SDK Tooling Challenge

As part of the SDK tooling team, you will be building and maintaining tools that will help people develop, test, and release the Dyte video calling SDKs for web and mobile platforms. So to check your design and development skills and to give you a sense of what you will be working on, we ask you to create a tool that will help us with our release process.

Problem Statement

A lot of our microservices are written in Node.js and making sure that the dependencies for these services are up to date can be a bit of a hassle. Your job is to build a CLI tool that will do a few things

Given a list of Github repositories, assuming all of them are node js projects with a package.json and package-lock.json in the root, and the name and version of a dependency, you want to give the current version of that dependency and tell if the version is greater than or equal to the version specified or not.

For Example, considering you feed them a list of repositories in a CSV like this:

name	repo
dyte-react-sample-app	https://github.com/dyte-in/react-sample-app/
dyte-js-sample-app	https://github.com/dyte-in/javascript-sample-app
dyte-sample-app-backend	https://github.com/dyte-in/backend-sample-app

A sample way to feed it could be this:

```
myawesometool -i input.csv axios@0.23.0
```

It should give the following output:

name	repo	version	version_satisfied
dyte-react-sample-app	https://github.com/dyte-in/react-sample-app/	0.24.0	true
dyte-js-sample-app	https://github.com/dyte-in/javascript-sample-app	0.21.1	false
dyte-sample-app-backend	https://github.com/dyte-in/backend-sample-app	0.23.0	true

Secondly, for all the repositories that have the version lower than the one specified, if passed as additional param, let's say `-update`, it should create a PR updating the version. So for example:

```
myawesometool -update -i input.csv axios@0.23.0
```

Should give an output like:

name	repo	version	version_satisfied	update_pr
dyte-react-sample-app	https://github.com/dyte-in/react-sample-app/	0.24.0	true	
dyte-js-sample-app	https://github.com/dyte-in/javascript-sample-app	0.21.1	false	https://github.com/dyte-in/javascript-sample-app/pull/3
dyte-sample-app-backend	https://github.com/dyte-in/backend-sample-app	0.23.0	true	

If possible try to conform to the same input and output interfaces, it will help us review things faster but if you think something else makes more sense, you are free to build it.

Ground rules

1. The tool must be written in Node.js, Golang, or Python.

2. It should work for public and private GitHub repositories.

3. It needs to work on Linux, and macOS machines. (We don't care about Windows :P)

4. It needs to have very clear documentation on how to install the tool and try it out. Please give some sample inputs for us to test it.

5. You can add any functionality you want as long as it is trying to solve the same problem, given the overwhelming amount of applications we have received, any additional features you add will fetch you bonus points.

6. You are not allowed to use CLI tools (other than `git`, of course) which do similar dependency tracking, such as `dependabot`. Like you can do that if you already have a really nice offer already and you just wanna troll us but don't do it if you are seriously applying.

7. **We take plagiarism very seriously.** If found cheating, there will be serious consequences for you and the person you copied from.

8. Relax, **we won't do any cutoffs based on CGPA**, even if we have to review 1000s of repositories. All we need to see is that you can code.

How to submit your code

We take submissions in the form of GitHub repositories.

1. Please join the GitHub classroom using this link: https://classroom.github.com/a/R63zfLxi. Once you accept the assignment, a repository will be created for you automatically. Make sure you push all your commits to this repository before the deadline.

2. Please fill this link with all the relevant details: https://airtable.com/shroszjNUQ27f9jFk. Make sure to add the repo link, it should look something like this: `https://github.com/dyte-submissions/dyte-vit-2022-<your-username>` .

For any questions, please send us an e-mail at support@dyte.io.