

# Configuration Management with Ansible and Terraform



## Course-End Project





# **Web Application Using Ansible**

## Objective

To create an automation script to deploy an application using Ansible and Jinja2 template



# Problem Statement and Motivation

## Real-time scenario:

You have joined as a DevOps engineer in XYZ Pvt. Ltd. It is a platform where individuals can create their profile and start blogging on various topics. The application is ready to be hosted on a server.

You are tasked with implementing an Ansible script to deploy this application on a remote Nginx server.



# Industry Relevance

The following tools used in this project serve specific purposes within the industry:

1. **Ansible:** Ansible automates IT tasks, streamlining configuration management, application deployment, and orchestration. It uses simple, human-readable YAML files called playbooks, allowing easy setup and management of complex IT environments.



# Tasks

The following tasks outline the process of deploying web application on a remote server:

1. Create an inventory file to define the remote server(s)
2. Write a YAML playbook with tasks for installing Nginx, copying web application files, deploying the Nginx configuration, and enabling the site
3. Create a directory for templates and a Jinja2 template for the Nginx configuration
4. Define variables in the playbook for application details and Nginx configuration
5. Include tasks in the playbook for installing Nginx, copying application files, deploying Nginx configuration, and enabling the Nginx site
6. Execute the playbook to deploy the web application on the remote server



# Project References

- **Task 1:** Lesson 02
- **Task 2:** Lesson 05
- **Task 3:** Lesson 06
- **Task 4 and 5:** Lesson 05
- **Task 6:** Lesson 05





# Output Screenshots



# Output Screenshots

```
labsuser@ip-172-31-26-76:~/ansible-nginx-demo$ ansible-playbook playbook.yml

PLAY [all] *****

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

TASK [Update apt cache and install Nginx] *****
ok: [localhost]

TASK [Copy website files to the server's document root] *****
ok: [localhost]

TASK [Apply Nginx template] *****
ok: [localhost]

TASK [Allow all access to tcp port 80] *****
ok: [localhost]

PLAY RECAP *****
localhost                : ok=5    changed=0    unreachable=0    failed=0    skipped=0
```



**Thank you**