

Networks Lab 6 Report - Leonid Lygin

So, I was trying to get a real application this time, with ability to extend in the future (you have mentioned that we'll use this as a foundation for the future labs)

I didn't use the threading model, because synchronization would have been a huge problem, so I have decided to use an event loop (using poll)

Sorry for the amount of code (I can reduce it in the future labs, but now I can't really see anything to remove which would leave the structure good (IMO of course))

Also, using Innopolis network was not really possible, because you haven't provided us with any standardized protocol for inter-node communication, so different implementations could not talk to each other

Here is the screenshot of the nodes on localhost talking to each other

```
~/I/B/S/N/L/week06 >>> ./app --listen 3000 --name seed --ping 10
23:07:16 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/pings.c:74 - Pings:
23:07:16 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/known_nodes_hashmap.c:45 - Adding node node1:127.0.0.1:3001
23:07:17 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/known_nodes_hashmap.c:45 - Adding node node2:127.0.0.1:3002
23:07:27 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/pings.c:74 - Pings: node2:ok node1:ok
23:07:38 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/pings.c:74 - Pings: node2:ok node1:ok

~/I/B/S/N/L/week06 >>> ./app --listen 3001 --name node1 --bootstrap 127.0.0.1:3000 --ping 10
23:07:16 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/known_nodes_hashmap.c:45 - Adding node seed:127.0.0.1:3000
23:07:17 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/pings.c:74 - Pings: seed:ok
23:07:17 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/known_nodes_hashmap.c:45 - Adding node node2:127.0.0.1:3002
23:07:28 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/pings.c:74 - Pings: node2:ok seed:ok
23:07:39 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/pings.c:74 - Pings: node2:ok seed:ok

~/I/B/S/N/L/week06 >>> ./app --listen 3002 --name node2 --bootstrap 127.0.0.1:3000 --ping 10
23:07:17 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/known_nodes_hashmap.c:45 - Adding node seed:127.0.0.1:3000
23:07:17 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/known_nodes_hashmap.c:45 - Adding node node1:127.0.0.1:3001
23:07:18 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/pings.c:74 - Pings: seed:ok node1:ok
23:07:29 info /Users/ionagamed/Innopolis/BS2/Spring 2019/Networks/Labs/week06/src/pings.c:74 - Pings: seed:ok node1:ok
```