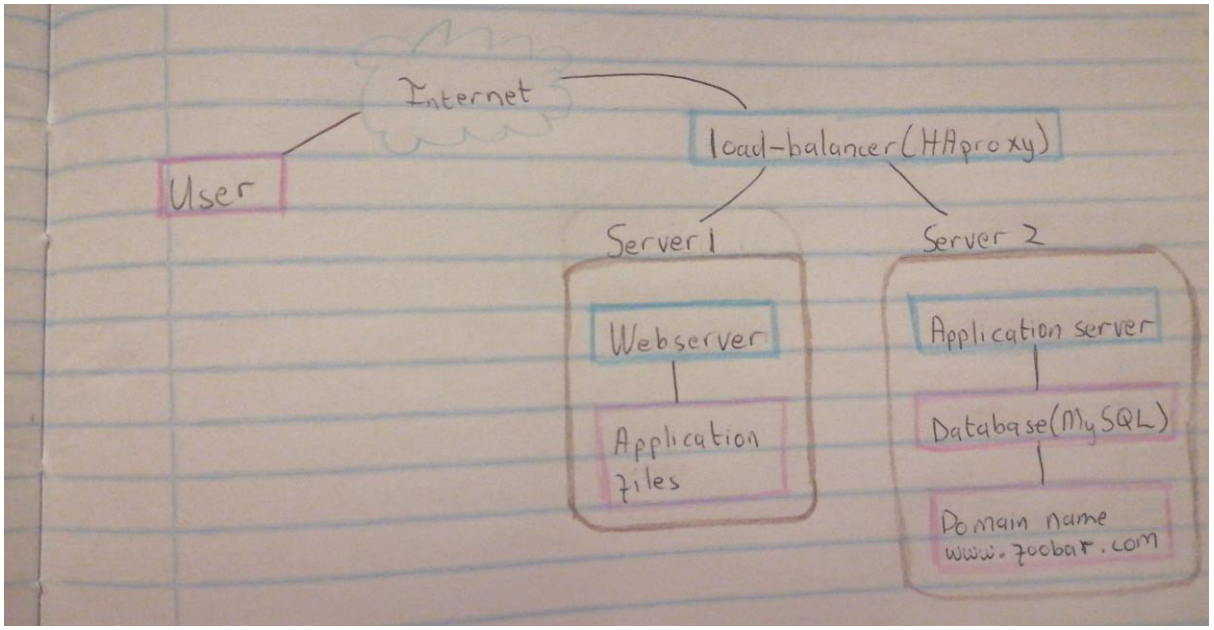

- Explanation for additional elements: There are now three servers so that each server now has more memory to perform its specific task.

  There is a load-balancer to split work-load to respective servers. SPOF will not affect the whole network.

- Distribution algorithm of load-balancer: Observed algorithm – the server with the least connections and faster response gets more connections.
- What load-balancer enables: My load-balancer enables Active-Passive setup. Active-Passive setup has an instance that is active and one that is standby(passive), when the active instance fails to function the passive is activated. Active-Active setup has all systems available active and requests are handled concurrently by the instances.
- How Primary-Replica (Master-Slave) works: It allows the primary database to be read and written and the replica then stores the databases as backup.
- Difference between Primary node and Replica node: It has a primary node that takes in data and executes computing processes. The other part of this database is the replica which responds to the user and executes computing processes.

Issues with the infrastructure

- SPOF: If the load-balancer fails the whole network will be affected. If the web server or the application server fails then server 1 and server 2, respectively will not work.
- Security issues (no firewall, no HTTPS): Data theft can occur as it is not protected, and unauthorised personnel may access and manipulate the data.
- No monitoring: There is no way to find out if the servers are behaving as expected or if they are overloaded.