

NETWORK PROGRAMMING LABORATORY

30 January 2023

Exercise

In this project it is requested to implement the `find-my-ip` service, a simple client-server application to retrieve the IP address in use. This can be useful when the host is behind a NAT and needs to find out the public IP address provided by the ISP.

Client. The client program contacts the remote server by using the appropriate transport protocol over a predefined port. It is up to the implementer to choose the most suitable transport protocol and to define (if any) the format of the message request. Upon receiving the server response, the server parse the message and prints to standard output its own IP address.

Server. The server listens for client requests over the predefined port (and the selected transport protocol) and sends back to the client a JSON message containing the client IP address. Optionally, the server may add other information (client port number, time, etc.).

1. Write the C++ program `find-my-ip.cpp` that implements the client.
2. Write the C++ program `find-my-ip-server.cpp` that implements the server.

Note: all library functions from the NPL repository developed in the course can be used, as well as your favorite external JSON library (e.g., the `nlohmann` library).