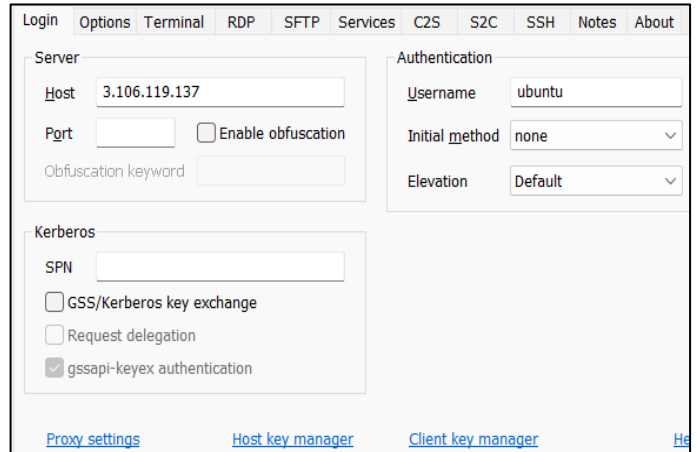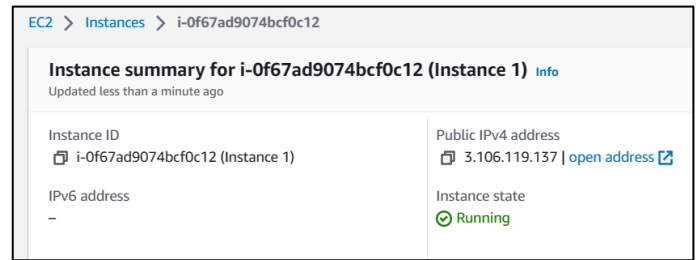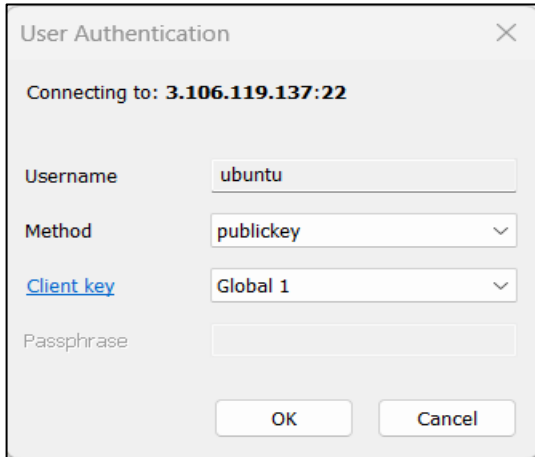# Assignment 9: Deploy a project from GitHub to EC2.

1. Log in to AWS and create an **EC2 Instance**.
2. Open **Bitvise SSH Client** Application and paste the public IPv4 of the instance in the **Host** field. Give **Username** as **ubuntu**.
3. Click **Client Key Manager**, remove existing keys and import the new key.
4. Log in. In **User Authentication** set client key as **Global1**.

5. Open **New Terminal Console.**
6. Enter and execute the following commands:
   - pwd
   - sudo apt-get update
   - sudo apt-get upgrade
   - sudo apt-get install nginx
   - curl -sL https://deb.nodesource.com/setup_18.x | sudo -E bash –

```
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-30-178:~$ curl -sL https://deb.nodesource.com/setup_18.x | sudo -E bash -

## Installing the NodeSource Node.js 18.x repo...
```

   - sudo apt install nodejs

```
ubuntu@ip-172-31-30-178:~$ sudo apt install nodejs
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
```

   - node -v
   - git clone https://github.com/Sayan-K-Dutta/Assign8-Repo2.git

```
ubuntu@ip-172-31-30-178:~$ git clone https://github.com/Sayan-K-Dut
Cloning into 'Assign8-Repo2'...
Username for 'https://github.com': Sayan-K-Dutta
Password for 'https://Sayan-K-Dutta@github.com':
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (9/9), done.
```
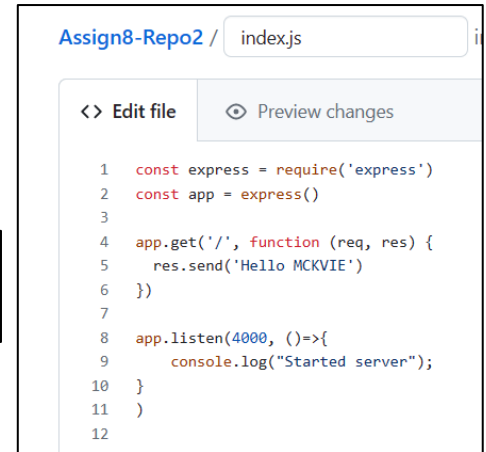
7. Give Username same as the GitHub username and the token as the password. Press Enter and execute the following commands:
   - dir
   - cd Assign8-Repo2
   - ls
   - npm install
   - node index.js

```
ubuntu@ip-172-31-30-178:~$ dir
Assign8-Repo2
ubuntu@ip-172-31-30-178:~$ cd Assign8-Repo2
ubuntu@ip-172-31-30-178:~/Assign8-Repo2$ ls
'New Text Document.txt'  index.js   package.json
ubuntu@ip-172-31-30-178:~/Assign8-Repo2$ npm install
npm WARN deprecated uuid@3.4.0: Please upgrade  to version 7 or high
.random() in certain circumstances, which is known to be problematic
random for details.

added 258 packages, and audited 259 packages in 21s
```

```
ubuntu@ip-172-31-30-178:~/Assign8-Repo2$ node index.js
Started server
```

8. The **index.js** file in GitHub consists of port no. **4000**. Go to the **Security** option of the instance.
9.
10. Click the **Security Group** and go to **Edit inbound rules**. Click on **Add rules**, set **Custom TCP** with Port range of **4000** and select **0.0.0.0/0**. Save the rule.

Custom TCP ▼	TCP	4000	Anywh... ▼	🔍
				0.0.0.0/0 ✕

11. Go to web browser and give the port number after the public IPv4. Press Enter.

```
🗔   📄  3.106.119.137:4000      ✕    🗗  EC2 Manageme
←   🔄        ⚠ Not secure   |   3.106.119.137:4000

Hello MCKVIE
```

Assign8-Repo2 / index.js   i

<> Edit file   ⊙ Preview changes

```
1   const express = require('express')
2   const app = express()
3
4   app.get('/', function (req, res) {
5     res.send('Hello MCKVIE')
6   })
7
8   app.listen(4000, ()=>{
9       console.log("Started server");
10  }
11  )
12
```
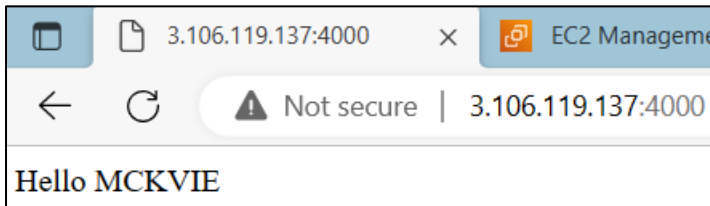
12. Go to **index.js** in GitHub and make some changes in the String displayed. Commit Changes.
13. Stop the server by Ctrl+C in the terminal.
14. Execute the command `git pull`. Enter Username and Password and type the command `node index.js`.

```
Started server
^C
ubuntu@ip-172-31-30-178:~/Assign8-Repo2$ git pull
Username for 'https://github.com': Sayan-K-Dutta
Password for 'https://Sayan-K-Dutta@github.com':
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 2), reused 0 (delta 0), pack-reused
```

```
 1 file changed, 1 insertion(+), 1 deletion(-)
ubuntu@ip-172-31-30-178:~/Assign8-Repo2$ node index.js
Started server
```

Assign8-Repo2 / index.js   in master

<> Edit file   ⊙ Preview changes

```
1   const express = require('express')
2   const app = express()
3
4   app.get('/', function (req, res) {
5     res.send('Hello MCKVIE. This is AWS Trial')
6   })
7
8   app.listen(4000, ()=>{
9       console.log("Started server");
10  }
11  )
12
```

15. Refresh the web browser. Changes are reflected.

```
🗔   📄  3.106.119.137:4000      ✕    🗗  EC2
←   🔄        ⚠ Not secure   |   3.106.119.137:4000

Hello MCKVIE. This is AWS Trial
```