## 1 Protocol

a) All required messages:

## Client:

- Username
- "1" for Addition
- "2" for Subtraction
- "3" for Multiplication
- "4" for Factorial
- 1. Operand
- 2. Operand (is 0 for Factorial)

## Server:

- Login succesful?
- Result
- b) format of messages
  - Username: String only sends one string to the server
  - Service data: [Operation: Int, Operand1: Int, Operand2: Int] on the client side an array of length 3 represents the data for the service. At index 0 is the operation, at index 1 is the first operand and at index 2 is the second operand. Tue to the table of operations
    - 1 Addition
    - 2 Subtraction
    - 3 Multiplication
    - 4 Factorial

client and server know which integer indicates which operation.

- Login successful: boolean tells the client if the login was successfully.
- Result : Int the result of the operation is always one singe integer.



