

# Academy 2024h1

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## Mini-project week 5:

### Initial considerations:

1. Document your results with screenshots. You do not need to show all the mistakes you made in the process, but you can save them and share them on the day of the presentation.
2. You should submit a pdf file with the evidence and with the format `<globant user>-MiniProject-<week>`, for example: `juan.quinayas-MiniProject-5.pdf`.

### Repository:

Use git as local repository and Gitea as remote repository. Remember that you already mounted Gitea in a docker container in mini-project-2.

### Application:

Use the previous application: Python

### CI/CD pipeline:

1. Use docker to deploy Jenkins.
  - Create a pipeline to deploy Terraform.
2. Use minikube as your k8s Cluster.
3. Use terraform to deploy Kubernetes.
  - Install terraform.
  - Configure the local backend.
  - Create a deployment for your Python API.
    - replicas = 2
    - image from your DockerHub
  - Create a NodePort service
    - You can only use that type of service
    - To access the service, you use the node's ip and the defined NodePort
  - Search for kubernetes provider in terraform registry
    - Deployment Example: kubernetes provider > apps/v1 > Resources > kubernetes\_deployment
    - Service Example: kubernetes provider > core/v1 > Resources > kubernetes\_service\_v1