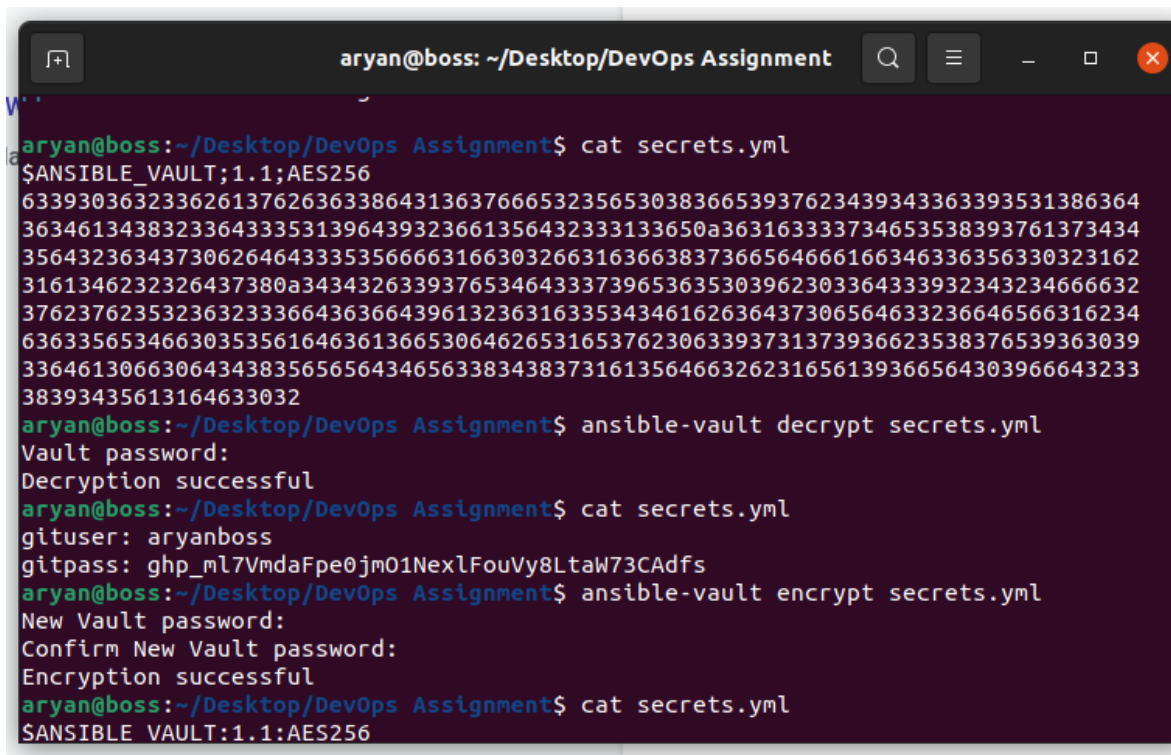
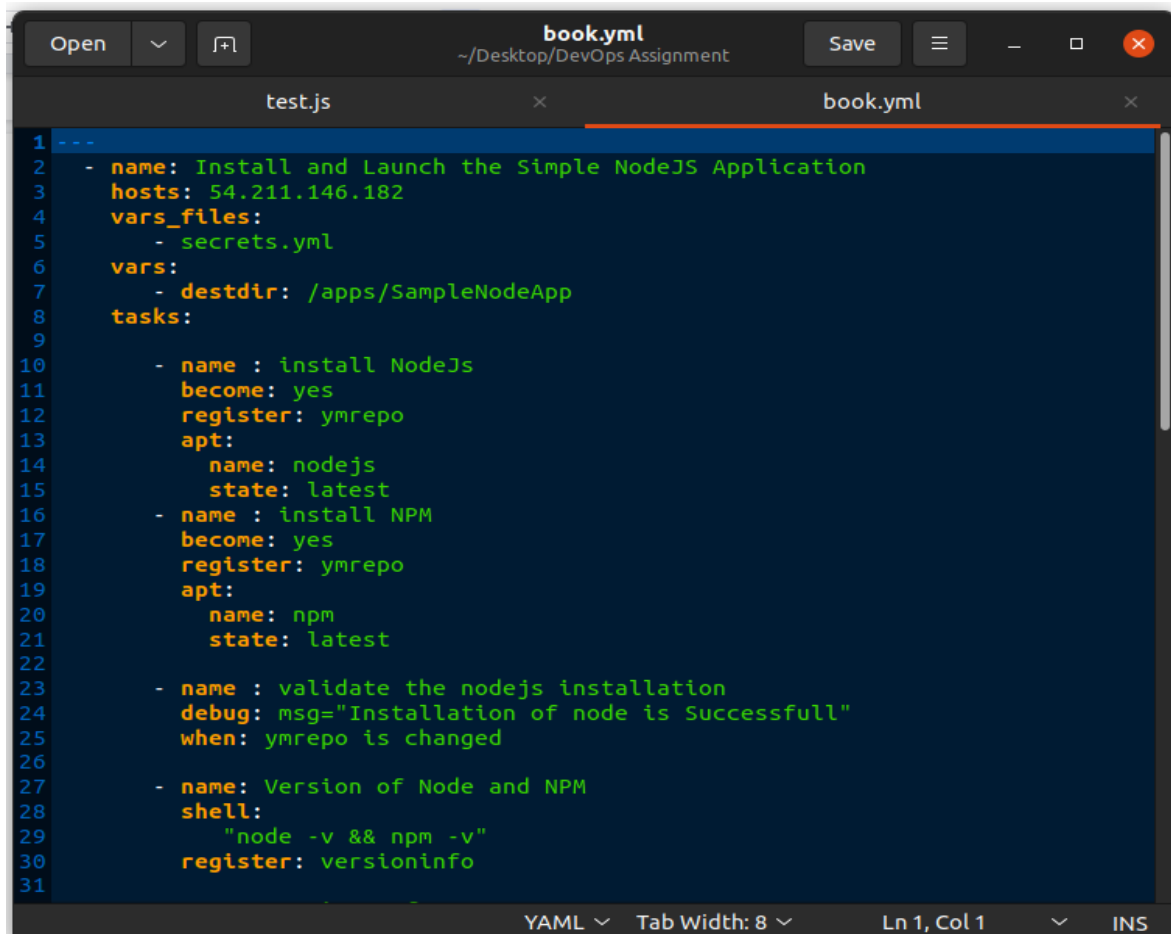


Ansible Playbook Exercise

- 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*

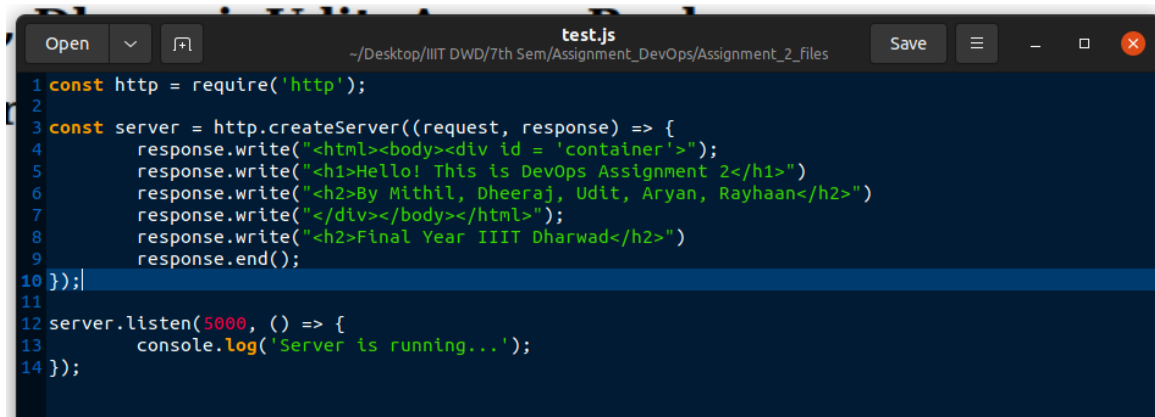
A terminal window titled 'aryan@boss: ~/Desktop/DevOps Assignment' with search, menu, and window control icons. The terminal shows a sequence of commands and their outputs: 1. 'cat secrets.yml' outputs a long string of base64-encoded data starting with '\$ANSIBLE_VAULT;1.1;AES256'. 2. 'ansible-vault decrypt secrets.yml' prompts for a vault password, which is then entered, resulting in 'Decryption successful'. 3. 'cat secrets.yml' outputs the decrypted content: 'gituser: aryanboss' and 'gitpass: ghp_ml7VmdaFpe0jm01NexlFouVy8LtaW73CAdfs'. 4. 'ansible-vault encrypt secrets.yml' prompts for a new vault password, which is entered and confirmed, resulting in 'Encryption successful'. 5. 'cat secrets.yml' outputs the new base64-encoded string starting with '\$ANSIBLE_VAULT:1.1;AES256'.

- 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.



```
1 ---
2 - name: Install and Launch the Simple NodeJS Application
3   hosts: 54.211.146.182
4   vars_files:
5     - secrets.yml
6   vars:
7     - destdir: /apps/SampleNodeApp
8   tasks:
9
10    - name : install NodeJs
11      become: yes
12      register: ymrepo
13      apt:
14        name: nodejs
15        state: latest
16    - name : install NPM
17      become: yes
18      register: ymrepo
19      apt:
20        name: npm
21        state: latest
22
23    - name : validate the nodejs installation
24      debug: msg="Installation of node is Successfull"
25      when: ymrepo is changed
26
27    - name: Version of Node and NPM
28      shell:
29        "node -v && npm -v"
30      register: versioninfo
31
```

- 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.



```
1 const http = require('http');
2
3 const server = http.createServer((request, response) => {
4   response.write("<html><body><div id = 'container'>");
5   response.write("<h1>Hello! This is DevOps Assignment 2</h1>");
6   response.write("<h2>By Mithil, Dheeraj, Udit, Aryan, Rayhaan</h2>");
7   response.write("</div></body></html>");
8   response.write("<h2>Final Year IIIT Dharwad</h2>");
9   response.end();
10 });
11
12 server.listen(5000, () => {
13   console.log('Server is running...');
14 });
```

- 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_hosts --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]

```

```
File Edit View Insert Format Tools Add-ons Help Last edit was 2 minutes ago
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.



54.211.146.182:5000

Hello! This is DevOps Assignment 2

By Mithil, Dheeraj, Udit, Aryan, Rayhaan

Final Year IIIT Dharwad

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