***Covid19 Form:***

I was asked to develop a simple web application to collect data from citizens about covid19.

The back end will be written with Django, front end with React and the databade with PostgreSQL.

For this exercise I had already studied a little bit of PostgreSQL – I am working with postgres for few months now buy with typeorm with typescript so it’s a little different with djando but there is on youtube simple videos to how to work with postgres:

Link how to connect PostgreSQL to Django - <https://www.youtube.com/watch?v=dYDoGHV-9hY&t=163s>

This website explain what need to be installed and how to connect step by step:

<https://www.enterprisedb.com/postgres-tutorials/how-use-postgresql-django>

and another video to understand how to save data and get data:

<https://www.youtube.com/watch?v=Pwwz4_AvHDU>

there is some install to do -> pip install psycopg2

those are only for PostgreSQL.

***Django:***

I did not know Django before so I had to take some tutorial for Django in youtube:

<https://www.youtube.com/watch?v=rHux0gMZ3Eg&t=1314s>

this video explain what install you need to do, how to build first Django app and settings.

First of all, you install few things:

Pip install -g pipenv -> virtual environment

This on the vscode or whatever you use install in the directory of the project

Pipenv install Django

Then to move the virtual environment write pipenv shell

Then to start project you need to type : Django-admin startproject nameofproject .

Then to build an app with Django you will type: python manage.py startapp appname

And for last thing you will type: Django manage.py startserver

That’s the way to build a server by the way I show on youtube.

The link above will show the user how to write all he needed – routes, setting and will show how the server working so for a new user in Django it is perfect tutorial.

Only this this video is only one side and don’t have front end so it's not perfect for our project and we need to write the back end a little different from this video

<https://www.youtube.com/watch?v=ejJ-2oz4AgI&t=1127s>

<https://www.youtube.com/watch?v=BSHRftLtPEg&t=120s>

<https://www.youtube.com/watch?v=cJveiktaOSQ&t=61s>

this videos explain how to work with Django all In little different way so I choose small thing from each one of the videos and combine some rest frame work way to the back end.

Another thing, for export the data to excel I had learned from you tube video how to do so,

Here is the link:

<https://www.youtube.com/watch?v=rmVHOg7fj7E> -> export to excel

For me those videos were more than enough.

Finally to build tables on the DB you will need to write your models in the Django project and type:

python manage.py makemigrations  
python manage.py migrate -> it will create tables on the DB.

**To run the server after you wrote the code all needed to do is make sure you are on the pipenv shell and if not write pipenv shell and then write Django manage.py startserver.**

***React:***

I did not know react so good but I have seen some react code before.

First I looked at some videos on youtube for react

<https://www.youtube.com/watch?v=w7ejDZ8SWv8>

and then I used a website to help open new project of react:

<https://www.codecademy.com/article/react-setup-i>

there is few installation to do:

npm init -> to start new project

npm I –save react

npm I –save react-dom

npm install react-router-dom -> to redirect to another urls

npm I axios -> to send data to back end

npm install react-bootstrap [bootstrap@5.1.3](mailto:bootstrap@5.1.3) -> bootstap for react

npm I @mui

npm I @mui/lab

npm I @mui/material ->using the website mui

we study HTML in the first semester so all needed to do is combine react to it,

most of the HTML visual code I got from the websites:

bootstrap

<https://getbootstrap.com/docs/4.0/getting-started/introduction/>

mui:

https://mui.com/

so all needed to learn is pure react from the first video I put (first link) and there is some more links:

<https://www.youtube.com/watch?v=O6P86uwfdR0> -> hooks in react

<https://www.youtube.com/watch?v=Y2hgEGPzTZY> -> components

<https://www.youtube.com/watch?v=oQnojIyTXb8> -> axios with react

<https://www.youtube.com/watch?v=6LyagkoRWYA> -> and more axios

with those videos I recon everyone should know how to build the project and how build a simple web application.

I set down to study react for a full day because this is the most complex thing for me that I worked with less than the others.

***To run react server as well needed to write npm start***

**PostgreSQL**

It was pretty easy because there is not much that I did not know all I needed is to understand how to work with Django and PostgreSQL and it way pretty simple after watching the videos on you tube.

Django is a now this I have learn but I already know on javascript how to write some backend so all the differences was how to start project and where should I write routes, how to write on the project, defining the routes and some settings but the videos were very nice and very helpful to understand how to use Django.

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