Understanding Angular GPM

+

Last update: 09/29/2017

GPM Structure

Folder Structure

All GlassCat Project Models (*GPMs*) have the same structure. GPM folders contain:

- the `gpm.json` file, which represents the manifest of the GPM
- the `archetype` folder which contains files used to build the project

Pre-install and post-install scripts are located in the optional `scripts` folder.

Expressions

- GPM allows expressions evaluation during build process
- expressions are defined in the form `<% myToken %>`, where `myToken` is evaluated and replaced at build
- all file types specified in the `processedFiles` property list are evaluated
- properties can be passed through command lines

Building The Angular Archetype

To create a new project based on the Angular GPM, you need to call the `glasscat archetype` goal with `angular` as `gpm` parameter:

```
$ glasscat archetype --gpm=[angular] --projectName=[myProject]
                     --directory=[myDirectory] --contextRoot=[myContextRoot]
```

The built `angular` project includes:

- Angular 4 dependencies
- Angular Material dependencies

Angular GPMs use Google Web Fonts as default configuration to load Material icons.

Contrary to Angular-CLI, Angular GPM projects use SystemJS to manage dynamic ES modules.

Angular Archetype Structure 1/2

The Angular archetype is designed from a standard JEC Web app:

```
.
├── src
│   └── jslest
│         ├── TS AngularApp.ts
│         └── TS Status.ts
├── webapp
│   ├── app
│   ├── node_modules
│   ├── styles
│   ├── views
│   │     ├── <> angular-app.ejs
│   │     └── <> status.ejs
│   ├── WEB-INF
│   │     └── {} web.json
│   ├── <> index.html
│   └── {} package.json
│
└── {} tsconfig.json
```

Jslets provides the easiest way to manage cache control capabilities.

Angular Archetype Structure 2/2

The Angular app is designed with logical separation of objects in mind:

```
.
├── webapp
│   ├── app
│   │   ├── business
│   │   │   └── TS Message.ts
│   │   ├── components
│   │   │   ├── TS AppComponent.ts
│   │   │   └── TS WelcomeComponent.ts
│   │   ├── modules
│   │   │   ├── TS AppModule.ts
│   │   │   └── TS AppRoutingModule.ts
│   │   ├── services
│   │   │   └── TS MessageService.ts
│   │   ├── templates
│   │   │   ├── <> app-main.html
│   │   │   └── <> welcome.html
│   │   ├── TS main.ts
│   │   └── JS systemjs.config.js
```

Developers can use any code layout to structure their applications.

Angular App Jslet

Angular app is served by using a jslet associated with an EJS template:

```
import { HttpJslet, WebJslet, HttpRequest, HttpResponse } from "jec-exchange";

@WebJslet({
  name: "AngularApp",
  urlPatterns: [
    "/app",
    "/app/",
    "/app/welcome"
  ],
  template: "/views/angular-app.ejs",
})
export class AngularApp AngularApp HttpJslet {

  public doGet(req:HttpRequest, res:HttpResponse, exit:Function):void {
    exit(req, res);
  }
}
```

You must either declare all routes for the Angular app, or use a generic path (e.g. `app/*`), to ensure accessibility of each URL path.

Securing The Angular App

JEC and jslets allow to easily add security layer to the Angular application:

```
...

"security": {
  "roles": [
    {
      "name": "ADMIN",
      "path": "security/AdminRole"
    }
  ],
  "constraints": [
    {
      "name": "ConsoleConstraint",
      "roles": [ "ADMIN" ],
      "urlPattern": "/app/*",
      "errorUrl": "/login"
    }
  ],
  "staticResources": [
    { "urlPattern": "/styles/*" },
    { "urlPattern": "/node_modules/*" }
  ]
}

...
```

Serving Polyfills

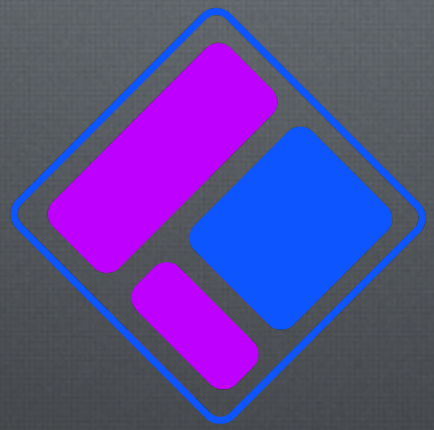
Where to go from here?

For more information and documentation on GPMs and JEC please visit:

- GlassCat Project
- JEC Sample Projects
- JEC Youtube Channel

The Angular GPM is part of the JEC project:

- JEC project on GitHub



JEC

JavaScript Entreprise Container