LABBBBBB 4:

Step 1: Clone the MERN app

```
cd ~
git clone https://github.com/Kuzma02/Simple-MERN-App.git
cd Simple-MERN-App
```

Step 2: Install Nodedependencies:(Inside simple mern app)

ls -la

npm install

nano .env

MONGO_URI=mongodb+srv://i221542:yxs7VnyPHUoJvCH9@cluster0.kujkb.mongodb.net/?retryWrites=true&w=majority&appName=Cluster0
PORT=3000

Press Ctrl + O, then Enter to save, and Ctrl + X to exit.

node app.js

OPEN ANOTHER WSL AND PASTE THIS:
cd ~/Simple-MERN-App/client

```
npm install
npm run dev
```

STEP 3: Deploy with Apache
(OPEN ANOTHER WSL TERMINAL)

1. Install Apache

```
sudo apt update muy password is : warda
sudo apt install apache2
```

2.Check if apache is running:
```
apache2 -v
sudo systemctl status apache2
```

3.Enable proxy modules

```
sudo a2enmod proxy
sudo a2enmod proxy_http
```

4.Edit Apache config

```
sudo nano
/etc/apache2/sites-available/000-default.conf
```

Inside the <VirtualHost *:80> block, add:

```apache
<VirtualHost *:80>
    ServerName 172.25.180.97

    # Serve React frontend
    DocumentRoot /var/www/html
    <Directory /var/www/html>
        Options Indexes FollowSymLinks
        AllowOverride All
        Require all granted
    </Directory>

    # Proxy API requests to Express backend
    ProxyPass /api/v1/
http://localhost:3000/api/v1/
    ProxyPassReverse /api/v1/
http://localhost:3000/api/v1/

    ErrorLog ${APACHE_LOG_DIR}/error.log
    CustomLog ${APACHE_LOG_DIR}/access.log combined
</VirtualHost>
```

Then save (Ctrl + O, Enter, Ctrl + X).

5.Restart Apache:
```
sudo systemctl restart apache2
```

Then open:

http://localhost

STEP: 4: DEPLOY WITH NGINX:

Install Nginx

```
sudo apt install nginx
```

Configure Nginx

```
sudo nano /etc/nginx/sites-available/default
```

Replace the location / block with:

```
server {
    listen 80;
    server_name localhost;

    location / {
        proxy_pass http://localhost:3000;
        proxy_http_version 1.1;
        proxy_set_header Upgrade
$http_upgrade;
```

```
        proxy_set_header Connection
'upgrade';
        proxy_set_header Host $host;
        proxy_cache_bypass $http_upgrade;
    }
}
```

Restart Nginx

```
sudo systemctl stop apache2
sudo systemctl restart nginx
```