

# Angular Project Assignment

Your task is to **design** and **implement** a web application using Angular. Use a service like Firebase for your **back-end** or create your own with Node.js and MongoDB or a framework in another language (ASP.NET, Spring, Symfony). It can be a discussion forum, blog system, e-commerce site, online gaming site, social network, or any other web application by your choice.

## 1. Application Structure

The application should have:

- public part (accessible without authentication)
- private part (available for registered users)

### 1.1 Public Part

The public part of your projects should be visible **without authentication**. This public part could be the application start page, the user login and user registration forms, as well as the public data of the users, e.g. the blog posts in a blog system, the public offers in a bid system, the products in an e-commerce system, etc.

### 1.2 Private Part (User Area)

Registered users should have personal area in the web application **accessible after successful login**. This area could hold for example the user's profiles management functionality, the user's offers in a bid system, the user's posts in a blog system, the user's photos in a photo sharing system, the user's contacts in a social network, etc.

## 2. General Requirements

Your Web application should use the following technologies, frameworks and development techniques:

- At least 3 different **dynamic pages** (pages like about, contacts, login, register do not count towards that figure). If your project **doesn't cover** this condition you will **not** be graded.
- Use Angular for the **client-side**
- Communicate to a **remote service** (via REST, sockets, GraphQL, or a similar client-server technique).
- Implement **authentication**
- Use a **source control system** like GitHub, Bitbucket etc. **Commit** inside the repository for **at least 3 days**.

## 3. Other Requirements

- Apply **error handling** and **data validation** to avoid crashes when invalid data is entered
- Brief **documentation** on the project and project architecture (as .md file)
- Good usability. Good UI and UX. (NGBootstrap, MDL, CSS Grids or another method of your choice)

## 4. Project Defense

Each student will have to deliver a **defense** of their work in front of **one** other student, trainer or mentor. Students will have **only 15-20 minutes** for the following:

- **Demonstrate** how the application works (very shortly)
- Show the **source code** and explain how it works

Please be **strict in timing**! On the **20<sup>th</sup>** minute you **will be interrupted**! It is good idea to leave **the last 3-5 minutes for questions** from the trainers.

Be **well prepared** for presenting maximum of your work for minimum time. Open the project assets **beforehand** to save time.

The project defense will be happening **online** through **Discord** (or another platform of this type).

## 5. Bonuses

- Deploy the application in a **cloud environment**
- Use a **file storage cloud API**, e.g. **Dropbox**, **Google Drive** or other for storing the files.
- Use of features of HTML 5 like Geolocation, SVG, Canvas, etc.
- Use **Angular Animations** somewhere in your application
- Write **unit tests** for your components
- Use RxJS powered **state management** for Angular applications, inspired by Redux (ngRx store)
- Anything that is not described in the assignment is a bonus if it has some practical use.

## 6. Assessment Criteria

### General Requirements – 25 %

### Functionality Presentation – 50 %

Adequately and clearly demonstrate the requested functionality. Know your way around the application and quickly demonstrate the code. Evaluation in this section is also based on the **structure** of your code.

### Answering Questions – 25 %

Answer questions about Angular specifics and potential functionality outside the scope of the project.

### Bonuses – Up to 10 %

Additional functionality or libraries outside the general requirements, with motivated usage.

## 7. Submission Deadline

You **must** submit your project before **23:59 on 16<sup>th</sup> August** using a survey that will show up the **11<sup>th</sup> August**. A presentation **schedule** will be available on the **18<sup>th</sup> August** and will include only the projects that were **submitted beforehand**. **Non-submitted projects will NOT be evaluated**.

## 8. Restrictions

You can use **parts** (some components, routing configurations, form validation etc...) of the **course workshop**, but you are **NOT** allowed to use the **whole workshop** as your project assignment.