Steps to create an EC2 instance in AWS:

1. Login to AWS Console in the browser
2. Select EC2 from the Recently visited list
3. Select the instances from the sidebar menu
4. Click on Launch Instance button at the top right corner
    a. In the Name and tags section, enter your first name, followed by instance name
    b. In Application and OS Images (Amazon Machine Image) section,
        i. Select Ubuntu
        ii. Select AMI which is free tier eligible
        iii. Select Architecture as x86
    c. In Instance type section,Select t3.micro (free tier eligible)
    d. In Key pair (login) section, select "**AWS**" as the key pair name/
    e. In Network settings section, select the existing security group, "default."
    f. In Configure Storage section, keep the default values.
    g. Finally, click on Launch Instance and wait till it shows a success message.
5. Switch to Instances page and refresh it to see your instance.

Steps to connect to the EC2 instance through Laptop/PC:

1. Download the fsd02key.pem file from the drive link shared with you.
2. Keep it in a folder where you can access it later, and open the powershell/bash shell from this folder location.
3. Go to the EC2 instance page in the browser and do the following
    a. Select your instance
    b. Click on connect button at the top.
    c. In Connect to instance page, select SSH client tab
    d. Copy the link under Example:
4. Go back to the powershell/bash and paste the SSH client link, then press enter.
5. Type "yes" if prompted to authenticate the connection and press enter.
    a. If it shows permission denied or bad permissions, execute the command "chmod 600 AWS.pem."
    b. And then try to reconnect using SSH client connection link
    c. Now, you can see "Ubuntu Console" connected.

Steps to install docker in EC2 instance:

1. Connect to EC2 instance locally.
2. Execute the following commands:
    a. Update linux libraries
        $ sudo apt update
    b. Install docker
        $ sudo apt install docker.io
    c. Check the docker version.
        $ sudo docker version

Docker Commands:

- ***To run the image,***
    $ sudo docker build -t nginx:latest .

- ***To pull nginx,***
    $ sudo docker pull nginx

- ***To list the docker images,***
  $ sudo docker images

- ***To run the image,***
  $ sudo docker run -d -p 80:80 nginx:latest

- ***To see the list of containers currently running,***
  $ sudo docker ps

- ***To stop the running container,***
  $ sudo docker stop container_id

- ***To romve the container,***
  $ sudo docker rm container_id

- ***To remove/delete an image from docker,***
  $sudo docker rmi image_name:tag

- ***To remove/delete an image with dangling effect from docker container,***
  $sudo docker rmi -f image_name:tag

Dockerfile for Frontend-Realgrande

1. Clone the github frontend repository
2. Create a Dockerfile

```
FROM node
WORKDIR /app
COPY . /app
RUN npm install
EXPOSE 3000
CMD ["npm","start"]
```

3. Push the Dockerfile to GitHUb
   To run the frontend image from docker:

```
sudo docker build -t <image_name> .
sudo docker images
sudo docker run -d -p 3000:3000 <Image_name>
```

4. See the constant through <public_ip>:3000