HOW IT WORKS

1. Similar to task 0, the user will get access to the IP address to pass to the web server from the DNS server.
2. The HTTP Request will be passed through a load balancer that will determine which server will undertake this operation. Its purpose is to ensure an even workload on the 2 servers.
3. The load balancer is configured with the least connections algorithm. It enables an Active-Active setup whereby the server with the least amount of connections will be assigned the upcoming tasks. The difference to Active-Passive setup is only one server is used at a time and the other server is only used if the current server encounters a failure.
4. After the request is passed to one of the servers, the web server will pass the request to the application server, and with the help of the database the codebase will be able to generate a response that will be sent back to the user by the web server.
5. The display on the user's screen will determine the success or failure of the request. A page displaying the information that was asked for indicates success while a page displaying an error indicates failure.
6. Master-slave replication enables data from one database server (the master) to be replicated to one or more other database servers (the slaves). The master logs the updates, which then ripple through to the slaves. If the changes are made to the master and slave at the same time, it is synchronous.
7. The difference between the Primary node and the Replica node in regard to the application is that-, the primary node is regarded as the authoritative source, and the replica node (also known as slave) databases are synchronized to it(Master)

ISSUES

1. SPOF - This can occur because we only have a single load balancer.
2. Security Issues - one of the underlying security issues is the lack of HTTPS. The HTTP requests are susceptible to being intercepted and the information being transferred to be seen by the attacker. This is an issue when it comes to private data such as user information and even payment information. Another issue is the lack of a firewall. This means that unauthorized external networks will be able to access the information even if it was not meant to be accessed by other people using a different network.
3. No Monitoring - the best way to determine problems is by the use of statistical data. Because of this data, one can quickly point out any issues in the system if there is an anomaly in the data or if the data does not represent the expected results. Without these monitoring tools, it is difficult to identify the areas that may have an issue.