



Assignment (Software Engineer)

Intro

Let's imagine, you are building an Web application `Tech Notes Plus`, that lets user to take notes. User can take notes, add them, edit them delete them, search them and even can share them with other users for view only, that is user can share their notes to other user to view.

Also we want the to notify the user with whom the note is shared with using notification via email.

Seems cool? Let's build this.

Pre-requisite

You need to send notification about shared notes, that's why you need to use email delivery service. We suggest you use `sendgrid` to send mail using the free plans. Details can be found [here](#).

More Details..

You need to build a working frontend alongside the backend as well as APIs so that we can connect to mobile frontend too.

1. **Authentication and Authorization:** User logs in via username and password. Your implementation should support changing password and profile too. You need to build APIs for this using `Django Rest Framework`. Also, you need to implement `JWT` tokens so that to complete the stateless communication between server and the client.
2. **Notes:** Add capabilities to add, delete, edit and share the notes. Please make sure, notes can contain emojis, html formatted texts. So please implement the models accordingly. Please add tags to the notes and implement finding notes based on tags. One note can have multiple tags. And of course the tags should be available to all users(no private tags).

3. **Sharing:** You need to implement sharing capabilities with other users. Here, you need to implement user discovery that actually searches for users. You need to share the notes with other users. you need to keep the track of the notes if it is viewed by the user shared with.
4. **Notification:** If the note shared is not viewed by the user, you need to send mail as a notification to the user to remind them about the notes. Please introduce a light-weight scheduler so that it sends mails after a certain intervals.
5. **APIs:** Implement all of the above so that can be operated via APIs. Use any http-client (Insomnia or Postman) to test these APIs and share it with with docs.

We Expect..

1. You use `GitHub/Bitbucket` for you code, and share with us the link so that we can have a journey with you throughout the process of building this. Your repository should name `/technotesplus` .
2. Also, please keep an `.env` file for keeping the keys and credentials, and share the content with it.
3. If you are using other `databases` than `SQLite` , please make sure you provide data population script for populating the database.
4. Your repository contains a clean `README.md` file, where you explain how to replicate your code base into our system and test accordingly.
5. **Bonus** - After completion, you can deploy this application to `Heroku` in their free tier quota to showcase your project. Also, if possible, write proper `Test Codes` so is to cover most of the endpoints.