

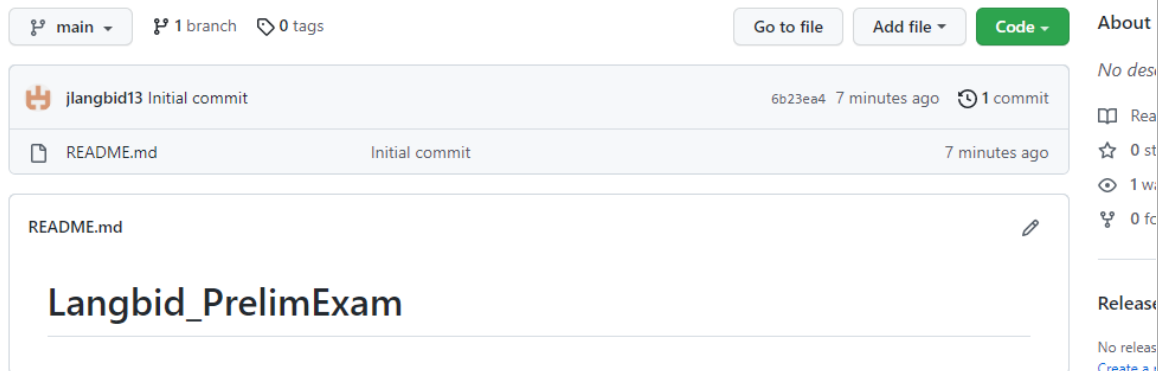
## Hands-on Prelim Exam

### Tools Needed:

1. Control Node (CN) - 1
2. Manage Node (MN) - 1 Ubuntu
3. Manage Node (MN) - 1 CentOS

### Procedure:

1. Note: You are required to create a document report of the steps you will do for this exam. All screenshots should be labeled and explained properly.
2. Create a repository in your GitHub account and label it as Surname\_PrelimExam



I created a new Repository in github named Langbid\_PrelimExam

3. Clone your new repository in your CN.

```
jefferson@LocalMachine-VirtualBox:~$ git clone git@github.com:jlangbid13/Langbid_PrelimExam.git
Cloning into 'Langbid_PrelimExam'...
The authenticity of host 'github.com (140.82.113.4)' can't be established.
ED25519 key fingerprint is SHA256:+DiY3wvvV6TuJJhbpZisF/zLDA0zPMSvHdkr4UvCOqU.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com' (ED25519) to the list of known hosts.
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
jefferson@LocalMachine-VirtualBox:~$ ls
CPE_Ansible_Langbid  Downloads          Music              snap
Desktop              get-pip.py         Pictures           Templates
Documents            Langbid_PrelimExam Public             Videos
jefferson@LocalMachine-VirtualBox:~$ cd Langbid_PrelimExam
jefferson@LocalMachine-VirtualBox:~/Langbid_PrelimExam$
```

**After creating a repository, I cloned it in my CN.**

4. In your CN, create an inventory file and ansible.cfg files.

```
jefferson@LocalMachine-VirtualBox: ~/Langbid_PrelimExam
GNU nano 6.2 inventory
[[remote_servers]
192.168.56.106
192.168.56.109
```

```
jefferson@LocalMachine-VirtualBox: ~/Langbid_PrelimExam
GNU nano 6.2 ansible.cfg
[defaults]

inventory=inventory
Host_key_checking = False

depracation_warnings = False

remote_user = jefferson
private_key_file = ~/.ssh/
```

**The inputted command is the ip address of the manage nodes and the default ansible file**

5. Create an Ansible playbook that does the following with an input of a config.yaml file for both Manage Nodes
  - Installs the latest python3 and pip3
  - use pip3 as default pip
  - use python3 as default python

```
jefferson@LocalMachine-VirtualBox: ~  
jefferson@LocalMachine-VirtualBox:~$ sudo apt install python3  
[sudo] password for jefferson:  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
python3 is already the newest version (3.10.4-0ubuntu2).  
0 upgraded, 0 newly installed, 0 to remove and 77 not upgraded.  
jefferson@LocalMachine-VirtualBox:~$ sudo apt install python3-pip  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
python3-pip is already the newest version (22.0.2+dfsg-1).  
0 upgraded, 0 newly installed, 0 to remove and 77 not upgraded.  
jefferson@LocalMachine-VirtualBox:~$  
  
jefferson@LocalMachine-VirtualBox:~$ pip --version  
pip 22.2.2 from /home/jefferson/.local/lib/python3.10/site-packages/pip (python  
3.10)  
jefferson@LocalMachine-VirtualBox:~$ python3 --version  
Python 3.10.4  
jefferson@LocalMachine-VirtualBox:~$ which pip  
/home/jefferson/.local/bin/pip  
jefferson@LocalMachine-VirtualBox:~$ which python3  
/usr/bin/python3  
jefferson@LocalMachine-VirtualBox:~$  
  
Python 3 and pip3 is installed and it is set as default.  


- Install Java open-jdk

```

```
Jefferson@LocalMachine-VirtualBox: ~/Langbid_PrelimExam
GNU nano 6.2 config.yaml
---
- hosts: all
  become: true
  tasks:
    - name: install python3, pip3, and java package in Ubuntu
      apt:
        name:
          - python3
          - python3-pip
          - openjdk-11-jdk
        state: latest
        update_cache: yes
        when: ansible_distribution == "Ubuntu"
    - name: install python3 and pip3 package in CentOS
      dnf:
        name:
          - python3
          - python3-pip
        state: latest
        update_cache: yes
        when: ansible_distribution == "CentOS"

- name: install java package in CentOS
  package:
    name: java
    state: present
  vars:
    packages:
      - openjdk-11-jdk
  when: ansible_distribution == "CentOS"
```

Python3, pip3, and java are installed via playbook.

```
jefferson@LocalMachine-VirtualBox: ~/Langbid_PrelimExam
TASK [Gathering Facts] *****
*
ok: [192.168.56.110]
ok: [192.168.56.106]

TASK [install python3, pip3, and java package in Ubuntu] *****
*
skipping: [192.168.56.110]
ok: [192.168.56.106]

TASK [install python3 and pip3 package in CentOS] *****
*
skipping: [192.168.56.106]
ok: [192.168.56.110]

TASK [install java package in CentOS] *****
*
skipping: [192.168.56.106]
ok: [192.168.56.110]

PLAY RECAP *****
*
192.168.56.106      : ok=2    changed=0    unreachable=0    failed=0
skipped=2    rescued=0    ignored=0
192.168.56.110      : ok=3    changed=0    unreachable=0    failed=0
skipped=1    rescued=0    ignored=0
```

The output is successful.

- Create Motd containing the text defined by a variable defined in config.yaml file and if there is no variable input the default motd is "Ansible Managed node by (your user name)"

```
GNU nano 6.2 config.yaml
---
- hosts: all
  become: true
  tasks:
    - shell: echo 'jefferson'
      register: username
    - debug: msg= "Ansible Managed node by Jefferson"

    - shell: echo 'Jefferson Langbid'
      register: myName
    - debug: msg= "My name is Jeff and I made this "

    - name: install python3, pip3, and java package in Ubuntu
      apt:
        name:
          - python3
          - python3-pip
          - openjdk-11-jdk
        state: latest
        update_cache: yes
      when: ansible_distribution == "Ubuntu"

    - name: install python3 and pip3 package in CentOS
      dnf:
```

- Create a user with a variable defined in config.yaml

```
jefferson@LocalMachine-VirtualBox: ~/Langbid_PrelimExam
GNU nano 6.2 config.yaml *
```

```
---
- hosts: all
  become: true
  tasks:

    - name: Create a User
      ansible.builtin.user:
        name: config.yaml
        comment: jefferson

    - name: install python3, pip3, and java package in Ubuntu
      apt:
        name:
          - python3
          - python3-pip
          - openjdk-11-jdk
        state: latest
        update_cache: yes
```

```
jefferson@LocalMachine-VirtualBox: ~/Langbid_PrelimExam
```

```
TASK [Create a User] *****
*
changed: [192.168.56.106]
changed: [192.168.56.110]

TASK [install python3, pip3, and java package in Ubuntu] *****
*
skipping: [192.168.56.110]
ok: [192.168.56.106]

TASK [install python3 and pip3 package in CentOS] *****
*
skipping: [192.168.56.106]
ok: [192.168.56.110]

TASK [install java package in CentOS] *****
*
skipping: [192.168.56.106]
ok: [192.168.56.110]

PLAY RECAP *****
*
192.168.56.106      : ok=3    changed=1    unreachable=0    failed=0
skipped=2    rescued=0    ignored=0
192.168.56.110      : ok=4    changed=1    unreachable=0    failed=0
skipped=1    rescued=0    ignored=0
```

Creating A user using ansible command

## 5. PUSH and COMMIT your PrelimExam in your GitHub repo

```
jefferson@LocalMachine-VirtualBox:~/Langbid_PrelimExam$ sudo nano config.yaml
jefferson@LocalMachine-VirtualBox:~/Langbid_PrelimExam$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
  .installJava11.yml.swo
  .installJava11.yml.swp
  ansible.cfg
  config.yaml
  configg.yaml
  inventory
  roles/

nothing added to commit but untracked files present (use "git add" to track)
jefferson@LocalMachine-VirtualBox:~/Langbid_PrelimExam$ git add ansible.cfg
jefferson@LocalMachine-VirtualBox:~/Langbid_PrelimExam$ git add config.yaml
jefferson@LocalMachine-VirtualBox:~/Langbid_PrelimExam$ git add inventory
jefferson@LocalMachine-VirtualBox:~/Langbid_PrelimExam$
```

```
jefferson@LocalMachine-VirtualBox:~/Langbid_PrelimExam$ git commit -m "PrelimExam"
[main 06f7828] PrelimExam
 3 files changed, 56 insertions(+)
 create mode 100644 ansible.cfg
 create mode 100644 config.yaml
 create mode 100644 inventory
jefferson@LocalMachine-VirtualBox:~/Langbid_PrelimExam$ git push origin
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Compressing objects: 100% (4/4), done.
Writing objects: 100% (5/5), 851 bytes | 851.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:jangbid13/Langbid_PrelimExam.git
 6b23ea4..06f7828  main -> main
```

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**jangbid13 PrelimExam** 06f7828 1 minute ago 2 commits

README.md	Initial commit	5 hours ago
ansible.cfg	PrelimExam	1 minute ago
config.yaml	PrelimExam	1 minute ago
inventory	PrelimExam	1 minute ago

README.md

No releases published  
[Create a new release](#)

The files are pushed to the origin which is the PrelimExam repository.

6. Your document report should be submitted here.

7. For your prelim exam to be counted, please paste your repository link here.

[jlangbid13/Langbid\\_PrelimExam \(github.com\)](https://github.com/jlangbid13/Langbid_PrelimExam)