**The Software Development The Process Until Deployment**

1- the process that I follow for the coding for making the application:

- first step creating the application by first create virtual environment to install dependences and make requirement file to save on it installed

- second step creating application project with naming convention noun and first letter capital

- the third thing create the database in my apps that I have created and use files models.py in every application to make the structure of database that I have made before in paper and make draw for it in my head

- make documentation for the code by make comments on every function and class that show the use of endpoint and the parameters if take and the method or action (POST, GET, PUT OR PATCH, DELETE)

- make documentation for whole application using third party apps like swagger or core api or open api

- after make the view and make to it the url make test for it with tests.py for unit test and using postman to make sure the endpoint works correctly

- for the authentication I have worked with them jwt encoding for access token and generate access token and refresh token and make validation and can use rest framework authentication token or other authentication tools to make validation for the request in header to know who is the user call the endpoint and authorization

- I have worked with the rest framework status and in the response of endpoint I have returned and message for success of failure and status code such as 200 for success or 404 for failure of not found

- in the deployment process I have to make revision in my file settings.py to make restrict for domains or url that can call my backend apis and make debug mode for False to restrict any one to show the data of my urls and make white list for urls that can call my backend and allowed hosts to call my endpoint

2- the Tools that I have worked on it and use:

- I have used visual studio code, atom and sublime txt for coding tools

- I have more working with PyCharm professional that fantastic python IDE

- For database I have worked with MySQL and MySQL workbenches and work with postgres and its tool pg. admin to make control and queries

- I make upload for code in the server like aws servers and GoDaddy and digital ocean so I use tools like putty and FileZilla or ssh from terminal of command if I have ssh key for server

3- If I have seen an error that I don’t see before I can go to google and search on it and go to stack over flow, I have a new thing to learning or my application needs to work on it I search on videos or blogs on it and make studying and apply for it in my conditions or can see course from Udemy to work with in it

4- APIs allow scalability and flexibility when expanding your store’s catalog, security, or data needs. Your store can grow at a faster rate when you don’t have to factor in new code for every single product or user.

5- for security I prefer a simple token-based authentication, where the token is a random hash assigned to the user and they can reset it at any point if it has been stolen. Allow the token to be passed in through POST or an HTTP header

And user permissions to make authorization for the user have been login