A close-up of a logo

Description automatically generatedEin Bild, das Person, draußen, sitzend, Mann enthält.

Automatisch generierte Beschreibung

Docker Assignment

# Assignment 1

* Install Docker and Docker Compose on your machine.
* Verify the installation by running a test container.
* Create a simple web application (e.g., a Python Flask, DotNet, Java or Node application).
* Write a Dockerfile to containerize the application.
* Build the Docker image and run a container from it.
* Use Docker commands to list, start, stop, and remove containers.
* Inspect running containers and view logs.
* Write a docker-compose.yml file to define a multi-container application.
* Use Docker Compose to bring up the application and ensure all services are running correctly.
* Create a private Docker registry or use Docker Hub.
* Push your Docker images to the registry.
* Pull the images from the registry and run them locally.

# Requirements

* Docker 20.10 or later
* Docker Compose 1.29 or later
* Linux command-line knowledge
* GitHub account

# Note

* Complete the tasks as specified.
* Submit your project in a GitHub repository.
* Ensure your submission is well-documented.
* Include a README file with instructions on how to set up and run your project.

# Deliverables

* GitHub repository link with all source code and documentation.
* README file with setup instructions.
* Well-documented code with comments.
* Dockerfiles, DockerCompose files, and CICD configuration files.

# Bonus Question

* Extend the multi-container application to include a database service and configure the web application to interact with the database.