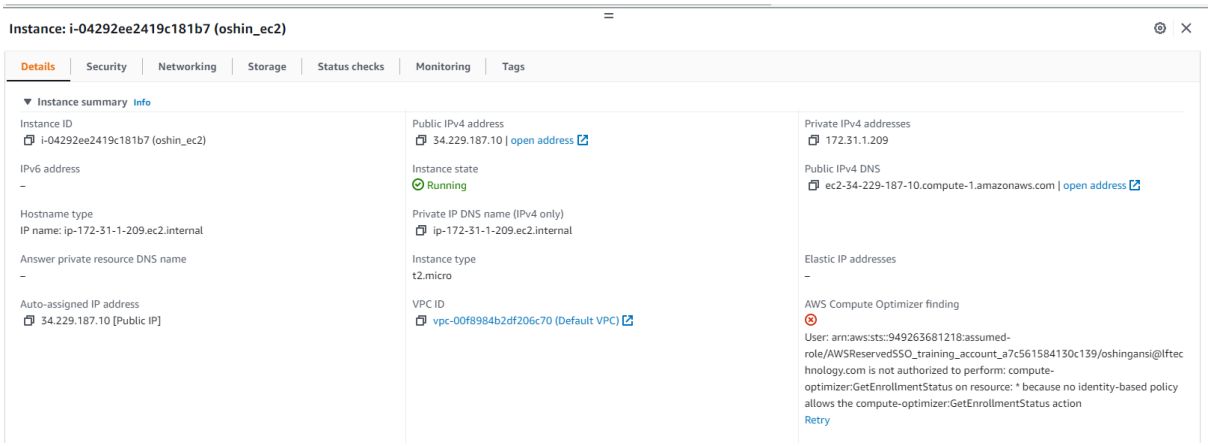
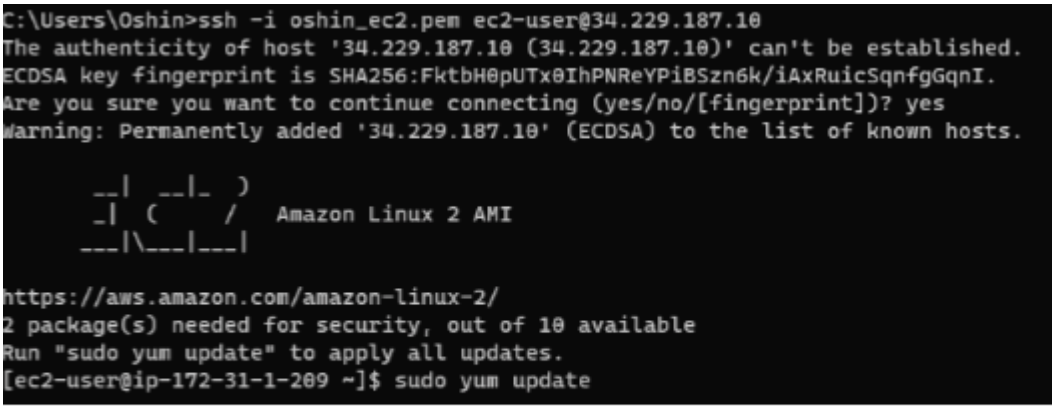
1.Launch an EC2 instance and login via ssh furthermore, install httpd(apache).

Launched EC2 instance:



Login via ssh



Install httpd

```
Complete!
[ec2-user@ip-172-31-1-209 ~]$ sudo yum install httpd\
>
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
---> Package httpd.x86_64 0:2.4.54-1.amzn2 will be installed
--> Processing Dependency: httpd-tools = 2.4.54-1.amzn2 for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: httpd-filesystem = 2.4.54-1.amzn2 for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: system-logos-httpd for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: mod_http2 for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: httpd-filesystem for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: /etc/mime.types for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: libaprutil-1.so.0()(64bit) for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: libapr-1.so.0()(64bit) for package: httpd-2.4.54-1.amzn2.x86_64
--> Running transaction check
---> Package apr.x86_64 0:1.7.0-9.amzn2 will be installed
---> Package apr-util.x86_64 0:1.6.1-5.amzn2.0.2 will be installed
--> Processing Dependency: apr-util-bdb(x86-64) = 1.6.1-5.amzn2.0.2 for package: apr-util-1.6.1-5.amzn2.0.2.x86_64
---> Package generic-logos-httpd.noarch 0:18.0.0-4.amzn2 will be installed
---> Package httpd-filesystem.noarch 0:2.4.54-1.amzn2 will be installed
---> Package httpd-tools.x86_64 0:2.4.54-1.amzn2 will be installed
---> Package mailcap.noarch 0:2.1.41-2.amzn2 will be installed
---> Package mod_http2.x86_64 0:1.15.19-1.amzn2.0.1 will be installed
--> Running transaction check
---> Package apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

==========================================================================================================
 Package                     Arch              Version                      Repository               Size
==========================================================================================================
Installing:
 httpd                       x86_64            2.4.54-1.amzn2               amzn2-core              1.4 M
Installing for dependencies:
 apr                         x86_64            1.7.0-9.amzn2                amzn2-core              122 k
 apr-util                    x86_64            1.6.1-5.amzn2.0.2            amzn2-core               99 k
 apr-util-bdb                x86_64            1.6.1-5.amzn2.0.2            amzn2-core               19 k
 generic-logos-httpd         noarch            18.0.0-4.amzn2               amzn2-core               19 k
 httpd-filesystem            noarch            2.4.54-1.amzn2               amzn2-core               24 k
 httpd-tools                 x86_64            2.4.54-1.amzn2               amzn2-core               88 k
 mailcap                     noarch            2.1.41-2.amzn2               amzn2-core               31 k
 mod_http2                   x86_64            1.15.19-1.amzn2.0.1          amzn2-core              149 k

Transaction Summary
==========================================================================================================
Install  1 Package (+8 Dependent packages)

Total download size: 1.9 M
Installed size: 5.2 M
```

```
Transaction Summary
==========================================================================================================
Install  1 Package (+8 Dependent packages)

Total download size: 1.9 M
Installed size: 5.2 M
Is this ok [y/d/N]: y
Downloading packages:
(1/9): apr-1.7.0-9.amzn2.x86_64.rpm                                            | 122 kB  00:00:00
(2/9): apr-util-1.6.1-5.amzn2.0.2.x86_64.rpm                                   |  99 kB  00:00:00
(3/9): apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64.rpm                               |  19 kB  00:00:00
(4/9): generic-logos-httpd-18.0.0-4.amzn2.noarch.rpm                           |  19 kB  00:00:00
(5/9): httpd-filesystem-2.4.54-1.amzn2.noarch.rpm                              |  24 kB  00:00:00
(6/9): httpd-2.4.54-1.amzn2.x86_64.rpm                                         | 1.4 MB  00:00:00
(7/9): httpd-tools-2.4.54-1.amzn2.x86_64.rpm                                   |  88 kB  00:00:00
(8/9): mailcap-2.1.41-2.amzn2.noarch.rpm                                       |  31 kB  00:00:00
(9/9): mod_http2-1.15.19-1.amzn2.0.1.x86_64.rpm                                | 149 kB  00:00:00
----------------------------------------------------------------------------------------------------------
Total                                                                9.6 MB/s | 1.9 MB  00:00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : apr-1.7.0-9.amzn2.x86_64                                                           1/9
  Installing : apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64                                              2/9
  Installing : apr-util-1.6.1-5.amzn2.0.2.x86_64                                                  3/9
  Installing : httpd-tools-2.4.54-1.amzn2.x86_64                                                  4/9
  Installing : httpd-filesystem-2.4.54-1.amzn2.noarch                                             5/9
  Installing : generic-logos-httpd-18.0.0-4.amzn2.noarch                                          6/9
  Installing : mailcap-2.1.41-2.amzn2.noarch                                                      7/9
  Installing : mod_http2-1.15.19-1.amzn2.0.1.x86_64                                               8/9
  Installing : httpd-2.4.54-1.amzn2.x86_64                                                        9/9
  Verifying  : apr-util-1.6.1-5.amzn2.0.2.x86_64                                                  1/9
  Verifying  : apr-util-bdb-1.6.1-5.amzn2.0.2.x86_64                                              2/9
  Verifying  : httpd-tools-2.4.54-1.amzn2.x86_64                                                  3/9
  Verifying  : mod_http2-1.15.19-1.amzn2.0.1.x86_64                                               4/9
  Verifying  : httpd-2.4.54-1.amzn2.x86_64                                                        5/9
  Verifying  : mailcap-2.1.41-2.amzn2.noarch                                                      6/9
  Verifying  : generic-logos-httpd-18.0.0-4.amzn2.noarch                                          7/9
  Verifying  : httpd-filesystem-2.4.54-1.amzn2.noarch                                             8/9
  Verifying  : apr-1.7.0-9.amzn2.x86_64                                                           9/9

Installed:
  httpd.x86_64 0:2.4.54-1.amzn2

Dependency Installed:
  apr.x86_64 0:1.7.0-9.amzn2           apr-util.x86_64 0:1.6.1-5.amzn2.0.2   apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2   generic-logos-httpd.noarch 0:18.0.0-4.amzn2   httpd-filesystem.noarch 0:2.4.54-1.amzn2
  httpd-tools.x86_64 0:2.4.54-1.amzn2   mailcap.noarch 0:2.1.41-2.amzn2       mod_http2.x86_64 0:1.15.19-1.amzn2.0.1

Complete!
[ec2-user@ip-172-31-1-209 ~]$
```

2.Create a Dockerfile for node js and react and push the created docker images to the docker hub repository.

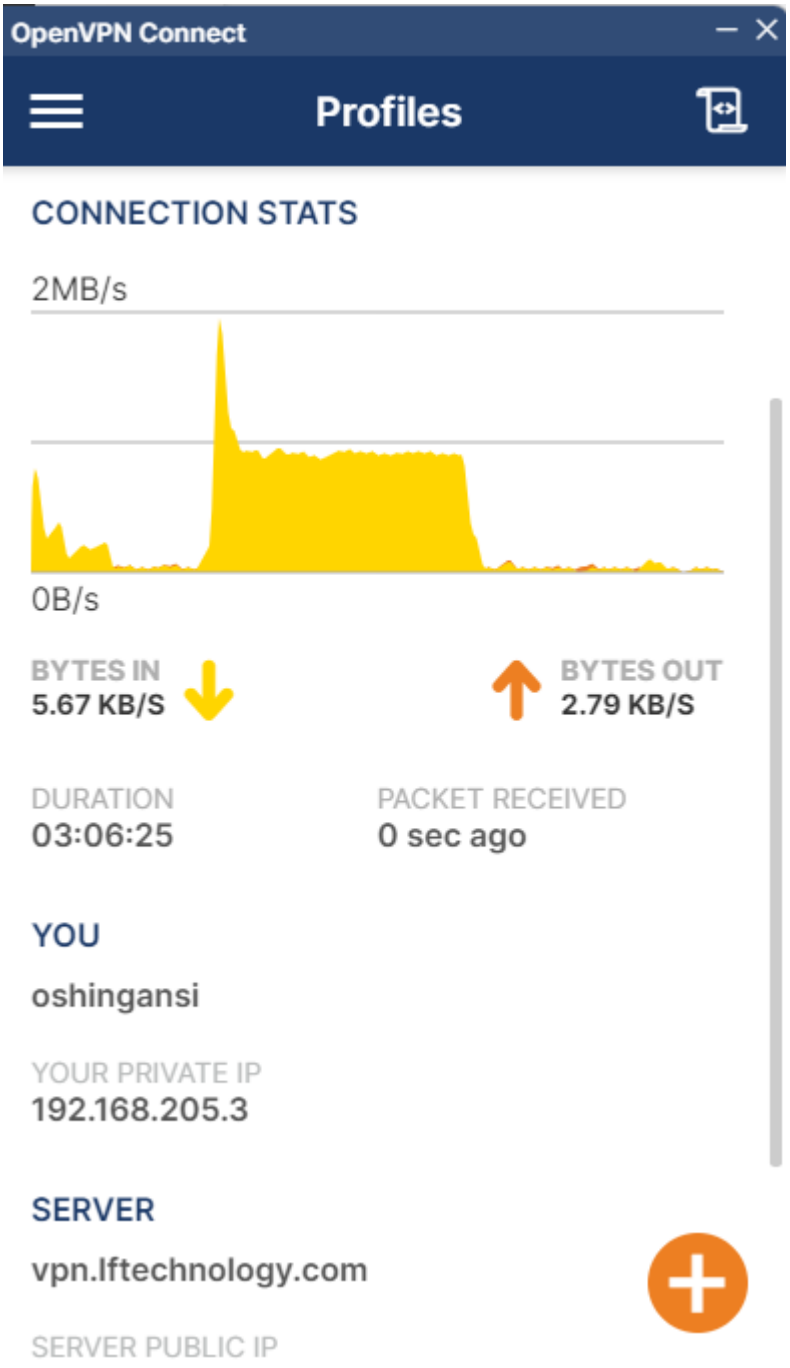
Docker File:

Dockerfile

```
# pull official base image
FROM node:latest

# set working directory
WORKDIR /app

# add `/app/node_modules/.bin` to $PATH
ENV PATH /app/node_modules/.bin:$PATH

# install app dependencies
COPY package.json ./
RUN npm install -g npm@8.16.0
RUN npm install
RUN npm install react-scripts@3.4.1 -g --silent

# add app
COPY . ./

# start app
CMD ["npm", "start"]

```

Docker Commands:
1.docker build -t vas:dev .
2. docker run -d -it --rm -p 3001:3000 vas:dev
3. docker tag vas:dev oshin136/vas
4. docker push

3.Setup office vpn and access self learning platforms.



4.List down common HTTP status code(only 10) with means.

A. Status Code 200 :
   This is the standard “OK” status code for a successful HTTP request. The response that is returned is dependent on the request.

B. Status Code 201:
   This is the status code that confirms that the request was successful and, as a result, a new resource was created. Typically, this is the status code that is sent after a POST/PUT request.

C. Status Code 204 :
   This status code confirms that the server has fulfilled the request but does not need to return information.

D. Status Code 304 :
   This status code is used for browser caching. If the response has not been modified, the client/user can continue to use the same response/cached version.

E. Status Code 400 :
   The server cannot understand and process a request due to a client error. Missing data, domain validation, and invalid formatting are some examples that cause the status code 400 to be sent.

F. Status Code 401 :
   This status code request occurs when authentication is required but has failed or not been provided.

G. Status Code 403 :
   Very similar to status code 401, a status code 403 happens when a valid request was sent, but the server refuses to accept it. This happens if a client/user requires the necessary permission or they may need an account to access the resource. Unlike a status code 401, authentication will not apply here.

H. Status Code 404 :
   The most common status code the average user will see. A status code 404 occurs when the request is valid, but the resource cannot be found on the server.

I. Status Code 409:
   A status code 409 is sent when a request conflicts with the current state of the resource. This is usually an issue with simultaneous updates, or versions, that conflict with one another.

J. Status Code 500 :
Another one of the more commonly seen status codes by users, the 500 series codes are similar to the 400 series codes in that they are true error codes. The status code 500 happens when the server cannot fulfil a request due to an unexpected issue. Web developers typically have to comb through the server logs to determine where the exact issue is coming from.

5.Find network id and Broadcast for 150.10.20.30.

Network id: 150.10.20.0
Broadcast Id: 150.10.20.255