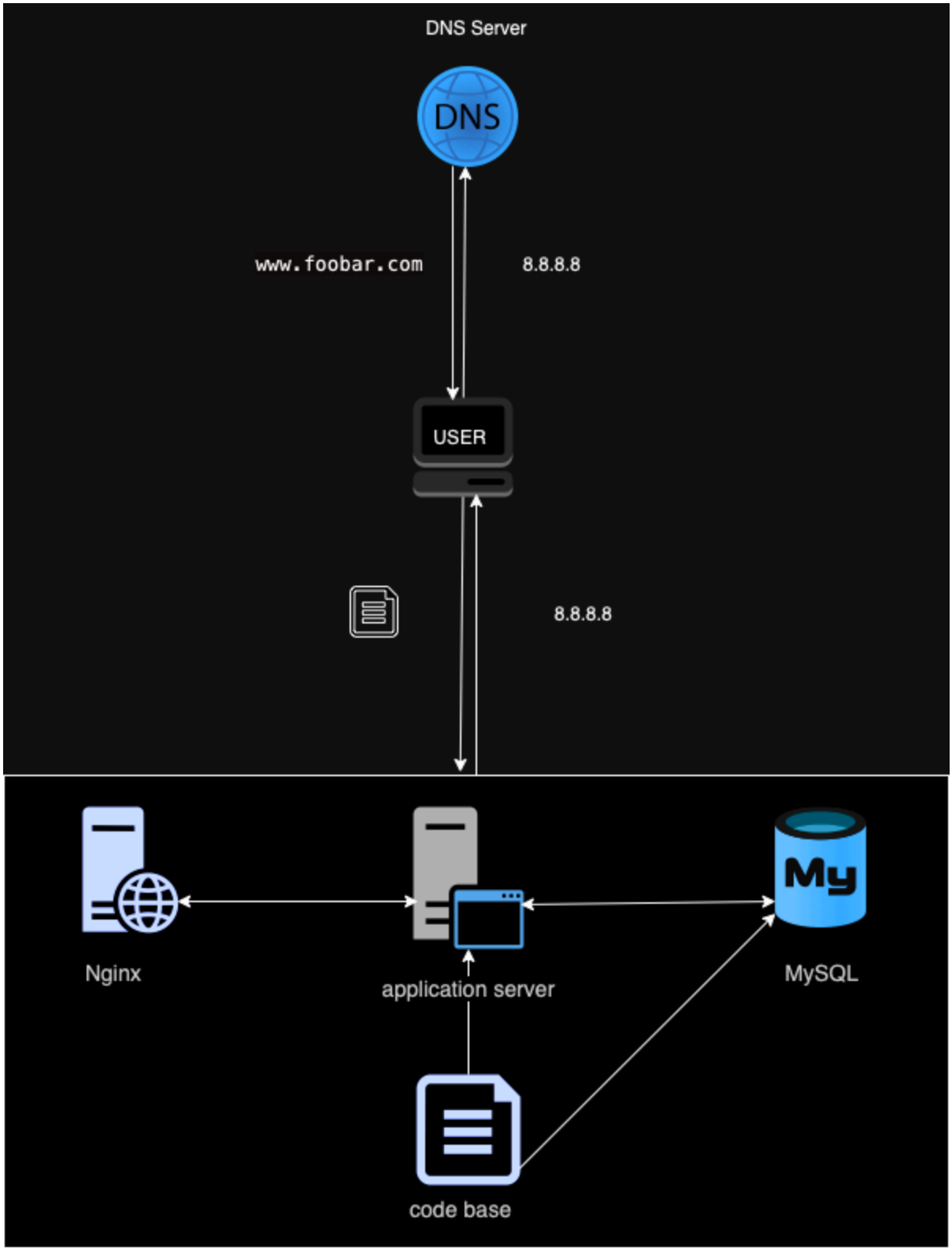
DNS Server
DNS
www.foobar.com
8.8.8.8
USER
8.8.8.8
Nginx
application server
MySQL
code base

Specifics of the Infrastructure:

- Server: The physical or virtual machine where all components of the web infrastructure are installed and running.
- Domain Name: www.foobar.com is a human-readable alias for the server's IP address (8.8.8.8). It allows users to access the website using a memorable name instead of an IP address.
- DNS Record: The www record in www.foobar.com is a CNAME (Canonical Name) record, which points to the domain name's canonical name. It is used to alias one domain name to another.
- Web Server (Nginx): Acts as the entry point for incoming HTTP requests, handles static content delivery, and forwards dynamic requests to the application server.
- Application Server: Executes server-side code, processes requests, generates dynamic content, and communicates with the database.
- Database: Stores and manages structured data used by the website, ensuring data persistence and integrity.
- Communication: The server communicates with the user's computer over the Internet using the HTTP protocol. HTTP requests are sent from the user's browser to the server, and HTTP responses containing requested content are sent back to the user.

Issues with the Infrastructure:

- Single Point of Failure (SPOF): Since all components are hosted on a single server, any failure or downtime of the server will result in the entire website being inaccessible.
- Downtime for Maintenance: Performing maintenance tasks such as deploying new code or updating server configurations requires bringing down the web server, causing downtime for users.
- Scalability Limitations: The infrastructure may struggle to handle a significant increase in traffic as the server's resources are limited. Scaling horizontally by adding more servers is not possible in this setup.