

# SKJ project 3

## UDP Tunneling – Agent and Relay

### 1. General description

There are two applications in the task: an agent that sends signals to a relay via TCP and answers via UDP and a relay that passes data from one agent to the other. To properly set up the applications the relay should be run first. After specifying its port it is properly set up. After that an agent can be set up. It requires a port to operate on. After entering it there are four options: set relay, connect, send message and disconnect. First, the relay address should be set. After that we connect with entering an ip address of the agent that we would like to connect to. We can send any number of messages afterwards. The receiver will always respond with a generic message containing its port. Once we are done we can disconnect and connect to another agent.

### 2. Protocol description

The protocol from an agent to a relay contains three possible requests. All of them consist of a single letter followed by arguments. Connect [C] requires IP address and port of the person we want to send messages to. Message [M] is followed by the message we would like to send. After executing a message the agent will wait for the answer from the relay. Disconnect [D] closes the connection. The relay communicates with the receiver by sending lines of text. All the responses from the receiver will be forwarded to the agent (also as lines of text).