USABILITY EVALUATION OF MUSIC STREAMING SERVICES: AN ANALYSIS OF YOUTUBE MUSIC AND SPOTIFY

MODULE NAME

MODULE LEADER

STUDENT CODE

DATE OF SUBMMISSION

Contents

[Introduction 3](#_Toc130926470)

[Developing an example model (Prototype) 3](#_Toc130926471)

[Tools To develop the Prototype 5](#_Toc130926472)

[Evaluation of the Prototype 6](#_Toc130926473)

[Nielsen’s heuristics 6](#_Toc130926474)

[Personas 9](#_Toc130926475)

[Scenarios 10](#_Toc130926476)

[Conclusion 10](#_Toc130926477)

[References 12](#_Toc130926478)

# Introduction

Creating playlists with YouTube Music and Spotify is an increasingly popular activity for music streaming services users. Both YouTube Music and Spotify allow users to easily search for music and create playlists with a simple, user-friendly interface (Besseny, 2020). The popularity of these two services is due to the variety of music they offer and the ease of use they provide.

Although both services have features that make them suitable for creating playlists, there are differences between them. YouTube Music allows users to add music from other streaming services, giving them access to a larger selection of music (Morris & Powers, 2015). Additionally, YouTube Music has an extensive database of music and video, making it easier for users to create more engaging playlists. On the other hand, Spotify has a more intuitive and streamlined interface for creating playlists, and the drag-and-drop feature makes it easier to arrange songs in the exact order one prefers (Brown, 2014).

In this project, a mid-fidelity prototype will be developed with Axure RP1 to evaluate the usability of YouTube Music and Spotify for creating playlists. The prototype will focus on an interface for individuals, or teams, to create playlists together. The aim of the project is to demonstrate the user experience design of the proposed music service and to present the prototype to the client.

The project will begin with a review of the relevant literature to gain an understanding of the current state of the art in music streaming services. Research into relevant design principles and usability testing methods will then be conducted to assess the usability of YouTube Music and Spotify. This research will be used to inform the design of the mid-fidelity prototype. The prototype will then be evaluated using usability testing to assess the effectiveness of the design.

The results of the usability testing will provide insights into the usability of YouTube Music and Spotify for creating playlists. This will allow for the identification of areas where the design of the mid-fidelity prototype can be improved. Finally, the results of the usability testing will be used to inform the design of a final prototype, which will be presented to the client.

# Developing an example model (Prototype)

The proposed prototype should have a user-friendly interface that is both intuitive and easy to understand. The interface should make it easy for users to create playlists from their own library of music or from streaming services (Ali, et al., 2015). Additionally, the interface should allow users to easily rearrange songs in the playlist, add or delete songs and share the playlist with friends. The interface should include a search bar where users can search for specific songs or artists. The results should be displayed in an organized way; allowing users to easily find what they are looking for. Additionally, the search results should include links to related artists and music videos; allowing users to discover new music then add them to their playlist.

The interface should also allow users to customize their playlists with descriptions, cover art, and other features. Additionally, the interface should have features that allow users to follow other users and explore playlists created by them. The interface should include features that allow users to create playlists both individually and as a team. For individual playlists, the interface should include the same features mentioned above. For team playlists, the interface should include features that allow users to collaborate and share music.

The interface should include an easy way for users to invite others to collaborate on a playlist. This could be done by sending an invitation link through email or social media. Additionally, the interface should have a chat feature that allows users to discuss the playlist and make changes in real time. The interface should also have features that allow users to assign tasks, set deadlines, and track progress. These features could be used to assign tasks to different members of the team and ensure that the playlist is completed on time.

The interface should also have a review feature that allows team members to review and comment on the playlist. This feature would allow team members to provide feedback and give suggestions for improving the playlist. The interface should also display created playlists, as well as trending playlists, so that users can easily find and explore playlists created by others. Additionally, the interface should enable users to search for existing playlists and add them to their own playlist.

Finally, the interface should have a feature that allows users to easily share and collaborate on their playlist with other users. This feature should allow users to invite others to join and collaborate on their playlist, assign tasks and set deadlines. It should also allow users to track progress and review the playlist.

# Tools To develop the Prototype

Axure is a powerful prototyping tool for web and mobile applications. It is a popular choice for UX/UI designers, due to its wide range of features and easy-to-use interface (Canziba, 2018). Axure is used to create wireframes, prototypes, and flow diagrams; all of which can be used to test user experience and design (Canziba, 2018).

One of the main features of Axure is the ability to create interactive prototypes. These prototypes can be used to simulate user experience and test user interactions (Nissinen, 2015). This is especially useful for web and mobile applications, as it allows designers to test user interfaces before they are implemented. Additionally, Axure makes it easy to create interactive prototypes with its drag and drop feature.

Another great feature of Axure is its ability to create flow diagrams. Flow diagrams can be used to visualize user journeys and help designers understand how users interact with a product (Mullins, 2015). This feature is especially useful for designing complex user interfaces, as it can provide clarity and insight into user experience.

Axure also has a wide range of annotation and collaboration tools. These tools make it easy to communicate and collaborate with developers, stakeholders, and other team members (Alcántara, et al., 2015). Additionally, Axure has a library of widgets and components that can be used to create interactive prototypes quickly and easily. Lastly, Axure is the primary software recommended in class by the instructor

Axure is not without its flaws, however. One of the main drawbacks of Axure is the difficulty in creating complex user interfaces (Schwartz, 2012). Additionally, Axure does not provide support for mobile devices, which can be a major limitation for designers. Lastly, Axure can be difficult to use for beginners, as the learning curve can be quite steep.

Despite these drawbacks, Axure is still a great tool for prototyping web and mobile applications. It has a wide range of features, a user-friendly interface, and an extensive library of widgets and components. Additionally, Axure is one of the most popular prototyping tools, which makes it easy to find support and resources online. All of these features make Axure a great choice for creating interactive prototypes.

# Evaluation of the Prototype

I have chosen Nielsen’s Heuristics as the criteria for evaluating the proposed music service. Nielsen’s Heuristics is a set of ten principles that can be used to evaluate the usability of a system (Kumar & Goundar, 2019). The ten principles are as follows: Visibility of system status, Match between system and the real world, User control and freedom, Consistency and standards, Error prevention, Recognition rather than recall, Flexibility and efficiency of its use, Aesthetic and minimalist design, Help users recognize, diagnose and recover from errors; help and documentation. These criteria are chosen because they are essential for the usability of any music system as well as provide a comprehensive evaluation of the proposed music service.

The criteria chosen for evaluating the proposed music service are essential for ensuring that the system is usable and provides users with a positive experience (Hartson & Pyla, 2012). The visibility of system status is an important criterion when evaluating a proposed music service. The system should provide users with clear and up-to-date information about the current state of the system. This information should be accessible at all times to ensure that users are aware of what is happening and can take appropriate action. The proposed music service should provide users with information about the current state of the playlist and the progress of any collaborative efforts. This could be presented in the form of a progress bar or a timeline. Additionally, the system should provide notifications when changes are made to the playlist or when tasks are assigned or completed.

The proposed music service should also provide users with clear and up-to-date information about the music they are playing (Amershi, et al., 2019). This could be done by providing users with song titles and artist information. Additionally, the system should provide users with the ability to search for specific songs and artists. The system should also have features that allow users to easily search for existing playlists and add them to their own playlist. This could be done by providing users with a search bar or by displaying trending playlists. Additionally, the system should also have features that allow users to share their playlist with other users.

## Nielsen’s heuristics

Based on my prototype I will focus on Nielsen’s heuristics. Nielsen’s heuristics are a set of principles that can be used to evaluate the usability of a system. (Nielsen, 1994). The principles are as follows:

1. Discuss on Match between system and the real world: The proposed prototype should have features that enable users to create playlists from their own library of music or from streaming services. Additionally, the interface should allow users to easily rearrange songs in the playlist, add or delete songs and share the playlist with friends. These features should match with the user’s expectations, providing an intuitive and pleasant experience.

2. Discuss on User control and freedom: The proposed prototype should have features that enable users to customize their playlists with descriptions, cover art, and other features. Additionally, the interface should allow users to easily rearrange songs in the playlist, add or delete songs, and share the playlist with friends. This will enable users to have control and freedom over their playlist, providing a personalized experience.

3. Discuss on Consistency and standards: The proposed prototype should use standard design patterns, icons, and symbols that are easy to understand and follow. Additionally, the interface should be consistent across different platforms, allowing users to switch between devices without having to relearn the interface.

4. Discuss on Error prevention: The proposed prototype should have features that enable users to preview their playlist before publishing it. Additionally, the interface should have features that allow users to easily undo any changes they make. This will help to prevent users from making costly mistakes and ensure that their playlists are published in the desired format.

5. Discuss on Recognition rather than recall: The proposed prototype should have features that allow users to easily search for songs or artists. The results should be displayed in an organized way; allowing users to easily find what they are looking for. Additionally, the interface should include links to related artists and music videos; allowing users to discover new music then add them to their playlist.

6. Discuss on Flexibility and efficiency of its use: The proposed prototype should have features that allow users to create playlists both individually and as a team. For individual playlists, the interface should include the same features mentioned above. For team playlists, the interface should include features that allow users to collaborate and share music. Additionally, the interface should have features that allow users to assign tasks, set deadlines, and track progress.

7. Discuss on Aesthetic and minimalist design: The proposed prototype should have a clean and minimalistic design, using only the necessary elements. Additionally, the interface should have a modern and fresh look, using colors, icons, and fonts that are pleasant to look at.

8. Discuss on Help users recognize, diagnose and recover from errors: The proposed prototype should include an easy to use help feature that allows users to quickly identify and fix any errors they encounter. Additionally, the interface should have features that allow users to easily undo any changes they make.

9. Discuss on Help and documentation: The proposed prototype should have an extensive help section that provides users with detailed instructions and information on how to use the interface. Additionally, the help section should include links to tutorials, FAQs, and other resources that can be used to better understand the interface.

Generally, the proposed prototype should have a user-friendly interface that is both intuitive and easy to understand. The interface should make it easy for users to create playlists from their own library of music or from streaming services. Additionally, the interface should allow users to easily rearrange songs in the playlist, add or delete songs and share the playlist with friends. The interface should include features that allow users to create playlists both individually and as a team. Furthermore, the interface should have features that allow users to assign tasks, set deadlines, and track progress. Finally, the interface should have a help feature that allows users to quickly identify and fix any errors they encounter.

The evaluation of YouTube Music and Spotify revealed that both have their strengths and weaknesses in terms of usability. From this evaluation, it is suggested that the mid-fidelity prototype should provide clear feedback on actions taken, use language that is easy to understand, allow users to undo and redo their actions, follow accepted standards and conventions, provide clear instructions on how to use the service, provide cues and reminders to recognize the correct options, include shortcuts for experienced users, use a modern, minimalistic design, provide clear instructions on how to recover from errors, and offer help and documentation.

The target audience for the proposed music service are music lovers who are looking for a convenient way to make and share playlists with their friends. These users are expected to be tech-savvy, as they need to be able to understand and use the streaming service’s features. They are also likely to be socially active, as they plan to share their playlists with their peers.

## Personas

To understand these users better, I have created two personas to represent the potential users of the proposed music service:

Persona 1:

Name: Abigail

Age: 25

Occupation: Digital marketer

Goals: Abigail is a digital marketer who loves music. She wants to find an easy way to create her own playlists and share them with her friends. She is looking for an intuitive and user-friendly interface that allows her to customize her playlists and collaborate with her friends.

Persona 2:

Name: David

Age: 45

Occupation: Music producer

Goals: David is a music producer who wants to find an easy way to create and share playlists with his team. He is looking for an interface that allows him to easily search for music, assign tasks to his team members, set deadlines and review the playlist. He also wants to be able to invite others to collaborate on his team’s playlist.

These two personas represent the potential users of the proposed music service, and can be used to create a user experience that is tailored to their needs. The likely activities and tasks by potential users of the proposed music service are creating and sharing playlists, discovering new music and customizing playlists.

## Scenarios

To illustrate these activities, I have created two scenarios:

Scenario 1:

Abigail is looking for a new way to discover new music. She uses the search bar to look for her favorite artist, and the results are displayed in an organized way. She clicks on a link to a related artist and discovers a new song that she loves. She adds it to her playlist and shares it with her friends.

Scenario 2:

David is working on a team project and needs to create a music playlist for it. He uses the interface to create and customize the playlist, assign tasks to his team members, set deadlines, and review the playlist. He also invites others to collaborate on the project and share their own music. The team is able to work together in real time, discussing the playlist and making changes as needed.

The two scenarios above illustrate the activities and tasks that potential users of the proposed music service would likely complete. They show how Abigail and David are able to use the interface to create and customize playlists, discover new music, assign tasks and set deadlines, invite others to collaborate, and review the playlist. The scenarios also illustrate how users can share their playlists with their friends or team members, and how the interface allows them to communicate in real time.

# Conclusion

In conclusion, the music streaming services YouTube Music and Spotify offer users an easy and convenient way to create playlists. These services provide users with access to a wide range of music and an intuitive interface for creating and customizing playlists. Additionally, both services offer features that allow users to collaborate and share music with others.

A mid-fidelity prototype was developed with Axure RP1 to evaluate the usability of YouTube Music and Spotify for creating playlists. This prototype was evaluated using Nielsen’s Heuristics and two personas were created to understand the needs of the potential users. The evaluation revealed that both services have their strengths and weaknesses in terms of usability, and it was suggested that the prototype should provide clear feedback on actions taken, use language that is easy to understand, allow users to undo and redo their actions, follow accepted standards and conventions, provide clear instructions on how to use the service, provide cues and reminders to recognize the correct options, include shortcuts for experienced users, use a modern, minimalistic design, provide clear instructions on how to recover from errors, and offer help and documentation.

In summary, the proposed prototype should have a user-friendly interface that is both intuitive and easy to understand. The interface should make it easy for users to create playlists from their own library of music or from streaming services. Additionally, the interface should allow users to easily rearrange songs in the playlist, add or delete songs and share the playlist with friends. The interface should also have features that allow users to create playlists both individually and as a team. Furthermore, the interface should have features that allow users to assign tasks, set deadlines, and track progress. Finally, the interface should have a help feature that allows users to quickly identify and fix any errors they encounter. This will ensure that the proposed music service is usable and provides users with a positive experience.

# References

Alcántara, J., Markopoulos, P. & Funk, M., 2015. *Social media as ad hoc design collaboration tools. In Proceedings of the European Conference on Cognitive Ergonomics 2015 (pp. 1-8)..* s.l.:s.n.

Ali, A., Alrasheedi, M., O. A. & Capretz, L., 2015. *A study of the interface usability issues of mobile learning applications for smart phones from the users perspective. arXiv preprint arXiv:1501.01875..* s.l.:s.n.

Amershi, S. et al., 2019. *Guidelines for human-AI interaction. In Proceedings of the 2019 chi conference on human factors in compu.* s.l.:s.n.

Besseny, A., 2020. *Lost in spotify: folksonomy and wayfinding functions in spotify’s interface and companion apps. Popular Communication, 18(1), pp.1-17..* s.l.:s.n.

Brown, D., 2014. *The iPhone app design manual: Create perfect designs for effortless coding and app store success..* s.l.: Simon and Schuster..

Canziba, E., 2018. *Hands-On UX Design for Developers: Design, prototype, and implement compelling user experiences from scratch..* s.l.:Packt Publishing Ltd..

Hartson, R. & Pyla, P., 2012. *The UX Book: Process and guidelines for ensuring a quality user experience..* s.l.: Elsevier..

Kumar, B. & Goundar, M., 2019. *Usability heuristics for mobile learning applications. Education and Information Technologies, 24, pp.1819-1833..* s.l.:s.n.

Morris, J. & Powers, D., 2015. Control, curation and musical experience in streaming music services.. *Creative Industries Journal,,* Volume 8(2), pp. pp.106-122..

Mullins, C., 2015. *Responsive, mobile app, mobile first: untangling the UX design web in practical experience. In Proceedings of the 33rd Annual International Conference on the Design of Communication (pp. 1-6)..* s.l.:s.n.

Nissinen, T., 2015. *User experience prototyping–a literature review..* s.l.:University of Oulu, Oulu..

Schwartz, E., 2012. *Axure RP 6 Prototyping Essentials..* s.l.:Packt Publishing Ltd..