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# Introduction

## Purpose

There are many music streaming services and none of them have the ability to have access to every single song that is available by an artist. This program is designed to help users gain more freedom with listening to music without having to switch to different music streaming services.

The purpose of this document is to present a detailed description of the “name of final project”. It will explain the purpose and features of the music player, the interface of the player, what the music player can accomplish, the criteria it needs to function properly and what should happen if exposed to external stimuli.

## Goals and objectives

The main goals of this application will be to a develop a music player that will be able to do the following:

1. Stream songs across multiple music streaming services
2. Create a playlist within the application that syncs all public playlists across multiple streaming services to that single local playlist
3. Download songs for offline listening
4. Sync playlist on Spotify, if the song is available on Spotify

## Scope of Project

The application will need to communicate with music streaming services such as Spotify, Soundcloud, YouTube, etc. It will need the credentials of the user to allow this to happen. This will allow the application to sync playlists, stream music, and download music.

## Glossary

|  |  |
| --- | --- |
| TERM | DEFINITION |
| Music Streaming Service (MSM) | A subscription or free service that allows user to listen to music on their phone |
| Offline Playlist | A list of recorded songs or pieces of music that is able to be listened to without a cellular or Wi-Fi connection |
| Soundcloud | An example of a music streaming service |
| Spotify | An example of a music streaming service |
| Stream | The ability to listen to music using a cellular or Wi-Fi connection |
| Sync | The ability to transfer data between (two devices) to ensure that the same data is stored on both |
| YouTube | An example of a music streaming service |
| Playlist | A list of recorded songs or pieces of music |

## References

## Overview of Document

The second chapter of this document, Overall Description, goes into more detail of the functionality of the music player. It will mention the requirements needed and is required to create a basis for the technical requirements that will be mentioned in the following chapter.

The third chapter, Requirements Specification, is primarily for the developers. This chapter will describe in further details the technical terms and functionality of the music player.

# Overall Description

## Product Perspective

A music player stores the following information:

1. Playlists
   * It includes the lists of user created playlists
2. Songs
   * Songs that are not included in playlists

## Product Features

## User Class and Characteristics

The users should be able to do the following functions:

* Music Player
  + Play song
  + Play playlist
  + Search for song
  + Change volume
  + Skip
  + Previous
  + Repeat song or playlist
  + Random
* Playlists
  + Download playlists
  + Edit playlists
  + Listen to playlists
  + Sync playlists
  + Search for song within playlist
* Song
  + Listen to songs
  + Add song to playlists
  + Download songs
  + View artist information

## Operating Environment

Operating environment for the music player is as listed below:

* Distributed database
* Client/Server system
* Platform: Java

## Design and Implementation Constraints

## Assumption Dependencies

# Requirements Specification

## External Interface Requirements

The user will have an account for YouTube, Soundcloud. A premium account is required for Spotify. The credentials will be needed to access the users’ playlists on each music streaming service.

## Functionality

### **Music Player**

The music player is the main component for listening to music. It will

#### The music player shall allow a user to pause or play the song

#### The music player shall allow a user to skip the song

#### The music player shall allow the user to go to beginning or the previous song

#### The music player shall allow the user to change the volume

#### The music player shall allow the user to add a song or playlist to the queue

#### The music player shall allow the user to repeat a song or playlist

#### The music player shall allow the user to choose a random song or go in order of the playlist

#### The music player shall allow a user to see the artist information of a song

#### The music player shall allow a user to add song to a playlist

### **Playlists**

#### The playlist shall allow the user to create a local playlist

#### The playlist shall allow the user to edit the title of the playlist

#### The playlist shall allow the user to add or remove a song from the playlist

#### The playlist shall allow the user to download the playlist for offline listening

#### The playlist shall allow the user to search within chosen playlist

#### The playlist shall allow the user to add entire playlist to queue

#### The playlist shall allow the user to sync playlists using information from multiple MSM