Problem 1:

Install Wordpress on a VM. Try using Apache httpd once and then again using Nginx.

* Note where the web server logs are written and understand log fields.
* Understand what Nginx proxy\_pass is.

Problem 2:

Install wordpress on a VM using Ansible.

* Ansible code directory structure should conform to best practices.
* Use as many modules as possible

Problem 3:

Host a multi-instance wordpress behind AWS ALB.

* Use the Autoscaling group once you are able to set up Wordpress without autoscaling.

Problem 4:

Host a multi-instance wordpress behind AWS ALB. Create the infrastructure using Terraform

* Write one or more modules to build infrastructure.
* Install wordpress using ansible provisioner.

Problem 5:

Monitor your setup using Prometheus and send alerts using alertmanager.

* Setup both node exporter and nginx exporter.

Problem 6:

Write Packer to build wordpress ami. Write Jenkins pipeline in Groovy to trigger Wordpress ami build.

Problem 7:

Extend the previous Jenkins pipeline to call Terraform. Take instance count, Wordpress setup name as Jenkins build parameter.

Problem 8:

Install minikube and setup Nginx Deployment, running two pods.

* Setup a configmap and read Nginx’s default.conf configuration from configmap.

Problem 9:

Install Prometheus on minikube as a Daemonset.

* Note the difference between Deployment and Daemonset.
* Read Prometheus’s configuration from a configmap.

Problem 10:

Use eksctl to setup an EKS cluster. Setup an Nginx deployment and expose it using an ingress.