

Angular @ ZIVVER

Hello amazing Angular aficionado!

It's awesome that you want to join the team. At ZIVVER we like to randomly browse freely available APIs in our spare time instead of watching Netflix. Ok, not true, but we thought it would be cool if you can show us a bit of your skills by building a lightweight app sitting on top of one of those APIs. Moreover, we would also like to know about your JS knowledge by asking a few basic questions.

We ask you to spend your precious time on an assignment. This is because we find that this gives you the fairest chance to show your skills and us the best way to find people who will raise the bar in the team. However, we understand that you might be reluctant to waste hours on just another take-home assignment that you never hear back about.

Therefore, we promise that:

1. We only ask you to make the assignment if we already think you are a good fit.
2. Your solutions will always be reviewed by your peers in the team.
3. We give all who submit a good solution a chance to explain it in an interview.
4. Whatever happens, you will receive feedback on your assignment.

We hope you understand that, no matter what happens, the time that you put into this assignment is appreciated. Hopefully you also enjoy the challenge!

Good luck!

The App

Write an Angular application that uses [jsonplaceholder](#) API to fetch [100 posts](#) and render them all where each post in a separate component and show them as squares, 10 rows x 10 columns. Considering the response of the 100 post request will look like:

```
{
  "userId": 1,
  "id": 1,
  "title": "sunt aut facere repellat provident...",
  "body": "quia et suscipit\nsuscipi..."
},
```

- By default, show the post id,
When clicking on a square: replace the id with the userId
- When clicking again show the id and so on...
- Impress us with your design taste (but we do have a designer at Zivver ;)).
- Don't use RxJS to make shared state (this will be the bonuses question)

Did you finish early? (bonus)

Then branch out your code and do exactly the same thing but with a shared state-like made by RxJS only

What we would like to see

a Github repo with a nice README.md file with how to run things, gotchas, and some motivation behind choices if you feel the need of sharing. If you don't feel comfortable with sharing a public repo, a zip file will do.

The generic questions

1. We use JWTs a lot throughout our API. For instance, when a user logs in on our API, a JWT is issued and our web-application uses this token for every request for authentication.

Here's an example of such a token:

eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiJzb211b25lQG4YW1wbGUubmV0IiwiaWF0Ij0wZmZhbHN1LCJ2YWxpZD91bnRpbCI6IldlZCBEZWMMzEgMjM2NTk6NTkgQ0VTVCAxOTY5In0.4bl2puoaRetNjO1GsweKOnnQsYgwna9bQIC-WQZkuNo

Why is it (or isn't it) safe to use this? (hint: the token is one string, the pdf might breaks it into multiple lines)

2. In our web-application, messages sent from one user to another, can contain HTML, which poses some security risks. Describe two attack vectors bad actors might try to abuse? And how would you mitigate these vectors?
3. Explain the difference between mutable and immutable objects.
 - a. What is an example of an immutable object in JavaScript?
 - b. What are the pros and cons of immutability?
 - c. How can you achieve immutability in your own code?
4. If you would have to speed up the loading of our current web-application, how would you do that? (no need to actually do it, just describe the steps you would take)
5. What part of a new job do you think is more important:

- a. Choose your own hardware, but work with a company supplied operating system image.
- b. You're offered a standard piece of mediocre hardware. Free to pick your own Software.