

TASK 5: Build a Kubernetes Cluster Locally with Minikube

- **Objective:** Deploy and manage apps in Kubernetes.
- **Tools:** Minikube, kubectl, Docker
- **Deliverables:** YAML files, screenshots of pods/services
- **Hints:**
 - a. Install Minikube & start the cluster.
 - b. Create deployment.yaml for an app.
 - c. Expose app using service.yaml.
 - d. Use kubectl get pods to verify.
 - e. Scale deployments using kubectl scale.
 - f. Use kubectl describe for logs.
- **Outcome:** You'll understand Kubernetes basics and deployments.

Interview Questions:

1. What is Kubernetes?
2. What is the role of kubelet?
3. Explain pods, deployments, and services.
4. How do you scale in Kubernetes?
5. What is a namespace?
6. Difference between ClusterIP, NodePort, LoadBalancer.
7. What are config maps?
8. How do you perform rolling updates?

📌 Task Submission Guidelines

- 🕒 **Time Window:**

You can complete the task anytime between 10:00 AM to 10:00 PM on the given day. Submission link closes at 10 :00 PM

- 🔍 **Self-Research Allowed:**

You are free to explore, Google, or refer to tutorials to understand concepts and complete the task effectively.

- 🔧 **Debug Yourself:**

Try to resolve all errors by yourself. This helps you learn problem-solving and ensures you don't face the same issues in future tasks.

- 💰 **No Paid Tools:**

If the task involves any paid software/tools, do not purchase anything. Just learn the process or find free alternatives.

- 📁 **GitHub Submission:**

Create a new GitHub repository for each task.

Add everything you used for the task — code, datasets, screenshots (if any), and a short README.md explaining what you did.

- 📌 **Submit Here:**

After completing the task, paste your GitHub repo link and submit it using the link below:

SUBMISSION LINK

