Stage 1: Pseudo code for Largest Round Robin (LRR)
COMP3100 (UPDATED on 31/3/2022)

The following show two versions of pseudo code for Stage 1: brief one and detailed one. This should be used as a **guideline only**. As usual, the actual implementation can vary.
ds-server should receive at least one REDY message before it can handle other commands, such as GETS.

Brief

```
1:  Create a socket and connect ds-server
2:  Handshake // HELO->OK->AUTH->OK
// you may idenfity the largest server type by reading ds-system.xml
3:  While the last message from ds-server is not NONE do
4:     Send REDY
5:     Receive a message // typically one of the following: JOBN, JCPL and NONE
6:     Identify the largest server type // by using GETS; you may do this only once
7:     If JOBN then
8:        Schedule a job // SCHD
9:    End If
10: End while
11: Send QUIT
12: Receive QUIT
13: Close the socket
```

Detailed with the use of GETS to identify the largest server type

```
1:  Create a socket
2:  Initialise input and output streams associated with the socket
3:  Connect ds-server
4:  Send HELO
5:  Receive OK
6:  Send AUTH username
7:  Receive OK
8:  While the last message from ds-server is not NONE do  // jobs 1 - n
9:      Send REDY
10:     Receive a message // typically one of the following: JOBN, JCPL and NONE
    //Identify the largest server type; you may do this only once
11:     Send a GETS message, e.g., GETS All
12:     Receive DATA nRecs recSize    // e.g., DATA 5 124
13:     Send OK
14:     For i = 0; i < nRecs; ++i do
15:        Receive each record
16:        Keep track of the largest server type and the number of servers of that type
17:     End For
18:     Send OK
19:     Receive .
20:     If the message received at Step 10 is JOBN then
21:        Schedule a job // SCHD
22:     End If
23: End While
24: Send QUIT
25: Receive QUIT
26: Close the socket
```