Genre Jukebox Museum

Morgan Gomez, Miranda Bisson, Rebekah Ku, Maddie McRoy, Jordan Cox, Joseph Meredith, Liam Oweida, Sabrina Wilson, William Boylan, Yiming Lyu, Elizabeth Sobel, Abigail Gutierrez-Ray, Trinn Nguyen, David Neil Daniell, Khadijat Amoo, Bianca Bordianu, Caroline Long, DeLauryn Brown, Katherine Shambaugh, Matthew Lipscomb, and Amanda Wang

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Project Summary

GOAL

The overall goal of the project was to create a museum that would allow users to walk through a jukebox containing various genres of music, immersing them in the genres they choose to view. Our idea was that the users would become the coin which operates the jukebox. They would then be transported into a portal of knowledge about musical styles across the Western world. We were inspired by the possibility of providing an experience in which you can walk through music. The team was unaware of such a museum existing in the physical world so we were interested in filling that gap through virtual reality.

We had three main goals in the creation of the museum:

1. To use the capacity of virtual reality to create a museum that showcases genres of music not only textually like a real museum, but also through immersive audio.
2. To provide a well-rounded and accurate depiction of the history and culture of the music genres that would be included in the museum.
3. To break out of the standard museum layout and create interesting landscapes for each room, in order to transport users to different musical times and spaces.

FINAL OUTCOME

Like with our initial concept, the museum begins with a lobby in which there is a record player and album covers hanging on the walls. Standing in front of the album covers on the wall, users can choose between six different genres of music: punk/emo, jazz, alternative, hip-hop, pop, and rock. Users can click the link to a room and instantly be transported there. The genres included were chosen based on their popularity in the Western world, and only six were included in this prototype to effectively schedule our time. By the end of this semester, we did not have time to implement all of the initial vision we had planned, but we had created a working prototype, which acts as an example of what the museum could be with more time.

Technology and Process

OVERVIEW

In order to streamline our creation process, we decided to break into three groups: content, modeling, and architecture. The content group researched and decided what objects would be in each room, the modeling group created those objects, and the architecture group placed the objects within the room. In the following sections, we will describe in more detail the processes that each of the groups used in relation to one another.

WORKING SCHEDULE

At the beginning of the project, we discussed how to optimize the project process and also decided that the museum would begin with a lobby. The content and modeling groups then began working on the lobby simultaneously before turning the room over to the architecture group. After the first week of the project, the teams worked on a music genre's room in the order below. In the final weeks of the project when each group finished working on the Rock room, that group then began to help finalize the overall project. You can see below our schedule. The cells are color-coded by group: Content, Modeling, Architecture.

	2/22-2/26	3/1-3/5	3/8-3/12	3/15-3/19	3/22-3/26	3/29-4/2	4/5-4/9	4/12-4/26
Lobby	C + M							
Punk								
Jazz								
Alternative								
Hip-Hop								
Pop								
Rock								
Finalize							C + M	C + M + A

CONTENT

Each week, the Content team had a list of tasks to complete that included:

1. Create a Google doc for research and fill it out with the genre's history, musical elements, cultural elements, and important figures.
    a. Record sources and format them in Chicago style.
2. Find relevant images for each section and save to the joint Google Drive.
3. Write captions for all images, describing the picture and including the source.
    a. Save the pictures as .png files, and upload to Drive.
4. Create any infographics needed, including history timelines.
5. Find audio clips for each important band, edit to no longer than 30 seconds in length, and upload to Drive

At the end of the week, all of the information, images, and audio were sent to the modeling and architecture teams, including a list of proposed models and possible layout ideas that the content team brainstormed.

MODELING

Each week, the group received a list of requested models from the content team and members self-assigned individual assets to be completed by the end of the week. Completed assets were uploaded to the corresponding genre folder in Google Drive, and shared in Teams for feedback if needed. The group also collaborated with the content and architecture teams as necessary to complete any additional assets requested or to revise previously completed assets. Additional assets were curated from online sources.

The modeling team used Adobe software to create 2D objects and Blender to create 3D models. The group decided to stick to a simplistic, low-poly style for the 3D models, both to maintain a uniform aesthetic among all assets and to avoid exceeding the limitations of Mozilla Hubs.

ARCHITECTURE

The architecture group was the final stage in the project pipeline. The group used the assets created by the modeling group and the research by the

content group to assemble all the pieces of a music genre's room in a way that was intuitive for users and consistent with the aesthetic for the genre.

This group was further split into sub-groups, which handled different parts of the room design: the base layout, placing artifacts from the content and modeling group, and the overall lighting of each room. The members of these groups sometimes changed between rooms to allow the group members to experience different roles. The modeling process was done mostly in Spokes, though some layout planning was done in advance using drawing programs such as Lucid.

Artifact

DESCRIPTION

Our final museum starts users off in a lobby modelled after an apartment. In this room, the users will gravitate towards the wall of album covers, where they may choose between six different genres of music: punk/emo, jazz, alternative, hip-hop, pop, and rock. You can go to the Genre Jukebox Museum to explore.

NAVIGATION

The punk/emo room combines two of the biggest offshoots of rock music. Walking in, viewers are met with a large model of a mohawk and the classic emo hairstyle. They then walk down the stairs to view the punk room, which contains images and text on punk history and culture. They can stop by the important bands section to listen to audio clips. Then they continue into the emo section to learn about the offshoot of punk music.

Next, viewers may enter our jazz room, modelled after a jazz bar, to learn all about jazz history and hear some jazz tunes. The alternative room is built like an outdoor music festival and lets patrons learn all about the history of one of the most pervasive music genres. The hip-hop room, modelled after a New York City street corner, reflects an important part of hip-hop culture for patrons to learn about. The classic rock room brings viewers into the culture of the 60s and beyond to teach them about some of the most famous rock musicians.

Users navigate between each of these rooms by locating the album covers that act as a portal to the other rooms by linking to each genre. Once in the room, they navigate as normal in Mozilla Hubs by using the mouse or arrow keys to zoom, pan, and fly.

Future Work and Lessons Learned

LESSONS LEARNED

Perhaps the most notable learning experience of this project was collaborating on a large scale group project efficiently. As a team of over twenty

students, it was essential to have a high level of organization. By dividing the team into three sub-groups, each with team leaders, and creating an effective and efficient project timeline, the group was able to complete the project in an organized and timely manner.

To improve communication between teams, midway through the semester, we created a GroupMe. Members were then able to easily communicate when certain tasks needed to be completed quickly, the team needed to discuss any changes, or team leaders needed to make announcements to the entire group. While an initially daunting task, overall we handled the large scale project well, and communicated and divided up tasks effectively.

However, one issue with the way things were set up was that the number of people in each group was not proportional to the amount of work each group needed to complete. The architecture group's work was a bit more time-intensive than the work of the content team. If we had initially ensured that there were more people on the architecture team than on the content team, we may have been able to complete tasks more efficiently.

Furthermore, perhaps there could have been more specific and specialized teams within each team. For instance, the content team could've been divided into groups of two or three who would specialize in one of the music genres. This division of roles might have ensured more timely progress and research.

While we realized at the end of the project the improvements that we could have made to the team organization, we also realized what we had learned. In the modeling team, many of the members had prior experience with Blender, but were able to dramatically increase their skills by creating new assets weekly. By the end of the semester, many members of the group were more comfortable with the software and saw improvement in their skills. The architecture team learned a lot about setting up interesting layouts by using floor plan references online and experimenting.

FUTURE EXPLORATION

One of the biggest lessons our team learned during this project was how to budget time and schedule appropriately. Initially, we had wanted to create up to nine different genre rooms, but we quickly realized that we wouldn't have time to create that many rooms and still have the quality for each one remain high. If we

had more time to work on this project, then we likely would have created all nine of these rooms and more.

If we were to create rooms beyond the nine that we initially considered, we would try to add genres that aren't Western or genres that users might be less familiar with. This additional expansion would help to enrich the museum and increase the interest of viewers. Additionally, we would have also loved to add even more interactivity to the museum.