

Technical Design Document

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0.1	30 Sept 24	Initial documentation.

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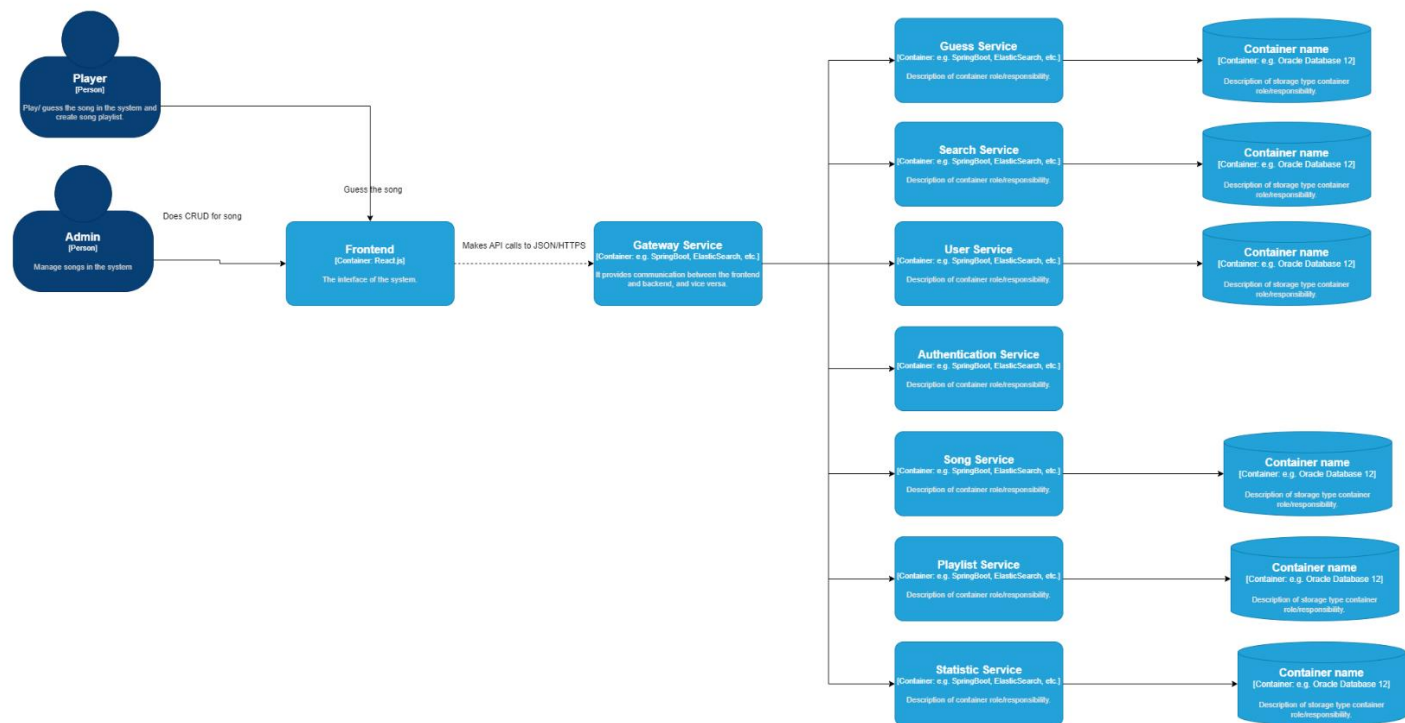
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Introduction

This section covers the technical aspects of the system, including its design and the reason behind the design decisions.

Microservice Architecture

The system is designed using a microservice architecture, allowing for scalable and flexible performance based on user demand. Each service can be independently scaled according to its usage, and services are decoupled, enabling changes to be made to one service without impacting others. This architecture also enables easier integration of CI/CD processes.



The microservice architecture is still in working progress, nothing is concrete yet and there is still missing some microservice communication with each other.

Frontend: This is where the system's user interface is located, and where users interact with the system.

Microservices

Gateway services: It handles all API routes between the frontend and other services. It is primarily used to centralize and manage API routes, making it suitable for scaling systems when you have a lot of microservices in the system.

Guess service: This is where the system compares the guesses made by the user with the correct answer of the song. It is connected to a database to compare the correct answer.

Search service: This is where the user types in their answer, and it auto-fills suggestions based on what the user types to help provide answers for their guesses. It's connected to a database to get all the auto-fill suggestions.

User service: This service manages user data and handles sign-up processes. It is connected to a database that stores all user information.

Authorization service: This service manages authentication and security, handling processes like user login. It must connect to the user service to access user information.

Song service: This service manages all the songs and is connected to a database that contains all the song information.

Playlist service: This service manages song playlists and is connected to a database that contains all the playlists.

Statistic service: This service manages all the statistics and is connected to a database that contains all the statistical data.