Ecole Nationale Supérieure d'Informatique et d'Analyse des Systèmes
Master Internet des objets : Logiciel et Analytique (MIOLA) 2021/2022

TP 5 : Java Streams

Exercice 1: Knock-Knock Joke

The goal of this exercise is to implement a knock-knock joke server and corresponding client. Through the client, users can ask for knock-knock jokes and can teach the server new jokes.

The Knock-Knock protocol

The server will be started first and will simply listen for a connection request from a client. (For this assignment, we have only one client.) Once the client connection is established, the server enters a 'tell/learn/quit' mode. The description of the protocol assumes that anything sent by the server is received by the client and likewise by the server for anything sent by the client. Interactions must follow this pattern exactly:

1. client sends one of tell, learn, or quit
2. if tell:
    1. server sends Knock knock
    2. client sends Who's there?
    3. server sends the first part of a Knock-knock joke randomly selected from the server's joke-base
    4. client sends whatever the server sent with who? appended
    5. server sends punchline of joke
    6. server returns to tell/learn/quit mode
3. if learn:
    1. server sends ready
    2. client sends Knock knock
    3. server sends Who's there?
    4. client sends the first part of a Knock-knock joke
    5. server sends whatever the client sent with who? appended
    6. client sends punchline of joke
    7. server creates a new Knock-knock joke instance and adds it to the joke-base
    8. server returns to tell/learn/quit mode
4. if quit then close any open sockets and exit the program

Exercice 2 : Knock-Knock Joke multi-client version

Give the multi-client version by introducing threads

Exercice 3 : Media Library

1. Define a clear communication protocol between the media library server and the different kindles.
2. Implement the defined protocol