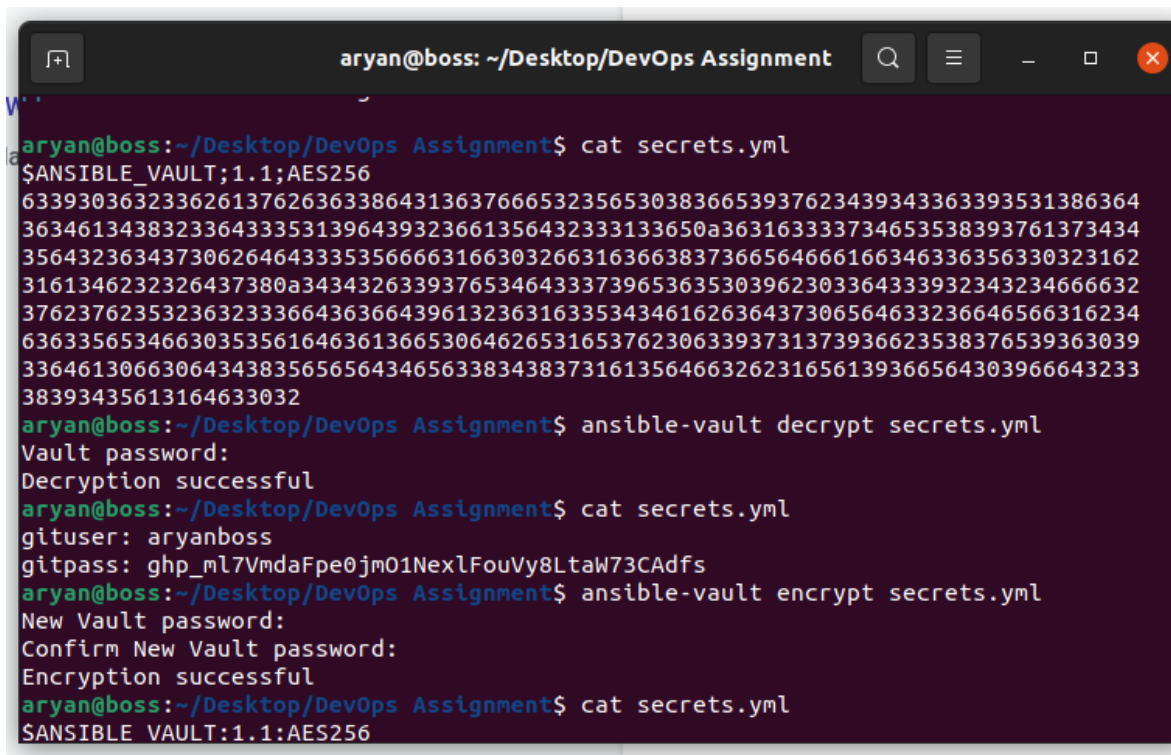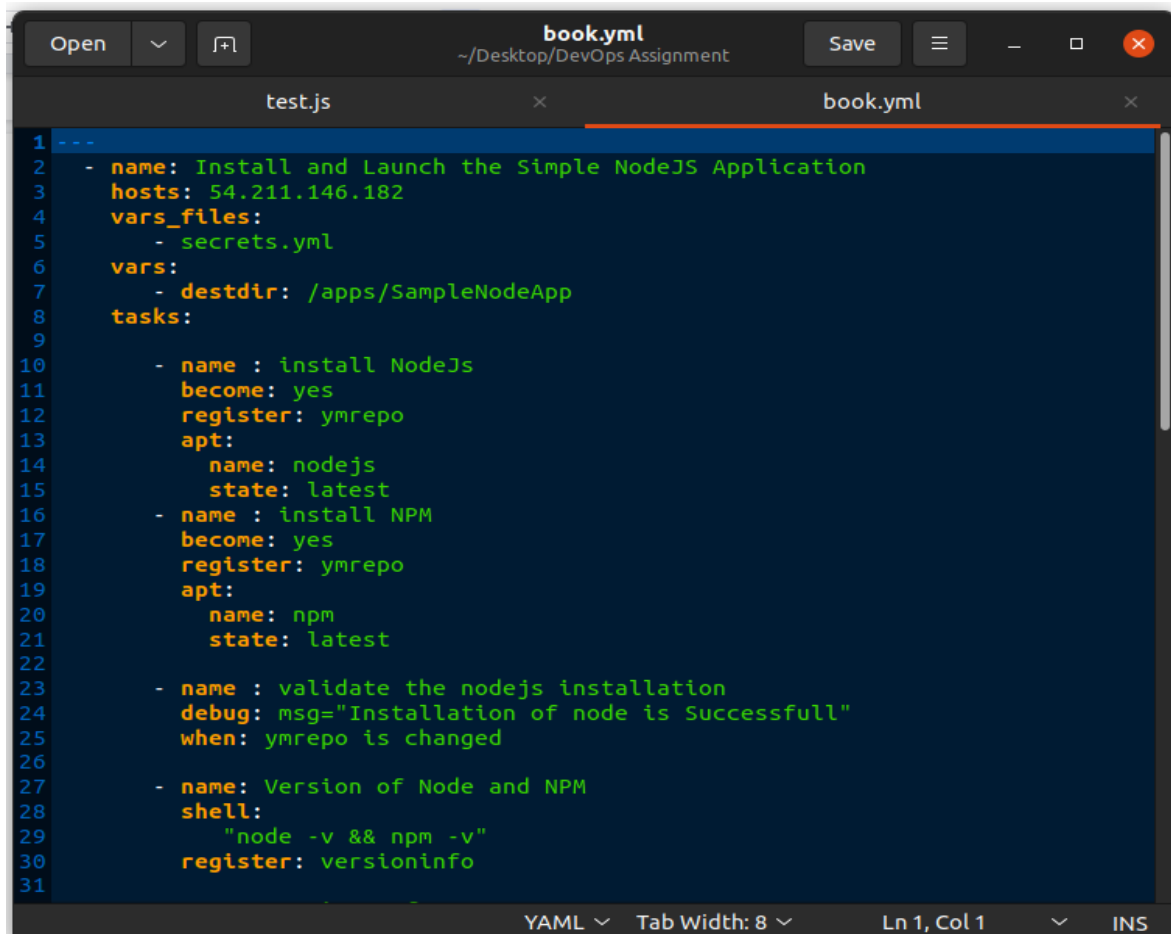# Ansible Playbook Exercise

- Create a secrets.yml file in a folder with ansible-vault
- Put your GitHub id and personal access token(PAT) in encrypted form.
  - *ansible-vault create secrets.yml*
  - *ansible-vault encrypt secrets.yml*
  - *ansible-vault decrypt secrets.yml*
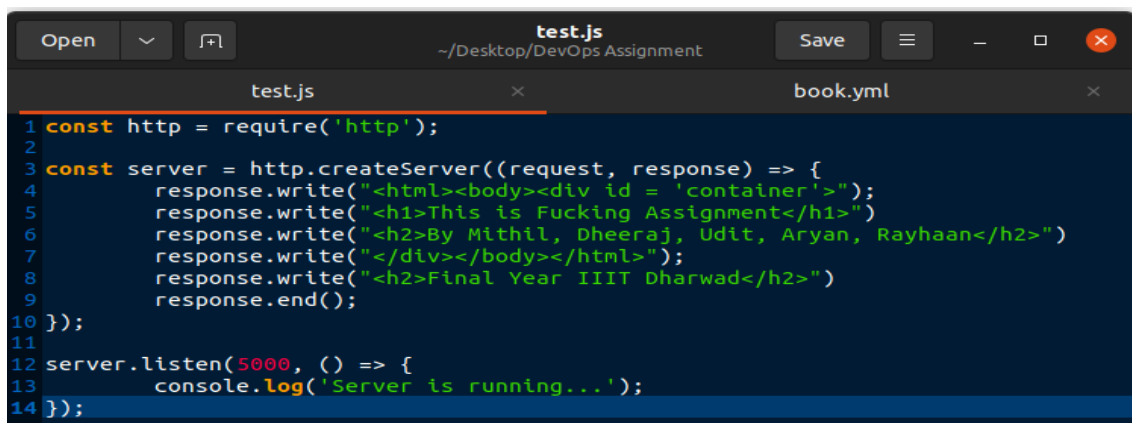 - *cat secrets.yml*

- Make an EC2 instance with any operating system image and copy its public IPV4 address.
- Write a playbook (book.yml) with all the tasks mentioned in it like installing NodeJS, validating the node js installation, Change the ownership of the, Install Directory, Install Dependencies with NPM install command, Debug npm install command, Validating port and other tasks.

test.js   ×   book.yml   ×

```yaml
---
 - name: Install and Launch the Simple NodeJS Application
   hosts: 54.211.146.182
   vars_files:
      - secrets.yml
   vars:
      - destdir: /apps/SampleNodeApp
   tasks:

      - name : install NodeJs
        become: yes
        register: ymrepo
        apt:
          name: nodejs
          state: latest
      - name : install NPM
        become: yes
        register: ymrepo
        apt:
          name: npm
          state: latest

      - name : validate the nodejs installation
        debug: msg="Installation of node is Successfull"
        when: ymrepo is changed

      - name: Version of Node and NPM
        shell:
            "node -v && npm -v"
        register: versioninfo
```

YAML ⌄   Tab Width: 8 ⌄   Ln 1, Col 1   ⌄   INS

- Write a NodeJS script of any application that should be hosted on the remote server and also mention the port number(5000) , that is to be used In the EC2 instance.

test.js   ×   book.yml   ×

```javascript
const http = require('http');

const server = http.createServer((request, response) => {
        response.write("<html><body><div id = 'container'>");
        response.write("<h1>This is Fucking Assignment</h1>")
        response.write("<h2>By Mithil, Dheeraj, Udit, Aryan, Rayhaan</h2>")
        response.write("</div></body></html>");
        response.write("<h2>Final Year IIIT Dharwad</h2>")
        response.end();
});

server.listen(5000, () => {
        console.log('Server is running...');
});
```

- Upload the NodeJs application onto the Github repository and copy the git address and paste it into the book.yml playbook file.
- Go on the security groups of EC2 instances and edit the inbound rules. Add a custom TCP with port number 5000.
- Make an ansible_host file and mention the IPV4 address of the EC2 instance on which we are going to deploy the NodeJS application.
- Launch the Playbook with Ansible Git: Run the playbook in the terminal with the following command line:
  - *ansible-playbook book.yml -i ansible_hosts --ask-vault-pass --user ubuntu --key-file ~/Downloads/DevOps1.pem*

```
aryan@boss: ~/Desktop/DevOps Assignment

aryan@boss:~/Desktop/DevOps Assignment$ ansible-playbook book.yml -i ansible_host
s  --ask-vault-pass --user ubuntu --key-file ~/Downloads/DevOps1.pem
Vault password:

PLAY [Install and Launch the Simple NodeJS Application] ***********************

TASK [Gathering Facts] *******************************************************
ok: [54.211.146.182]

TASK [install NodeJs] ********************************************************
ok: [54.211.146.182]

TASK [install NPM] **********************************************************
ok: [54.211.146.182]

TASK [validate the nodejs installation] **************************************
skipping: [54.211.146.182]

TASK [Version of Node and NPM] **********************************************
changed: [54.211.146.182]

TASK [Version Info] *********************************************************
ok: [54.211.146.182] => {
    "msg": "Version info ['v10.19.0', '6.14.4']"
}

TASK [Download the NodeJS code from the GitRepo] ****************************
changed: [54.211.146.182]

TASK [Change the ownership of the directory] *******************************
ok: [54.211.146.182]

TASK [Install Dependencies with NPM install command] ***********************
changed: [54.211.146.182]
```

```
aryan@boss: ~/Desktop/DevOps Assignment

TASK [Version of Node and NPM] ************************************************
changed: [54.211.146.182]

TASK [Version Info] **********************************************************
ok: [54.211.146.182] => {
    "msg": "Version info ['v10.19.0', '6.14.4']"
}

TASK [Download the NodeJS code from the GitRepo] *****************************
changed: [54.211.146.182]

TASK [Change the ownership of the directory] ********************************
ok: [54.211.146.182]

TASK [Install Dependencies with NPM install command] ************************
changed: [54.211.146.182]

TASK [Debug npm install command] ********************************************
ok: [54.211.146.182] => {
    "msg": [
        "up to date in 0.219s",
        "found 0 vulnerabilities"
    ]
}

TASK [Start the App] ********************************************************
changed: [54.211.146.182]

TASK [Validating the port is open] *****************************************
ok: [54.211.146.182]

PLAY RECAP *****************************************************************
54.211.146.182             : ok=11    changed=4    unreachable=0    failed=0    sk
ipped=1    rescued=0    ignored=0
```

- The Playbook has run successfully and done all the tasks mentioned in the book.yml file.
- Now let us access the URL http://54.211.146.182:5000/ and test it.
- The NodeJs application is successfully deployed on the remote server.

Hello! This is DevOps Assignment 2

By Mithil, Dheeraj, Udit, Aryan, Rayhaan

Final Year IIIT Dharwad

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