**Requirements Gathering Document: CloudSync**

**1. Introduction**

This document outlines the functional and non-functional requirements for CloudSync, a web-based music streaming service that enables users to stream their favourite songs.

**2. Functional Requirements**

**2.1 User Registration and Authentication**

* Users must be able to register with an email, username, and password.
* Users must be able to log in using their credentials.
* Users should have the option to reset their password if forgotten.

**2.2 Music Browsing**

* Users must be able to browse music by genre.
* Upon selecting a genre, users must see a list of artists within that genre.
* Users must be able to view songs by an artist.
* Users must be able to search for genres, artists, or songs.

**2.3 Music Playback and Synchronization**

* Users must be able to play a selected song.
* A playback control should be available to pause, resume, and stop the song.
* A progress bar should display the current position within the song.
* Users should be able to see the duration of the song.

**2.4 Playlists and Favourites**

* Users must be able to mark songs as favourites.
* Users must be able to view and manage their favourite songs.

**2.5 Admin Management**

* Admins must be able to add, edit, and delete genres, artists, and songs.
* Admins must be able to view and manage user accounts.

**3. Non-Functional Requirements**

**3.1 Performance Requirements**

* The application should load pages within 2 seconds.
* The music playback should start within 1 second of clicking play.

**3.2 Security Requirements**

* User passwords must be encrypted using a secure hashing or secrets algorithm.
* The application must use HTTPS for secure data transmission.
* Only authenticated users should access personal data, such as playlists and favourites.

**3.3 Usability Requirements**

* The user interface should be intuitive and easy to navigate.

**3.4 Scalability Requirements**

* The application should support at least 10,000 concurrent users.
* The application should be easily expandable to accommodate additional features.

**3.5 Compatibility Requirements**

* The application should be compatible with all major web browsers (Chrome, Firefox, Safari, Edge).
* The application should be responsive and work on various screen sizes.

**4. Assumptions and Constraints**

**4.1 Assumptions**

* Users will have a stable internet connection to stream music.
* Users will access the application using modern browsers.
* The initial launch will focus on a web platform, with potential expansion to mobile later.

**4.2 Constraints**

* The application must be delivered within 2 weeks.
* Only the English language will be supported in the initial version.

