Angular Tooling and Ecosystem

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Overview

CLI

Server-side rendering

Mobile/native frameworks

Testing

AOT Compiler and Ivy

Editors

Ecosystem

The Angular CLI

Creating a JavaScript Application

Module handling

Bundling

Minifying

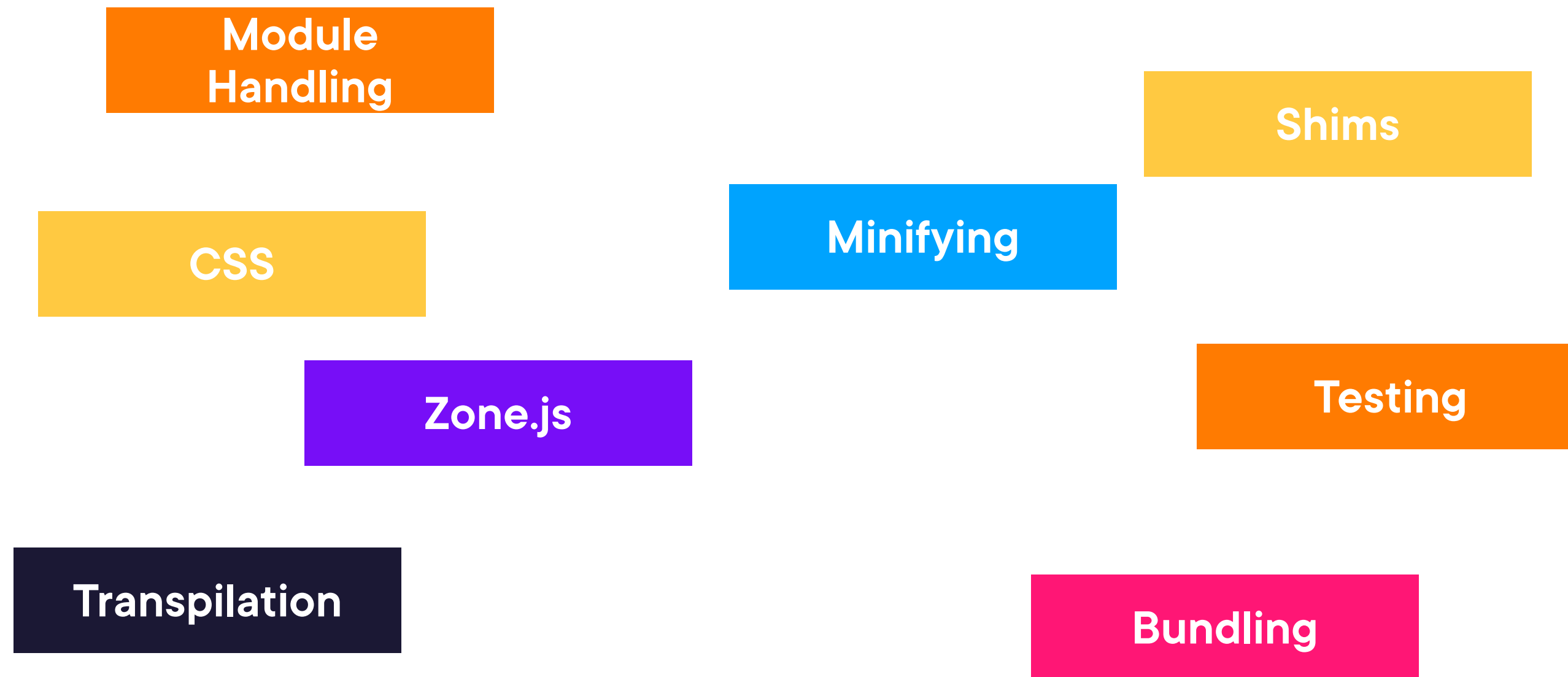Typescript and ECMAScript Transpilation

Browser shims

Zone.js

Testing

Monorepo

CSS

Creating by Hand

Module Handling

Shims

CSS

Minifying

Zone.js

Testing

Transpilation

Bundling

Creating with Angular

CLI

CLI Capabilities

New application

New component/service/pipe etc.

Serving up the application

Linting

Testing

Building

Server-side Rendering

Main Benefits

Performance

    – Initial download size

    – Render time

Search engine optimization

Server-side Rendering Modes

Full pre-render

Dynamic pre-render

Client-side switch
- Download app
- Hidden div
- Boots
- Render
- Replays events
- Swap display

Mobile and Native Frameworks

Native Mobile and Desktop Applications

Mobile

– Ionic

– NativeScript

Desktop

– Electron

Testing Tools

Angular Testing Tools

Karma

Protractor

Alternatives
- Jest
- Cypress
- Playwright

Angular testing utilities
- TestBed
- Async and fakeAsync
- MockBackend

AOT Compiler and Ivy

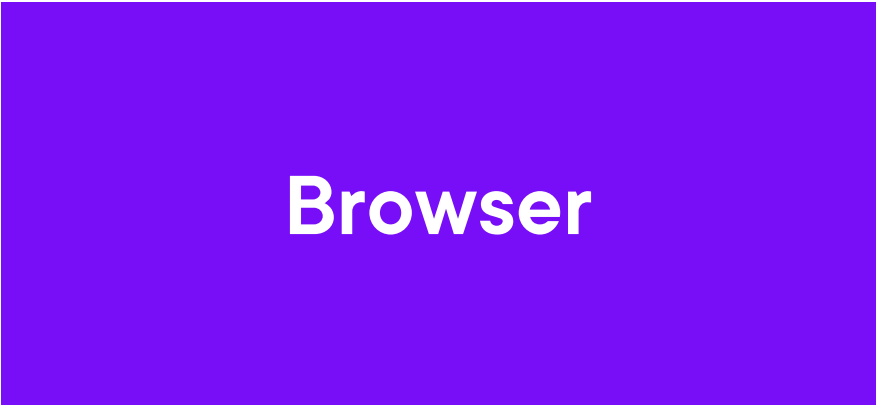# JIT Process

Server
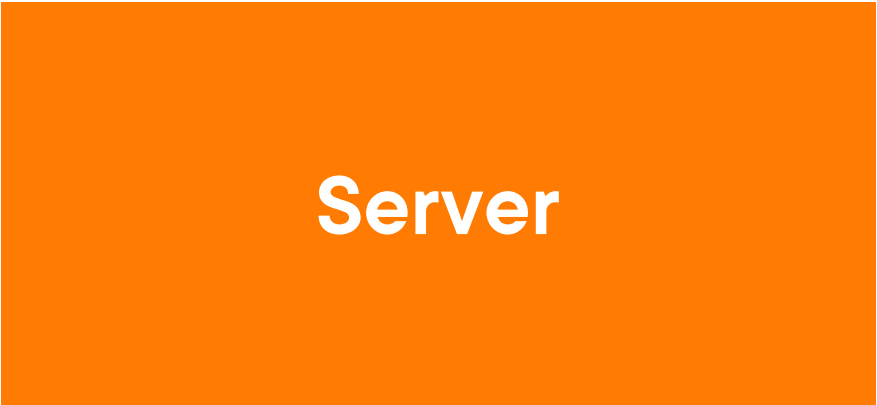
Browser

Code and Framework

Templates

Compiler

DOM Functions

AOT Process

Server

Code and Framework

Templates

Compiler

Browser

Ivy

Intellisense in templates and forms

Module-less applications

Signals

Editor Support

Editors

TypeScript
- Better intellisense
- Catch typing bugs

Angular Language Service
- VS Code
- WebStorm
- Others

Ecosystem

Tools and Libraries in the Ecosystem

VS Code

Stackblitz

NgRx

Nx

Angular Material

Summary

CLI

AOT/Ivy

Better editors