ALX PROJECT  
WEB INFRASTRUCTURE DESIGN

**TASK 0:**

* A server is a piece of computer hardware or software (computer program) that provides functionality for other programs or devices, called "clients".
* What is the role of the domain name ? A domain name is connected to a website's IP address so people can more easily remember and search for a website by its domain and their browser can still find the specific web server that hosts the website via the associated IP address.
* What type of DNS record www is in www.foobar.com;

It is a ‘cname’.

* What does the Web Server do? The Web Server's primary function is to house, process, and exhibit the contents of a website, encompassing its codebase. Additionally, it dispatches web pages to users, primarily comprising HTML and CSS, employing the HTTP protocol.
* What is the purpose of the application server? The application server operates to produce dynamic content by executing server-side code, such as JSP, Ajax, PHP, among others.
* What role does the database play? A database serves to systematically and efficiently manage data in a structured manner, facilitating easy addition, access, update, management, and deletion of data.
* How does the server communicate with the user's computer when they request a website? The server communicates with the user's computer via the HTTP protocol.

- A Single Point of Failure (SPOF) scenario arises when there are points within a system that, if they fail, can halt the entire system's operation.

- During maintenance activities such as deploying new code, the web server often requires a restart. However, relying on a single code base can prolong downtime beyond expectations.

- Scalability Limitations under High Traffic: In scenarios where there is a surge in incoming traffic, the absence of a load balancer exacerbates the situation. Directly pointing the domain name to a single server without load balancing capability makes it challenging to manage increased loads efficiently. Consequently, accommodating a high volume of users becomes problematic.