

Software Engineering

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1. The software I will be choosing for this assignment is Spotify. The Music, Podcast, and Audiobook Streaming platform. I will be talking about all features Spotify has in its paid for subscription version.

2. Use Cases

Use Case ID	Use Case Name	Brief Description
UC-1	Log Into Platform	The User must log into Spotify before being able to access any media type
UC-2	Listen Music	The user should be able to listen to music and access its lyrics if available
UC-3	Listen Podcast	The user should be able to listen to podcasts and access its video format if available
UC-4	Listen To Audio Book	The user should be able to listen to downloaded audiobooks
UC-5	Download Media	The user should be able to download all audio media and any related media
UC-6	Search Through Media	The user should be able to use the search bar in order so search and find all media types.
UC-7	Like Media	The user should have the ability to like all media types, in order to easily find later.
UC-8	Music Playlists	The user should be able to create different music playlists for listening to later.

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3. System Requirements

Functional requirements:

- 1) Spotify-Req-Func-Discovery-1: The System shall have an UpToDate database of Music, Podcasts, and Audio Books.
- 2) Spotify-Req-Func-Discovery-2: The System shall have a automatically create playlists based on popularity, physical regions, language, and genera. For users to pick from to help discover new music.
- 3) Spotify-Req-Func-Discovery-3: The System shall let the user search for the type of media they want to listen to.
- 4) Spotify-Req-Func-Discovery-4: The system shall let the user create and send links to others.
- 5) Spotify-Req-Func-AI-1: The system shall give the user artist recommendations based on who they are currently listening to.
- 6) Spotify-Req-Func-AI-2: The System shall automatically create playlists for the user based on the music they are currently listening.
- 7) Spotify-Req-Func-Access-1: The System shall let the user download media that they choose.
- 8) Spotify-Req-Func-Access-2: The System shall let the user stream media that they choose.
- 9) Spotify-Req-Fun-SocialMedia-1: The System shall let the user follow artists of their choice.
- 10) Spotify-Req-Fun-SocialMedia-2: The System shall let users like media of their choice.

Hardware requirements:

- 1) Spotify-Req-Hardware-1: The System shall include at least 1 screen to view the UI.
- 2) Spotify-Req-Hardware-2: The System shall include at least 1 NIC, to establish an internet connection.
- 3) Spotify-Req-Hardware-3: The System shall include at least 1 input device to interact with the programs UI.

Usability requirements:

- 1) Spotify-Req-Usability-1: The System shall be intuitive and easy to learn, for any user.
- 2) Spotify-Req-Usability-2: The System shall accept logins for multiple devices at once.
- 3) Spotify-Req-Usability-3: The System shall have the ability to run in the background, recusing hardware usage.

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Performance requirements:

- 1) Spotify-Req-Performance-1: The System shall not produce audio quality lower than 320 kbps.
- 2) Spotify-Req-Performance-2: The System shall not produce any unwanted noise under any circumstances.
- 3) Spotify-Req-Performance-3: The System shall not have a latency longer than 1 second.

Security requirements:

- 1) Spotify-Req-Security-1: The System shall let the user reset the password to their account, only through the preexisting email attached to the account.
- 2) Spotify-Req-Security-2: The System shall let the user opt out remove access to 3rd party applications.
- 3) Spotify-Req-Security-3: The System shall let the user activate 2-factor authentication for login.

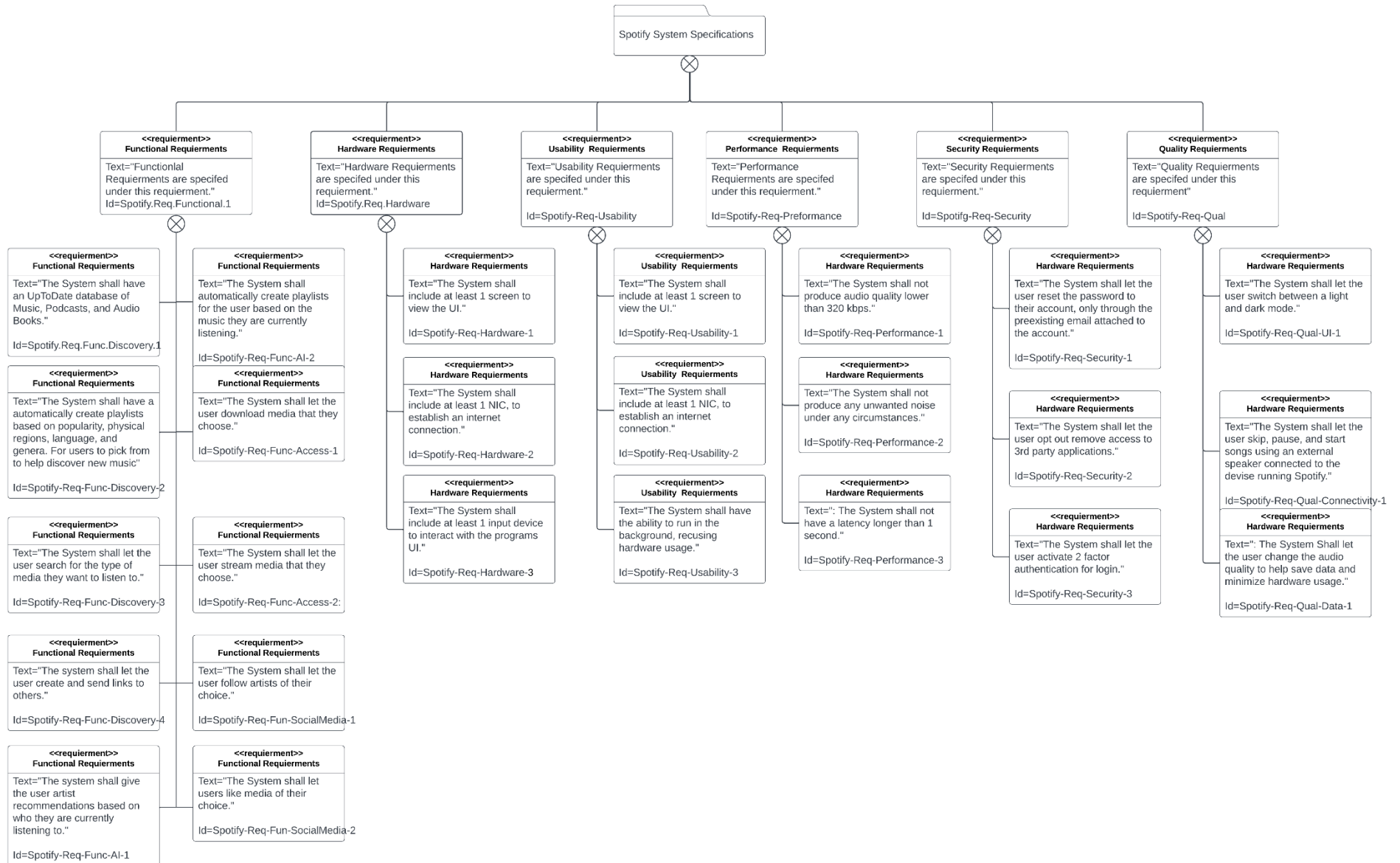
Quality requirements:

- 1) Spotify-Req-Qual-UI-1: The System shall let the user switch between a light and dark mode.
- 2) Spotify-Req-Qual-Connectivity-1: The System shall let the user skip, pause, and start songs using an external speaker connected to the device running Spotify.
- 3) Spotify-Req-Qual-Data-1: The System Shall let the user change the audio quality to help save data and minimize hardware usage.

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