

Project

Deadline: 24/12/2025

1. Create private repository named as devops in github if not already created in your account. Create folder project and inside that folder create 4 folders task1, task2, task4 for each task in this assignment. Push all code in those folders when completed.
2. Add collaborator muhammadimranfarooqi in your repository if not done in previous assignment.
3. Add README.md in markdown format in each task folder to explain tasks in detail.
4. Write report also in pdf/word file with screenshots and explanation. Also add your github repository link in first page.

Task 1

- 1 Dockerize your final year project application. It should contain all modules, frontend, backend, database or any other depending upon your project.
- 2 or get project from the list available at <https://github.com/docker/awesome-compose>
- 3
- 4 Upload source code alongwith Dockerfile

Task 2

1. Upload docker images to your docker hub repository
2. Deploy your application in single node Kubernetes cluster you created using assignment4
3. Expose your application using nnginx ingress
4. Using helm Kubeagle monitoring chart, apply monitoring of Kuberentes cluster.

Task 3

- 1 Implement github CI/CD pipeline using workflows that should create a new Docker image of your application whenever a new release is created and push image to your Dockerhub repository.
- 2 CI/CD should also deploy newly created image automatically in single node Kubernetes cluster created in assignment4.