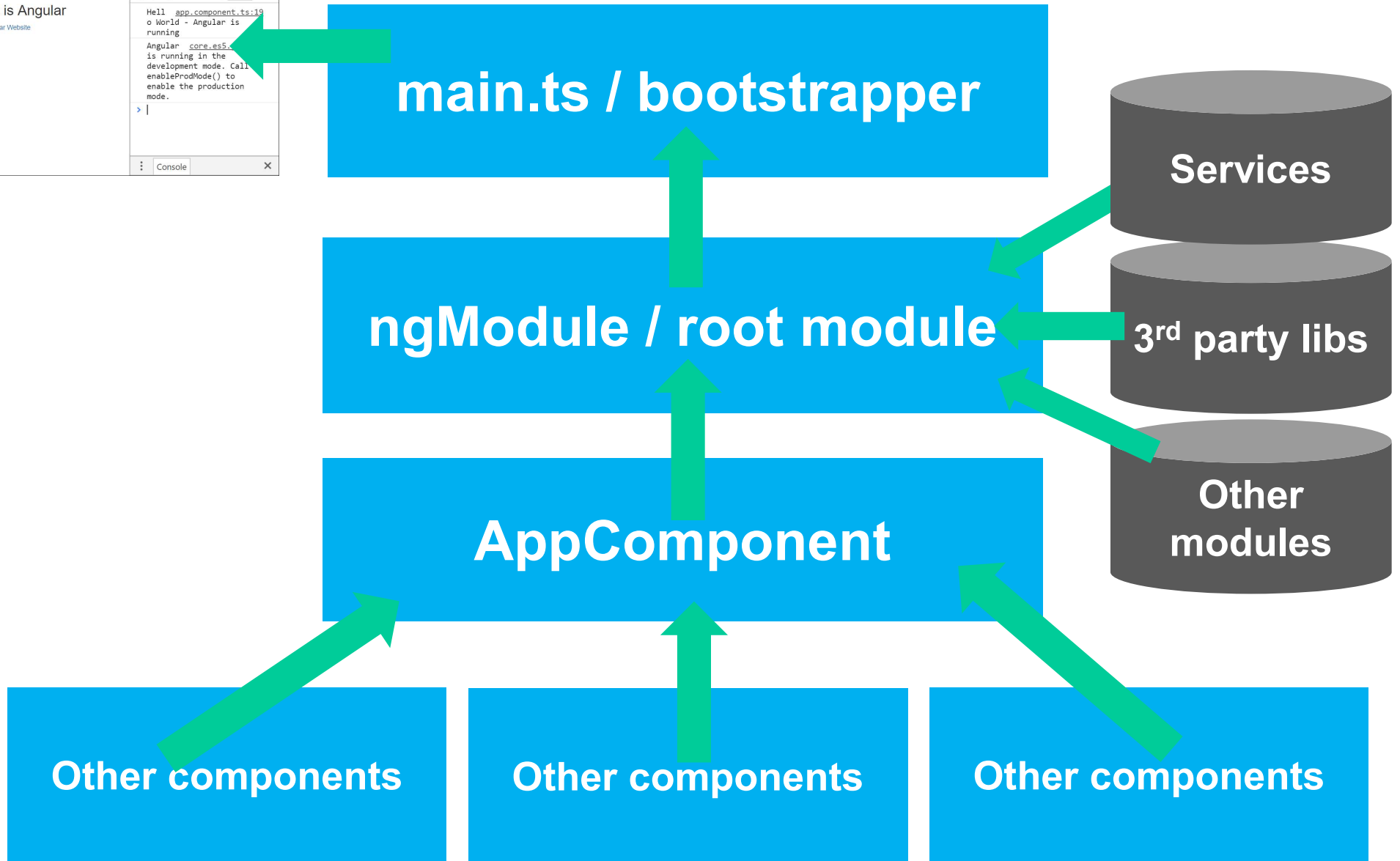
3rd party libs

Other modules

Other components

Other components

Other components





A Venn diagram consisting of three concentric circles. The outermost circle is dark green and contains the text 'TypeScript'. Inside it is a medium-sized teal circle containing the text 'ES6'. Inside the teal circle is a small light green circle containing the text 'ES5'. This visualizes that TypeScript includes all features of ES6, which in turn includes all features of ES5.

TypeScript

ES6

ES5

```

1 export class City{
2   constructor(public id: number,
3               public name: string,
4               public province: string,
5               public population?: number) {}
6 }
7 getFullName(){
8   return this.id + ' ' + this.name;
9 }
10
11 }
12

```

```

var City = /** @class */ (function () {
    function City(id, name, province, population) {
        this.id = id;
        this.name = name;
        this.province = province;
        this.population = population;
    }
    City.prototype.getFullName = function () {
        return this.id + ' ' + this.name;
    };
    return City;
})();
export { City };

```

Boilerplate code - stappenplan

1. Set up environment, boilerplate & libraries

- `npm install`

2. Schrijf Angular Root Component & Module voor de app

3. Bootstrap

4. Schrijf HTML-pagina (`index.html`)

5. Run applicatie

- `npm start`

Components

- @Component decorator
- View
- Controller / Class

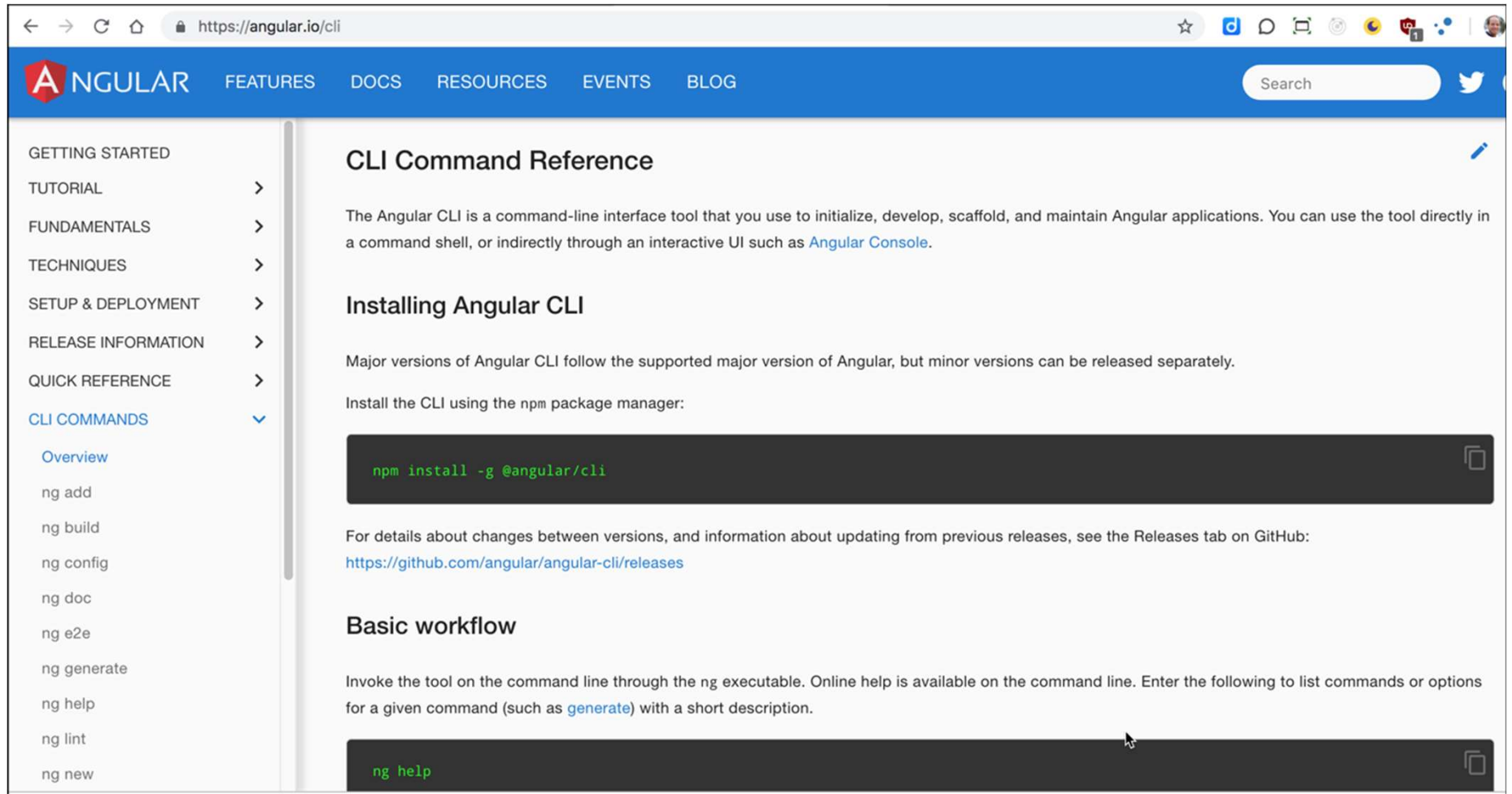
```
import { Component, OnInit } from '@angular/core';

@Component({
  selector: 'app-customer',
  templateUrl: './customer.component.html',
  styleUrls: ['./customer.component.css']
})
export class CustomerComponent implements OnInit {

  constructor() {}

  ngOnInit() {}
}
```

Angular CLI



The screenshot shows the Angular CLI documentation page. The browser address bar displays `https://angular.io/cli`. The page has a blue header with the Angular logo and navigation links: FEATURES, DOCS, RESOURCES, EVENTS, and BLOG. A search bar is located on the right side of the header. On the left, a sidebar lists various sections: GETTING STARTED, TUTORIAL, FUNDAMENTALS, TECHNIQUES, SETUP & DEPLOYMENT, RELEASE INFORMATION, QUICK REFERENCE, and CLI COMMANDS (which is expanded). Under CLI COMMANDS, there is an 'Overview' link and a list of commands: ng add, ng build, ng config, ng doc, ng e2e, ng generate, ng help, ng lint, and ng new. The main content area is titled 'CLI Command Reference' and includes a description of the Angular CLI as a command-line interface tool. It also features a section for 'Installing Angular CLI' with instructions to use npm and a code block showing the command `npm install -g @angular/cli`. Below this, there is a link to the GitHub releases page for more details. A 'Basic workflow' section follows, explaining how to use the `ng` executable and providing a code block with the command `ng help`.

← → ↻ 🏠 `https://angular.io/cli` ☆ [icons]

ANGULAR FEATURES DOCS RESOURCES EVENTS BLOG Search [icon]

GETTING STARTED
TUTORIAL >
FUNDAMENTALS >
TECHNIQUES >
SETUP & DEPLOYMENT >
RELEASE INFORMATION >
QUICK REFERENCE >
CLI COMMANDS ▾

Overview
ng add
ng build
ng config
ng doc
ng e2e
ng generate
ng help
ng lint
ng new

CLI Command Reference

The Angular CLI is a command-line interface tool that you use to initialize, develop, scaffold, and maintain Angular applications. You can use the tool directly in a command shell, or indirectly through an interactive UI such as [Angular Console](#).

Installing Angular CLI

Major versions of Angular CLI follow the supported major version of Angular, but minor versions can be released separately.

Install the CLI using the npm package manager:

```
npm install -g @angular/cli
```

For details about changes between versions, and information about updating from previous releases, see the Releases tab on GitHub:
<https://github.com/angular/angular-cli/releases>

Basic workflow

Invoke the tool on the command line through the `ng` executable. Online help is available on the command line. Enter the following to list commands or options for a given command (such as `generate`) with a short description.

```
ng help
```

<https://angular.io/cli>

Debugging/Analyse tool – Chrome DevTools

The screenshot displays the Chrome Web Store page for the Angular DevTools extension. At the top, the 'chrome web store' logo is on the left, and the user's email 'peter.kassenaar@gmail.com' is on the right. The breadcrumb trail shows 'Home > Extensions > Angular DevTools'. The extension's name 'Angular DevTools' is prominently displayed next to its red 'A' logo. Below the name, it says 'Offered by: Angular', has a 4.5-star rating from 66 reviews, is categorized as 'Developer Tools', and has '50,000+ users'. A blue 'Remove from Chrome' button is located in the top right corner. A horizontal menu below the extension details includes 'Overview' (which is selected), 'Privacy practices', 'Reviews', 'Support', and 'Related'. The main content area features a preview of the Angular DevTools component inspector. On the left, a tree view shows the component hierarchy, with 'mat-toolbar' selected. On the right, the 'Properties' panel for 'mat-toolbar' is shown, displaying attributes like '_color: primary', '_document: HTMLDocument', '_elementRef: {...}', '_platform: {...}', '_toolbarRows: {...}', and 'defaultColor: undefined'. The top right of the preview area indicates 'Angular version: 12.0.0-next.9 | DevTools SHA: ce5b7cb'.

<https://chrome.google.com/webstore/detail/angular-devtools/ienfalfjdbdpebioblackkekamfmbnh>

Ng serve

- Vervult verschillende rollen (*kan* ook handmatig)
 1. TypeScript compilation
 2. (SASS compilation)
 3. Fire up webserver on <http://localhost:4200>
 4. Fire up Live Reload
 5. Analyzing and bundling of application by firing up WebPack
 6. Watch for changes and recompile, rebundle, etc.

Data binding

- Notatiewijze in HTML-views/templates

1. Simple data binding `{{ ... }}`

2. Event binding `(...)="..."`

3. One-way data binding `[...]="..."`

4. Two-way data binding `[(ngModel)] = "..."`

Vragen?

Vandaag

- data binding –
 - two-way binding
- Belangrijk concept: **Services**
 - Static Services
 - Dependency Injection / `@Injectable()`
 - `HttpClientModule`,
 - `RxJS` / **Observables**,
 - `GET`-ing en `POST`-ing data
- Component **Communication**
 - `@Input()`, `@Output()`

Woensdag 22 november – dag #3

- Vragen + herhaling **Observables**
- Component **Communication**
 - `@Input()`, `@Output()`
 - Custom Event Bus, `Subject<Type>()`
- **Routing**
 - Basic routing
 - Routing parameters
- **Forms**
 - Template Driven Forms
 - Model Driven Forms



22 November

09:00 hr