NetMaze - Level 1

CompSci 311 (SP23), Duke Kunshan University

Yufan Zhang (NetID: yz605)

This program is a multi-connection client that connects to a server and uses two types of connections: primary and secondary. The program runs on Python 3.7 or higher and uses asyncio for asynchronous I/O operations.

Requirements

- Python 3.7 or higher
- asyncio

Installation

Install the required dependencies using pip:

```
pip install asyncio
```

Usage

1. Run the program from the command line:

```
python3 main.py
```

2. The program connects to the server and sends an ID message with your ID to the server.
3. The server responds with a port number that the program uses for the primary connection.
4. The program establishes a secondary connection to the server on the given port.
5. The program sends an ID message to the server on the secondary connection.
6. The server responds with a new port number that the program uses for the next secondary connection.
7. Steps 4-6 are repeated until the server stops sending new port numbers.
8. The program receives status messages from the server and prints them to the console.

Output

The output after running the program should be something like the below.

```
(base) ➜  hw1 python main.py
Connected to server on primary connection
Connected to server on secondary connection to port 51240
Connected to server on secondary connection to port 51202
Connected to server on secondary connection to port 51226
Connected to server on secondary connection to port 51206
Connected to server on secondary connection to port 51248
Connected to server on secondary connection to port 51212
Connected to server on secondary connection to port 51247
Connected to server on secondary connection to port 51208
Connected to server on secondary connection to port 51247
Connected to server on secondary connection to port 51211
Connected to server on secondary connection to port 51214
Connected to server on secondary connection to port 51234
Connected to server on secondary connection to port 51224
Connected to server on secondary connection to port 51245
Connected to server on secondary connection to port 51240
Connected to server on secondary connection to port 51248
Connected to server on secondary connection to port 51223
Connected to server on secondary connection to port 51244
Connected to server on secondary connection to port 51216
Connected to server on secondary connection to port 51237
Connected to server on secondary connection to port 51216
Connected to server on secondary connection to port 51246
Connected to server on secondary connection to port 51225
Connected to server on secondary connection to port 51246
Received status message: status success
The connected ports are: [51240, 51202, 51226, 51206, 51248, 51212, 51247, 51208, 51211, 51214,
 51234, 51224, 51245, 51223, 51244, 51216, 51237, 51246, 51225]
```

Contact

yufan.zhang@duke.edu

github.com/iamyufan