

NetMaze - Level 2

CompSci 311 (SP23), Duke Kunshan University

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This is an asyncio-based Python program that establishes connections with a remote server at a given host and port. The program connects to the server using two types of connections - primary and secondary. Additionally, the program also acts as a server and listens for incoming connections from the server. 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 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.

```
vcm@vcm-32999:~/cs311$ python3 main.py
```

```
Connected to server on primary connection
```

```
Connected to server on secondary connection to port 51337
```

```
Connected to server on secondary connection to port 51344
```

```
Connected to server on secondary connection to port 51327
```

```
Connected to server on secondary connection to port 51349
```

```
Connected to server on secondary connection to port 51333
```

```
Connected to server on secondary connection to port 51318
```

```
Connected to server on secondary connection to port 51347
```

```
Connected to server on secondary connection to port 51311
```

```
Connected to server on secondary connection to port 51308
```

```
Connected to server on secondary connection to port 51329
```

```
Connected to server on secondary connection to port 51345
```

```
Connected to server on secondary connection to port 51338
```

```
Connected to server on secondary connection to port 51320
```

```
Connected to server on secondary connection to port 51302
```

```
Connected to server on secondary connection to port 51321
```

```
Connected to server on secondary connection to port 51338 (visited)
```

```
> Listening on port 51426: server established
```

```
> Listening on port 51426: received message query 51329
```

```
Connected to server on secondary connection to port 51329 (visited)
```

```
> Listening on port 51426: received message query 51318
```

```
Connected to server on secondary connection to port 51318 (visited)
```

```
> Listening on port 51420: server established
```

> Listening on port 51420: received message query 51350

Connected to server on secondary connection to port 51350

Connected to server on secondary connection to port 51336

Connected to server on secondary connection to port 51327 (visited)

> Listening on port 51450: server established

> Listening on port 51420: received message query 51347

Connected to server on secondary connection to port 51347 (visited)

Connected to server on secondary connection to port 51335

Connected to server on secondary connection to port 51325

Connected to server on secondary connection to port 51317

Connected to server on secondary connection to port 51346

Connected to server on secondary connection to port 51328

> Listening on port 51450: received message query 51312

Connected to server on secondary connection to port 51312

Connected to server on secondary connection to port 51318 (visited)

> Listening on port 51421: server established

Connected to server on secondary connection to port 51322

Connected to server on secondary connection to port 51319

Connected to server on secondary connection to port 51326

Connected to server on secondary connection to port 51307

Connected to server on secondary connection to port 51313

Connected to server on secondary connection to port 51327 (visited)

> Listening on port 51450: received message query 51340

Connected to server on secondary connection to port 51340

Connected to server on secondary connection to port 51346 (visited)

> Listening on port 51421: received message query 51309

Connected to server on secondary connection to port 51309

Connected to server on secondary connection to port 51310

Connected to server on secondary connection to port 51313 (visited)

Connected to server on secondary connection to port 51334

Connected to server on secondary connection to port 51322 (visited)

Connected to server on secondary connection to port 51306

Connected to server on secondary connection to port 51349 (visited)

Connected to server on secondary connection to port 51311 (visited)

Connected to server on secondary connection to port 51307 (visited)

> Listening on port 51410: server established

Connected to server on secondary connection to port 51310 (visited)

Connected to server on secondary connection to port 51345 (visited)

> Listening on port 51421: received message query 51320

Connected to server on secondary connection to port 51320 (visited)

Connected to server on secondary connection to port 51335 (visited)

Connected to server on secondary connection to port 51303

Connected to server on secondary connection to port 51326 (visited)

Connected to server on secondary connection to port 51320 (visited)

> Listening on port 51410: received message query 51306

Connected to server on secondary connection to port 51306 (visited)

Connected to server on secondary connection to port 51316

Connected to server on secondary connection to port 51335 (visited)

Connected to server on secondary connection to port 51319 (visited)

Connected to server on secondary connection to port 51328 (visited)

Connected to server on secondary connection to port 51310 (visited)

Connected to server on secondary connection to port 51309 (visited)

Connected to server on secondary connection to port 51329 (visited)

Connected to server on secondary connection to port 51344 (visited)

Connected to server on secondary connection to port 51332

> Listening on port 51410: received message query 51303

Connected to server on secondary connection to port 51303 (visited)

Connected to server on secondary connection to port 51326 (visited)

Connected to server on secondary connection to port 51337 (visited)

Connected to server on secondary connection to port 51321 (visited)

Connected to server on secondary connection to port 51338 (visited)

Connected to server on secondary connection to port 51327 (visited)

Connected to server on secondary connection to port 51314

Connected to server on secondary connection to port 51327 (visited)

Connected to server on secondary connection to port 51311 (visited)

Connected to server on secondary connection to port 51325 (visited)

Connected to server on secondary connection to port 51316 (visited)

Connected to server on secondary connection to port 51307 (visited)

Connected to server on secondary connection to port 51333 (visited)

Connected to server on secondary connection to port 51327 (visited)

Connected to server on secondary connection to port 51346 (visited)

Connected to server on secondary connection to port 51320 (visited)

Connected to server on secondary connection to port 51329 (visited)

Connected to server on secondary connection to port 51315

Connected to server on secondary connection to port 51314 (visited)

Connected to server on secondary connection to port 51314 (visited)

Connected to server on secondary connection to port 51319 (visited)

Connected to server on secondary connection to port 51309 (visited)

Connected to server on secondary connection to port 51340 (visited)

Connected to server on secondary connection to port 51323

Connected to server on secondary connection to port 51330

Connected to server on secondary connection to port 51306 (visited)

Connected to server on secondary connection to port 51309 (visited)

Connected to server on secondary connection to port 51303 (visited)

Received status message: status success

The connected ports are: [51337, 51344, 51327, 51349, 51333, 51318, 51347, 51311, 51308, 51329, 51345, 51338, 51320, 51302, 51321, 51350, 51336, 51335, 51325, 51317, 51346, 51328, 51312, 51322, 51319, 51326, 51307, 51313, 51340, 51309, 51310, 51334, 51306, 51303, 51316, 51332, 51314, 51315, 51323, 51330]

The listening ports are: [51426, 51420, 51450, 51421, 51410]

Contacts

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