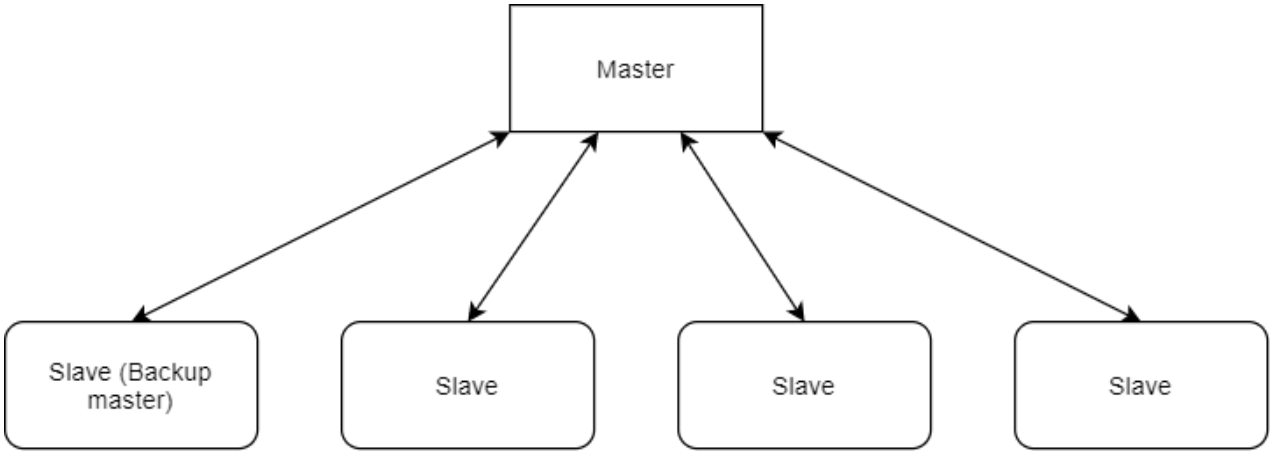
Design review - Group 57

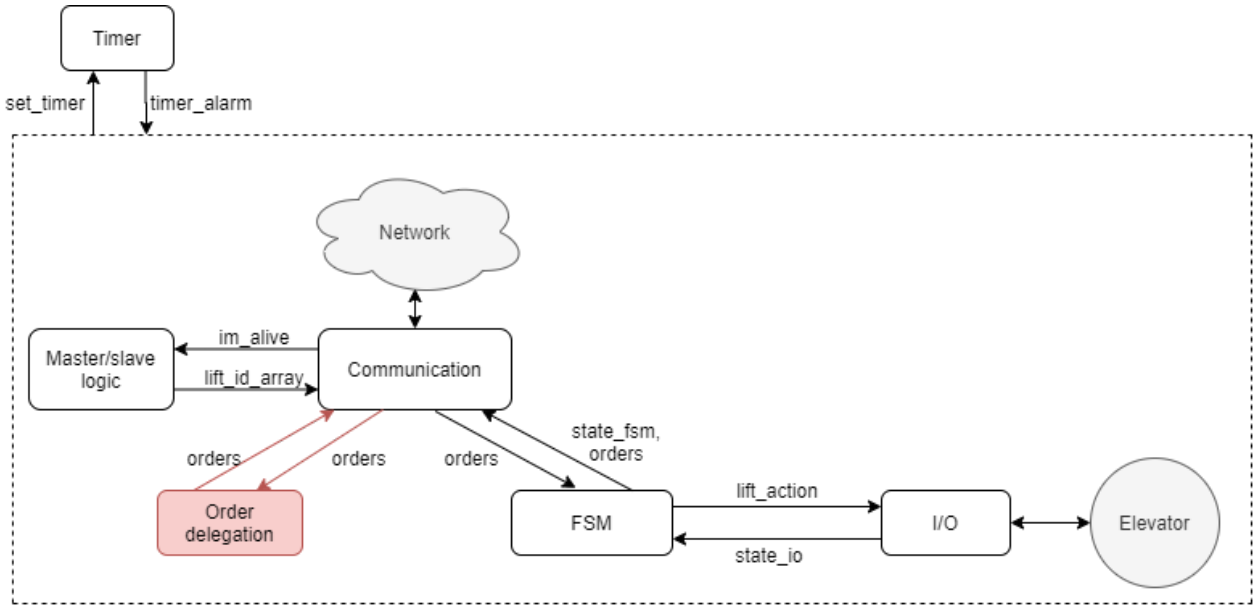
System overview
We will utilize a master slave architecture. The slaves will send their incoming tasks to master, who will distribute them to the most fit elevator. The system will be fault tolerant. For example, each node needs to operate independently in cases where they drop out of the network or when an elevator experiences power loss. The system will also handle the master dropping out by having a backup slave lift taking over the master role when necessary. The end result will be a scalable and robust system, making sensible decisions for an underdetermined amount of elevators.

Language
Go is a procedural programming language with familiar syntax. It is fast, got efficient concurrency and a strict typization that keeps bugs away. Go is fit for real time programming using message passing parallelism is easily achieved between multiple threads.On the other hand communication in Go is often harder than in Elixir and Erlang, but the provided Go network module makes up for it.

Master Slave Network Architecture



Module-level Node Architecture



Fault tolerance - Master power loss scenario