



SOFTWARE ENGINEERING PERSONAL REPORT

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PROGRAM: COMPUTER ENGINEERING

COURSE: INTRODUCTION TO SOFTWARE ENGINEERING

INTRODUCTION:

I am a member of the GREY DEVELOPERS group In both back-end and front-end teams. We worked on a Preschool app for both JHS and SHS students especially students preparing for their BECE and WASSCE exams.

The front-end team was responsible for the user interface(UI) and the user experience(UX) of the application including input validations.
The back-end team was responsible for the database schema,data manipulation(CRUD), user authentication and authorization.

It was a challenging task choosing the right technology initially.
Most of my members turned down the technology I suggested we use for the front-end. After much explanation, they later agreed.
They all agreed we build this web application in the REST API way but not the traditional way.I suggested we do this so that in future we may add a mobile app to make API calls to this same back end. Meaning two or more clients(Front-ends) can exchange data with one backend.

MY CONTRIBUTION AS A FULL-STACK DEVELOPER

- I contributed in the implementation of the REST API to serve data to more than one front-ends.
- I suggested the use of json web tokens(JWT) concept for both authorization and authentication in the app.
- I also used this JWT concept in creating most of the protected API routes in Python3(FLASK).
- I wrote a code in the login route that could generate JWT token from the user after the user login.

This will be returned so that another front-end developer doing the front-end for the login could store it in localstorage for authorization.

- I also made several front-end routes for this single page app. Most of the front-end routes make API calls to the protected routes in the back-end. Jwt token stored in localstorage could help accomplish this authorization task.

LESSONS LEARNT FROM THIS PROJECT

I discovered a lot from this project and I learnt lot of things. It wasn't easy since Flask has a very small community. This project was really educative and to be sincere I learnt a lot of concepts such as REST API architecture,JWT authentication and authorization techniques. I wouldn't have known JWT and REST API concepts very well without this project because I was using back-end authentication services such as Parse and Firebase. Working together as group was quite challenging but I learnt a lot from it since in the software field,I will always be working with group of developers.

Using git was a challenging task but I can now work using git with other developers and even controll the versions of my project.

I hope this project will help me get freelancing jobs very soon.