Afternoon at the races

Client & Server crash recovery

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Client crashes

- Use of local logging to save last step in its life cycle and current local variables value;
- Bash script to run client until its execution completes successfully;
- Use of remote logging on each server:
  - Data structure provided with a monitor that saves the type of the client's last sent message, its id, current race id and other values returned by the remote shared region;
  - Each time a message from a client is received, it gains possession of the monitor on the referenced data structure and executes the method on the shared region, saving its results;
  - This prevents that, in case of a crash, a new message enters the shared region, waiting for the previous one to complete its execution, returning its results.

Client crashes
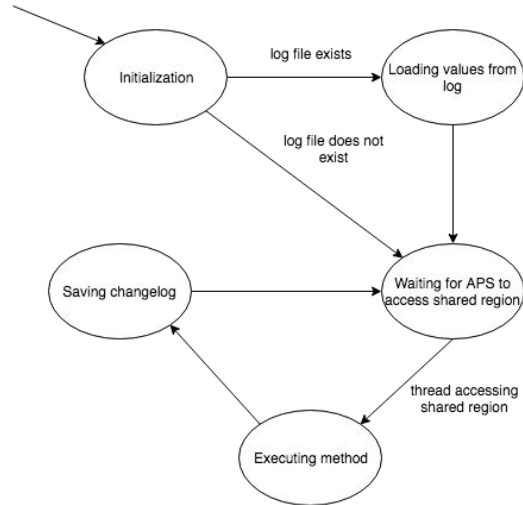
Client side
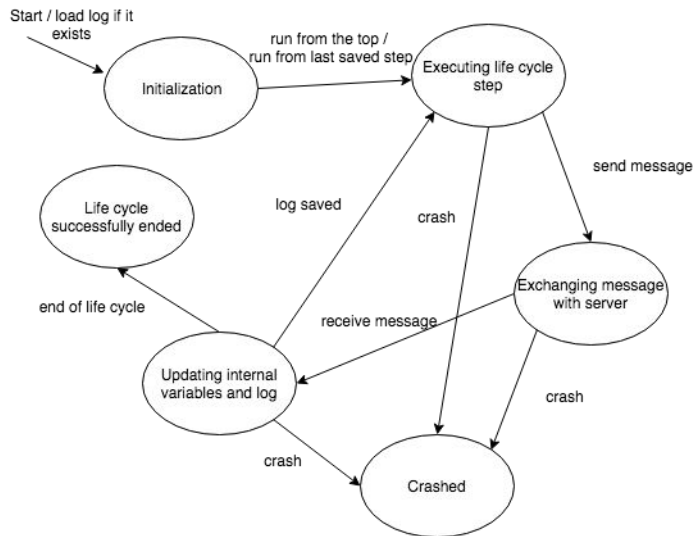
Server side
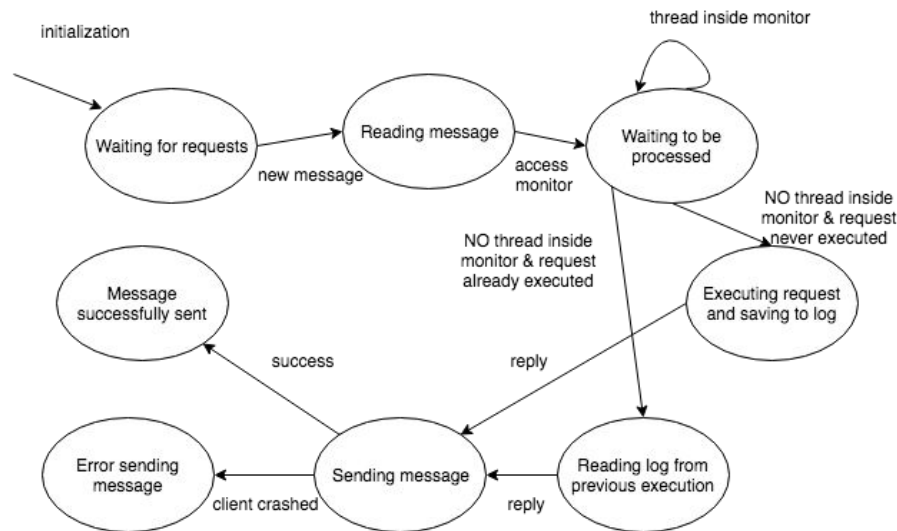
Server crashes

- Also makes use of server side client logging;
- Saves also the internal state of the shared region in a logging file:
  - Server logs - internal shared region;
  - Client logs - operations performed by the clients (interface level).
- Until not receiving a successful response from the server, clients try to resend messages;
- General Repository was slightly changed so that more than one update only takes effect once.

Server crashes

Shared Region

Interface