# 4-Week Ansible Learning Roadmap

## 📌 Week 1 – Foundation

Goal: Understand basics, set up environment, run first playbooks.

* Day 1: What is Ansible? How it works, use cases, YAML basics.
* Day 2: Install Ansible on control node (RHEL/Ubuntu).
* Day 3: Setup inventory file (static hosts).
* Day 4: Run ad-hoc commands (ping, uptime, install packages).
* Day 5: First playbook → Install Apache or Nginx.
* Day 6: Learn about modules (yum, apt, service, copy, user).
* Day 7 (Practice): Write a playbook that creates a user, installs a package, and starts a service.

## 📌 Week 2 – Playbook Skills

Goal: Get comfortable with playbooks, variables, and handlers.

* Day 8: Variables in playbooks (vars, vars\_files).
* Day 9: Conditionals (when:) and loops (with\_items or loop).
* Day 10: Handlers (restart service only if config changes).
* Day 11: Templates (Jinja2 → configure /etc/motd).
* Day 12: Facts gathering (ansible\_facts, setup module).
* Day 13: Error handling (ignore\_errors, failed\_when).
* Day 14 (Practice): Playbook that installs Apache, deploys a custom index.html using template, restarts Apache only if file changes.

## 📌 Week 3 – Reusability & Security

Goal: Learn about organizing playbooks, roles, and security.

* Day 15: Directory structure for projects.
* Day 16: Roles (create a role with ansible-galaxy init).
* Day 17: Importing & including playbooks.
* Day 18: Ansible Vault (encrypt passwords & keys).
* Day 19: Tags (run part of a playbook).
* Day 20: Dynamic inventory basics (e.g., AWS EC2).
* Day 21 (Practice): Build a role for Apache deployment with tasks, handlers, templates, vars.

## 📌 Week 4 – Advanced & Real Use Cases

Goal: Use Ansible for real-world automation.

* Day 22: Working with Git + Ansible (version control playbooks).
* Day 23: Ansible Galaxy (download community roles).
* Day 24: Multi-node orchestration (db + web + load balancer).
* Day 25: Ansible in CI/CD pipelines (Jenkins/GitLab).
* Day 26: Ansible for Cloud (AWS/GCP/Azure modules).
* Day 27: Debugging (ansible-playbook -vvv, debug module).
* Day 28 (Final Project): Create a full project - Install Apache on web servers, Configure DB server (MySQL), Deploy app from GitHub, Secure secrets with Vault.

## ✅ Tips for Success

* Practice daily on 2–3 test VMs (can use VirtualBox, VMware, or cloud).
* Keep all playbooks in Git repo for version control.
* Learn by breaking & fixing things (trial & error).
* Focus on concepts first, then advanced cloud stuff.