

# Frontend Coding Exercise (FSE)

Version 2

## Description

As a software engineer working at Techspert, you will be building the frontend tools that enable our users to take advantage of our search technology when looking for experts in areas of interest. The two exercises will assess your understanding of the process of building commercial applications, building features across the stack, backend to frontend.

The focus of this exercise is the frontend application and it works with the data from the backend you built in the previous exercise. We will be looking at your practices, architectural choices, and generally the quality of your solution. Particularly, we are interested in how you handle the data flow of your application, as well as the choices you make for the internal structure of the application.

This is a take-home exercise that you can do **in your own time**. We expect that the task will take **2h to complete**, so try to stick with that guideline. The language and framework of choice will be **Typescript** and **Angular**.

## Problem Statement

Big Books Publishing Co. is developing a tool to track the state of different projects that their editors are managing. From the moment they receive a manuscript to the point where the book is in print, the project goes through multiple states and involves multiple roles:

- Their pipeline consists of the following stages: Received, Reviewed, Accepted, Contract Signed, Edited, Copyedited, Typeset, In Print.
- For each project, they need to store:
  - Working title
  - Authors
  - Stage
  - Main editor
  - Person currently processing it
  - Creation date
  - Update date

Using Angular and the backend previously built, develop a simple interface where the users can create a new project, update an existing project, and show all projects separated into stages. The application will have at least two separate pages: one to create and update projects, and another one to show all the projects separated into categories. The choice of UI framework, as well as any other pages or features, will be yours.

As an *optional* challenge, you can create a page that for a specific project it shows a timeline of the different stages the project has been on, with timestamps.

## Deliverables

Provide a zip/tar file with your full project (frontend and backend) ready to be used. Include a README file with:

- Instructions on how to run the whole application
- A list with the assumptions you made
- A short description of interesting parts of your code
- A short description of potential improvements

After our team has reviewed your answers, we will invite the best candidates to an interview where, among other things, we will discuss the solution, its architecture and potential improvements. Be ready to provide highlights and alternatives, as well as any points you would like to discuss about your work.

## Tips

- Ask us any questions you have about the task.
- Make any reasonable assumptions but justify your choices.
- This is a senior role exercise, so it's not enough to have a working application. Your practices, architectural choices, and the overall quality of your solution are what matters.
- Pay special attention to how your data flows through your application.
- A good UI design is a “nice to have”, not a “must have”.