Setup Server

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1 Introduction

The goal of our project is to build a fast and free to use chat application **peer-to-peer** based with the possibility to use a server to save temporarily all the data sent to all the other peers of the network. We decided to develop the server of SynapseChat using **Python 3.12** and its **asyncio** library to meet this simple goal without too much effort.

2 Docker

To make everything even simpler, we decided to use Docker for the creation of a specific container that is separate from the machine's hardware, allowing us to **sandbox** potential vulnerabilities in the code.

2.1 Dockerfile

We decided to use the Python 3.12-alpine version due to its **speed** and **lightness**, installing some libraries like **aiomysql** for the server database connection. The latter will (possibly) be explored in a dedicated guide soon.

2.2 Docker compose

As for this section, there are no specific details to mention except that the database is tested by a **healthcheck** to ensure it is fully up and running, and the server will listen on **port 5050** of the host machine.

2.3 Start docker

There's a simple command to run: `docker compose [--build]`.
P.S.: this command should be runned in the same directory of the `docker-compose.yml` file to make it work.