

CSC258 Distributed Systems

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Implementation Assignment #2: Docker and containers

In this assignment you will get to work with Docker, containers, and practice microservices concepts.

Please refer to the following resources as you work on this assignment.

<https://www.cloudskillsboost.google/focuses/1029?parent=catalog>

<https://docs.docker.com/get-started/>

You can use the google cloud shell editor or you can download Docker and work on your own local environment.

You will develop a client/server application using Docker containers. This can be based on what you did in the client/server assignment. The difference is that you will run the client/server in containers and explore how to establish a connection between them. You can use any programming language of your choice.

Requirements:

I. You will submit a PDF file that explains what you did step by step:

1. Describe the environment you used and programming language.
2. Describe the Docker containers you developed and Docker files.
3. Describe how you ran your containers and the results you got.
4. Instructions on how to build and run the application. The port number used for communication (as applicable to your solution).
5. Reflection on testing, observations, challenges, etc.
6. References as applicable for any resources you used.

II. You will **submit all files used in creating the containers** with documentation/comments.

Please submit all files in Canvas.

Grading Criteria:

- Correctness of the application.
- Quality of the code (readability, organization, comments).
- Proper use of Docker and Docker Compose.
- Completeness and clarity of the written PDF file.