

Devops CS451 – Assignment Task 4

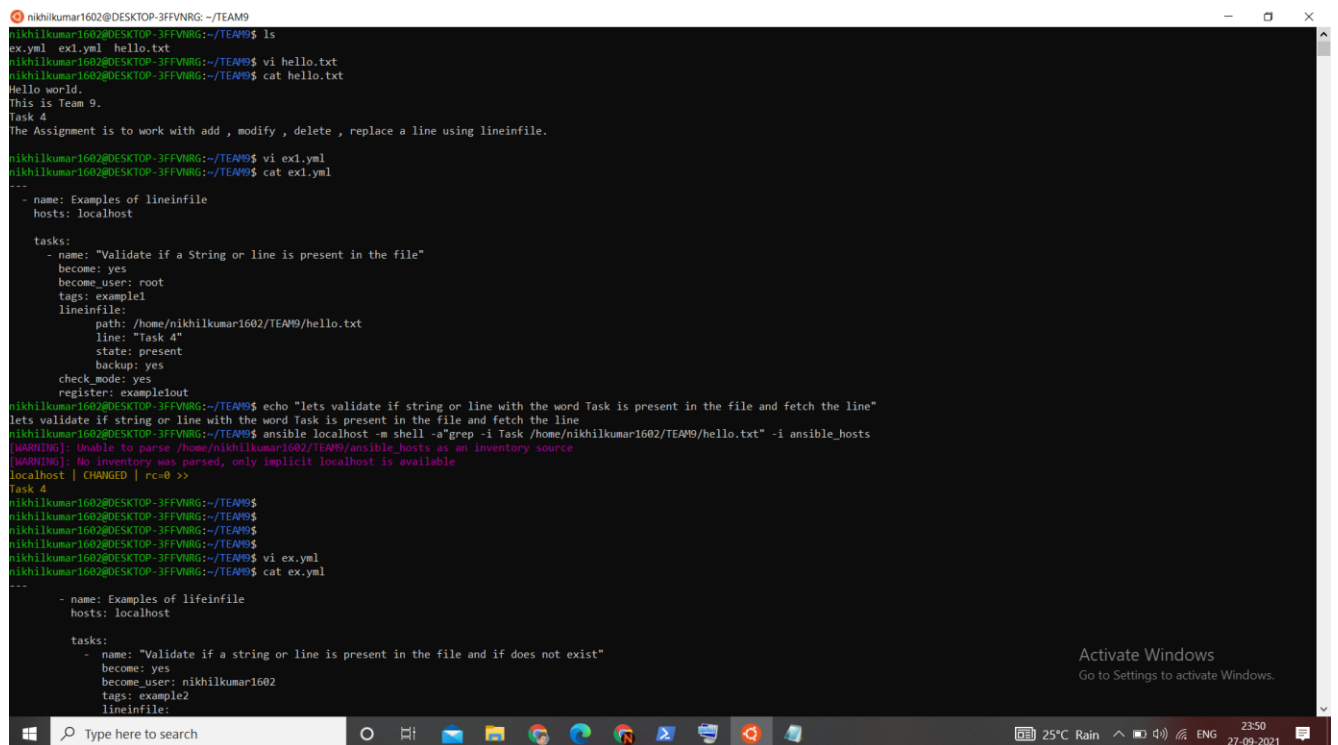
Ansible lifeline examples – Add, Modify, Delete, and Replace lines....

Ansible lineinfile module is **used to insert a line, modify, remove, and replace an existing line**. ... Ansible lineinfile provides many parameters to do the job quickly. You can also use the condition to match the line before modifying, removing using the regular expressions.

To install Ansible run these commands in Ubuntu

```
$ sudo apt-get update
$ sudo apt-get install software-properties-common
$ sudo apt-add-repository ppa:ansible/ansible
$ sudo apt-get update
$ sudo apt-get install ansible -y
```

1. To check if a line is present in the file and return the line



```
nikhilkumar1602@DESKTOP-3FFVNRG: ~/TEAM9
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ ls
ex.yml  ex1.yml  hello.txt
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi hello.txt
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
Hello world.
This is Team 9.
Task 4
The Assignment is to work with add , modify , delete , replace a line using lineinfile.
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi ex1.yml
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat ex1.yml
---
- name: Examples of lineinfile
  hosts: localhost
  tasks:
    - name: "Validate if a String or line is present in the file"
      become: yes
      become_user: root
      tags: example1
      lineinfile:
        path: /home/nikhilkumar1602/TEAM9/hello.txt
        line: "Task 4"
        state: present
        backup: yes
      check_mode: yes
      register: example1out
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "lets validate if string or line with the word Task is present in the file and fetch the line"
lets validate if string or line with the word Task is present in the file and fetch the line
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ ansible localhost -m shell -a "grep -i Task /home/nikhilkumar1602/TEAM9/hello.txt" -i ansible_hosts
[WARNING]: Unable to parse /home/nikhilkumar1602/TEAM9/ansible_hosts as an inventory source
[WARNING]: No inventory was parsed, only implicit localhost is available
localhost | CHANGED | rc=0 >>
Task 4
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi ex.yml
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat ex.yml
---
- name: Examples of lifefile
  hosts: localhost
  tasks:
    - name: "Validate if a string or line is present in the file and if does not exist"
      become: yes
      become_user: nikhilkumar1602
      tags: example2
      lineinfile:
```

It just checks if line is present or not and returns, it does not modify...

2. To check if a string is present in the file , if not add it

```
nikhilkumar1602@DESKTOP-3FFVNRG: ~/TEAM9
  backup: yes
  register: example2out
  ^ here
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi ex.yml
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat ex.yml
---
- name: Examples of lineinfile
  hosts: localhost

  tasks:
    - name: "Validate if a string or line is present in the file and if does not exist"
      become: yes
      become_user: nikhilkumar1602
      tags: example2
      lineinfile:
        path: /home/nikhilkumar1602/TEAM9/hello.txt
        line: "Task 4 is being implemented now."
        state: present
        backup: yes
      register: example2out
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "lets validate if a string or line is present in the file and add if it doesnot exist"
lets validate if a string or line is present in the file and add if it doesnot exist
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ ansible-playbook ex.yml --ask-vault-pass
Vault password:
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'

PLAY [Examples of lineinfile] *****

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

TASK [Validate if a string or line is present in the file and if does not exist] *****
changed: [localhost]

PLAY RECAP *****
localhost                : ok=2  changed=1  unreachable=0  failed=0  skipped=0  rescued=0  ignored=0

nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "check for hello.txt"
check for hello.txt
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
Hello world.
This is Team 9.
Task 4
The Assignment is to work with add , modify , delete , replace a line using lineinfile.
Task 4 is being implemented now.
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "line has been added"
line has been added
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$
```

Ansible Play book will look up for a line and adds it when, none of the lines matches.....

And the line will be added to the end of the line or at last..

3. To replace a line

```
nikhilkumar1602@DESKTOP-3FFVNRG: ~/TEAM9
Task 4 is being implemented now.
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi hello.txt
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
Hello world.
This is Team 9.
Task 4
The Assignment is to work with add , modify , delete , replace a line using lineinfile.
Task 4 is being implemented now.
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi ex.yml
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat ex.yml
---
- name: Examples of lineinfile
  hosts: localhost
  tasks:
    - name: "Replacing a line with ansible lineinfile"
      become: yes
      become_user: nikhilkumar1602
      tags: example2
      lineinfile:
        path: /home/nikhilkumar1602/TEAM9/hello.txt
        #the string to search for
        regexp: "Task 4"
        #the string to replace
        line: "Assignment 2."
        state: present
        backup: yes
        register: example2out
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "making replacement"
making replacement
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ ansible-playbook ex.yml --ask-vault-pass
Vault password:
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'
PLAY [Examples of lineinfile] *****
TASK [Gathering Facts] *****
ok: [localhost]
TASK [Replacing a line with ansible lineinfile] *****
changed: [localhost]
PLAY RECAP *****
localhost : ok=2  changed=1  unreachable=0  failed=0  skipped=0  rescued=0  ignored=0

nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
Hello world.
This is Team 9.
Task 4
The Assignment is to work with add , modify , delete , replace a line using lineinfile.
```

```
nikhilkumar1602@DESKTOP-3FFVNRG: ~/TEAM9
    regexp: "Task 4"
    #the string to replace
    state: present
    backup: yes
    register: example2out
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi ex.yml
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat ex.yml
---
- name: Examples of lineinfile
  hosts: localhost
  tasks:
    - name: "Remove a line from the file if it is found"
      become: yes
      become_user: nikhilkumar1602
      tags: example4
      lineinfile:
        path: /home/nikhilkumar1602/TEAM9/hello.txt
        #the string to search for
        regexp: "Task 4"
        #the string to replace
        state: absent
        backup: yes
        register: example4out
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ ansible-playbook ex.yml --ask-vault-pass
Vault password:
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'
PLAY [Examples of lineinfile] *****
TASK [Gathering Facts] *****
ok: [localhost]
TASK [Remove a line from the file if it is found] *****
changed: [localhost]
PLAY RECAP *****
localhost : ok=2  changed=1  unreachable=0  failed=0  skipped=0  rescued=0  ignored=0

nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "check for removed lines"
check for removed lines
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
Hello world.
This is Team 9.
The Assignment is to work with add , modify , delete , replace a line using lineinfile.
Task 4 line has been removed
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "Task 4 line has been removed"
Task 4 line has been removed
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi hello.txt
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
```

Using regexp – regular expressions to search and replace

4. To check if a line is present and remove it

```
nikhilkumar1602@DESKTOP-3FFVNRG: ~/TEAM9
Hello world.
This is Team 9.
Task 4
The Assignment is to work with add , modify , delete , replace a line using lineinfile.
Task 4 is on the way
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi ex.yml
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat ex.yml
---
- name: Examples of lineinfile
  hosts: localhost

  tasks:
    - name: "Remove a line from the file if it is found"
      become: yes
      become_user: nikhilkumar1602
      tags: example4
      lineinfile:
        path: /home/nikhilkumar1602/TEAM9/hello.txt
        regexp: "Task 4"
        #the string to search for
        #the string to replace
        state: present
        backup: yes
      register: example4out
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi ex.yml
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat ex.yml
---
- name: Examples of lineinfile
  hosts: localhost

  tasks:
    - name: "Remove a line from the file if it is found"
      become: yes
      become_user: nikhilkumar1602
      tags: example4
      lineinfile:
        path: /home/nikhilkumar1602/TEAM9/hello.txt
        regexp: "Task 4"
        #the string to search for
        #the string to replace
        state: absent
        backup: yes
      register: example4out
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ ansible-playbook ex.yml --ask-vault-pass
Vault password:
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'

PLAY [Examples of lineinfile] *****

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

TASK [Remove a line from the file if it is found] *****
changed: [localhost]

PLAY RECAP *****
localhost                : ok=2   changed=1   unreachable=0   failed=0   skipped=0   rescued=0   ignored=0

nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "check for removed lines"
check for removed lines
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
Hello world.
This is Team 9.
The Assignment is to work with add , modify , delete , replace a line using lineinfile.
Task 4 line has been removed
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi hello.txt
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
```

All expressions matching regexp will be removed

5. Inserting line after a matched line

```
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi hello.txt
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
Hello world.
This is Team 9.
The Assignment is to work with add , modify , delete , replace a line using lineinfile.
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi ex.yml
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat ex.yml
---
- name: Examples of lineinfile
  hosts: localhost
  tasks:
    - name: "Insert a string, after a matching line using insert after parameter "
      become: yes
      become_user: nikhilkumar1602
      tags: example5
      lineinfile:
        path: /home/nikhilkumar1602/TEAM9/hello.txt
        insertafter: ""This is Team 9."
        line: " Nikhil, Swarup, Yashwanth, Bhanu, Vinod, Harsha -- team members."
        firstmatch: yes
        state: present
      register: exampleSout
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "try to insert after matching statement"
try to insert after matching statement
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ ansible-playbook ex.yml --ask-vault-pass
Vault password:
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'

PLAY [Examples of lineinfile] *****
TASK [Gathering Facts] *****
ok: [localhost]

TASK [Insert a string, after a matching line using insert after parameter] *****
changed: [localhost]

PLAY RECAP *****
localhost                : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
Hello world.
This is Team 9.
Nikhil, Swarup, Yashwanth, Bhanu, Vinod, Harsha -- team members.
The Assignment is to work with add , modify , delete , replace a line using lineinfile.
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "line has been successfully added after matching line"
line has been successfully added after matching line
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi hello.txt
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
Hello world.
```

Insertafter is used find the matched line her and adds a line after it

If there are many elements matching the line then it will insert after the last line.

6. To comment a line

```
nikhilkumar1602@DESKTOP-3FFVNRG: ~/TEAM9
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
Hello world.
This is Team 9.
Nikhil, Swarup, Yashwanth, Bhanu, Vinod, Harsha -- team members.
The Assignment is to work with add, modify, delete, replace a line using lineinfile.
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi ex.yml
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat ex.yml
---
- name: Examples of lineinfile
  hosts: localhost

  tasks:
    - name: "Insert a string, after a matching line using insert after parameter "
      become: yes
      become_user: nikhilkumar1602
      tags: example6
      lineinfile:
        path: /home/nikhilkumar1602/TEAM9/hello.txt
        regexp: '(^Hello .*)'
        line: '# \!'
        backrefs: yes
        state: present
      register: example6out
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "try to comment"
try to comment
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ ansible-playbook ex.yml --ask-vault-pass
Vault password:
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'

PLAY [Examples of lineinfile] *****
TASK [Gathering Facts] *****
ok: [localhost]

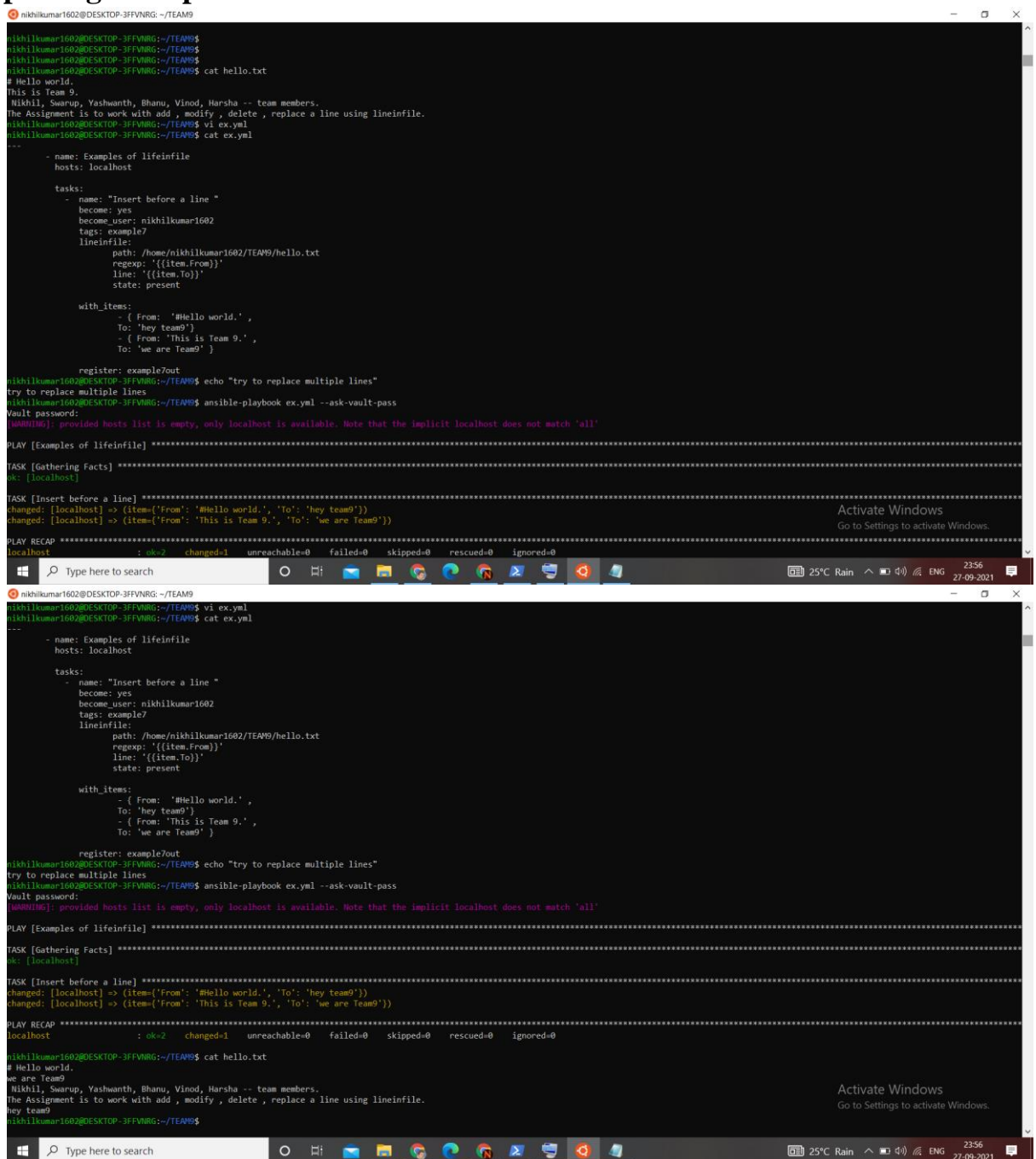
TASK [Insert a string, after a matching line using insert after parameter] *****
changed: [localhost]

PLAY RECAP *****
localhost : ok=2  changed=1  unreachable=0  failed=0  skipped=0  rescued=0  ignored=0

nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
# Hello world.
This is Team 9.
Nikhil, Swarup, Yashwanth, Bhanu, Vinod, Harsha -- team members.
The Assignment is to work with add, modify, delete, replace a line using lineinfile.
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "it has been commented"
it has been commented
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
# Hello world.
This is Team 9.
```

Activate Windows
Go to Settings to activate Windows.

7. Replacing multiple lines



```
nikhilkumar1602@DESKTOP-3FFVNRG: ~/TEAM9
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
# Hello world.
This is Team 9.
Nikhil, Swarup, Yashwanth, Bhanu, Vinod, Harsha -- team members.
The Assignment is to work with add , modify , delete , replace a line using lineinfile.
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi ex.yml
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat ex.yml
---
- name: Examples of lineinfile
  hosts: localhost

  tasks:
    - name: "Insert before a line "
      become: yes
      become_user: nikhilkumar1602
      tags: example7
      lineinfile:
        path: /home/nikhilkumar1602/TEAM9/hello.txt
        regexp: '{{item.From}}'
        line: '{{item.To}}'
        state: present

  with_items:
    - { From: 'Hello world.',
      To: 'hey team9' }
    - { From: 'This is Team 9.',
      To: 'we are Team9' }

  register: example7out
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "try to replace multiple lines"
try to replace multiple lines
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ ansible-playbook ex.yml --ask-vault-pass
Vault password:
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'

PLAY [Examples of lineinfile] *****

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

TASK [Insert before a line] *****
changed: [localhost] => (item={'From': 'Hello world.', 'To': 'hey team9'})
changed: [localhost] => (item={'From': 'This is Team 9.', 'To': 'we are Team9'})

PLAY RECAP *****
localhost                : ok=2   changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

nikhilkumar1602@DESKTOP-3FFVNRG: ~/TEAM9
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ vi ex.yml
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat ex.yml
---
- name: Examples of lineinfile
  hosts: localhost

  tasks:
    - name: "Insert before a line "
      become: yes
      become_user: nikhilkumar1602
      tags: example7
      lineinfile:
        path: /home/nikhilkumar1602/TEAM9/hello.txt
        regexp: '{{item.From}}'
        line: '{{item.To}}'
        state: present

  with_items:
    - { From: 'Hello world.',
      To: 'hey team9' }
    - { From: 'This is Team 9.',
      To: 'we are Team9' }

  register: example7out
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ echo "try to replace multiple lines"
try to replace multiple lines
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ ansible-playbook ex.yml --ask-vault-pass
Vault password:
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'

PLAY [Examples of lineinfile] *****

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

TASK [Insert before a line] *****
changed: [localhost] => (item={'From': 'Hello world.', 'To': 'hey team9'})
changed: [localhost] => (item={'From': 'This is Team 9.', 'To': 'we are Team9'})

PLAY RECAP *****
localhost                : ok=2   changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$ cat hello.txt
# Hello world.
we are Team9
Nikhil, Swarup, Yashwanth, Bhanu, Vinod, Harsha -- team members.
The Assignment is to work with add , modify , delete , replace a line using lineinfile.
hey team9
nikhilkumar1602@DESKTOP-3FFVNRG:~/TEAM9$
```

We used with_items to pass multiple values to regex...

By Team 9

N Nikhil Kumar 18bec031 | K Yashwanth 18bec020

P Bhanu Prakash 18bec035 | M Vinod 18bec027

Y Santhi Swarup 18bec051 | V Harsha Vardhan 18bcs118

