

| Input→Master | Master→Server | Comments |
|---|---|---|
| $\langle id \rangle$ start $\langle n \rangle$ $\langle port \rangle$ | — | master starts a process with <code>./process id n port</code> |
| exit | — | master calls <code>./stopall</code> then exits |
| sleep $\langle n \rangle$ | — | master sleeps for n milliseconds |
| $\langle id \rangle$ crash | — | The master crashes the given process using a kill signal. Your process must be compatible with this. |
| $\langle id \rangle$ get | get | the receiver responds to the master with its message log |
| $\langle id \rangle$ alive | alive | the receiver responds to the master with the ids all processes it thinks are alive |
| $\langle id \rangle$ broadcast $\langle message \rangle$ | broadcast $\langle message \rangle$ | the receiver broadcasts the given message to everyone alive, including themselves |
| — | connect $\langle host \rangle : \langle port \rangle$ | connect to host:port |

Table 1: Table of commands. The left column shows commands provided as input to the master; the center column the corresponding commands issued by the master to the servers.

| Server→Server | Server→Master | Comments |
|-----------------------------------|-------------------------------|--|
| message $\langle message \rangle$ | — | the receiver registers a message and does nothing with it |
| heartbeat $\langle id \rangle$ | hearbeat $\langle id \rangle$ | alerts the master or server that the socket is still alive |