**Project Title:** MusicMedley

**Team Name:** Hamilton County Hoosiers

**Team Members: (**For each team member, please give their name, cognate, skill sets, and why each cares about this project**)**

1. Abby Hackett
   1. Cognate: HCC Design
   2. Skills: html/css, Adobe Creative Suites, Python, XML
   3. Why I Care: Listening to music plays a huge role in my life. I am constantly listening to music and creating playlists to fulfill my musical interests. I also really enjoy designing applications as I hope to pursue a career that does such. Having the opportunity to combine two topics of interest in my life excites me which is why I care about this project. I look forward to creating a platform and a design that will fit music lover’s needs.
2. Bennett Dierckman
   1. Cognate: HCC Design
   2. Skills: html/css, php, team coordination, positive mental attitude
   3. Why I Care: I care about the project because I am a big fan of music, and believe that there should exist more opportunities for people to suggest their own songs to be played. I believe that by creating a modifiable playlist that can be influenced by the likes and dislikes of people listening nearby, we can more accurately reflect the mood of the party goers and help create the ideal party atmosphere.
3. Emma Smith
   1. Cognate: Computer Science
   2. Skills: html/css, php, java, python, sql, organization
   3. Why I Care: I have always been interested in learning how to create an app, but I never had an idea to inspire the initial design. Incorporating music into yet another part of my life by designing this app is what interests me in this project idea. I am looking forward to the challenges that we will be facing and conquering as a team.
4. Noah Kiser
   1. Cognate: Business
   2. Skills: sql, html/css, python, html/css
   3. Why I Care: I am interested in this project because of the social aspect that it creates. It allows the guest to interact with the social gathering and make it a little of their own. Music influences the mood of the social event so it is important for everyone to have a say. I think it could revolutionize the way people listen to music.

**Roles:** what member(s) will be responsible for each of the following roles (as is applicable to your project):

* Researching the problem
  + Talking with peers:  Abby, Emma
  + Creating Survey: All
  + Looking at Similar Products: Noah
* Researching the solution
  + Administering Survey: Bennett, Emma, Noah, Abby
  + Analyzing Survey: Discussion among Group
  + Looking into copyright issues: Noah
* Designing the user interface
  + Main: Bennett, Abby
  + Assist: Noah, Emma
* Coding the logic
  + Main: Emma, Noah
  + Assist: Bennett, Abby
* Managing the database
  + Main: Noah, Emma
  + Assist: Abby, Bennett
* Documenting your work - Noah, Emma
* Status reporting - Emma, Bennett
* Testing
  + Usability: Bennett, Abby
  + Code/Data: Noah, Emma
* Assigning tasks - Emma, Bennett

3. What specific training needs will you have to fulfill in order to fill these roles effectively?

We believe that in order to succeed in the creation of our information system, we must first train ourselves to work amongst each other in the most effective manner possible. This will be achieved through exercising self-control, as well as discussing and coordinating times and possibilities regularly. Team and time management paired with positive mental attitudes and meaningful communication will result in productive meetings and an increase in quality of work.

Researching the problem will require understanding of similar existing technologies and the requirements they satisfy. Examining these existing examples will also help us further understand the problem we are striving to solve. Alongside this, we will need to be effectively trained in creating a concise and informative survey by asking questions that relate to proof of concept. Researching the solution will involve administering and assessing the survey results. From this, we will be able to determine whether or not there exists a demand for our solution. Determining the feasibility of our solution to the problem will also involve ensuring that our desired solution does not violate or infringe any of YouTube’s terms of service.

Designing the user interface will involve determining the best means for the user to interact with the application and will require an in depth understanding of the principles of design. As designers, we must be trained in creating an easily understandable interface that makes the user’s possibilities as apparent as possible by using meaningful assistive cues, hinting at options when possibilities are less apparent. We must train ourselves to “think outside the web”, ensuring that our design suits the mobile device’s limited screen real estate.

Coding the logic correctly will require intensive training in the specific implementation of our teams database model (or whichever model is chosen to maintain state-persistence). Those of us who are not proficient in Java will require a significant amount of training in order to develop different app views and the interactions among them. Additionally, team members will require a proficiency in the Android Studios platform. Accomplishing this equips us with the appropriate means of preparing and packing the application for delivery.

Maintaining a well organized database will be yet another vital aspect of our information system. To accomplish this, we mustfirst review course work from I-308.  Doing so will help retrain us in the creation of meaningful ERD’s. Only through this understanding will we be able to accurately create meaningful tables and associations.

Once complete, we must run purge scripts to ensure the process is not slowed down or broken. Additionally we must set up the database to sanitize and validate user input. Failing to do so will inevitably result in system failure and increased vulnerability to SQL injection.

Appropriately documenting our work is pertinent in the creation of our app. Doing so will allow our team to determine what is occurring in a certain instance within the code. Documentation will also allow non-team members who are viewing the code to be aware of the logic and intention of its implementation. Javadocs will likely be used to  supplement code functionality. Github will also serve as a keystone to our documentation process. Ensuring that commits are supported by clear and concise comments will result in easier understanding when resuming teamwork. Documentation will also include a journal-like status report by describing the goals of team meetings and individual sessions supplemented with a summary of decisions and progress made.

Usability tests will play a crucial role in the development of our design. Ensuring the software’s abilities are intuitive to the end user through its interface is pertinent to our prototyping process. We will perform multiple usability tests throughout the development lifecycle. Conducting these tests routinely as we iterate through prototypes will help ensure a user friendly interface, which will prevent unnecessary backtracking nearing the designs final implementation.

Training is needed for the following:

* Agile lifecycle development process
* Java
* Android Studio (IDE)
  + GPS location services
* Specific database implementation (MySql)
* Utilizing pre-existing APIs

**Problem Statement:**

1. What is the problem that you want to solve? (1-2 paragraphs)

When people listen to music together, their preferences vary from person to person. As a result of this, the issue of what songs to play when at social gatherings presents itself either through music preferences or switching between phones and the aux cord. Discourse frequently begins among users when the previous song ends and the next song has yet to be decided. This will almost always result in a lapse of time during which no music is being played. As a solution to this issue, we aim to eliminate this “passing of the aux cord” and the conflicts it entails.

* What group of people are going to benefit from your solution?  
  The creation of MusicMedley will appeal to all who enjoy viewing youtube videos while catering to social gatherings.

The following are potential scenarios:

* + Music lovers who like to listen with others
  + Frequent party goers
  + Study groups
  + Parties without DJs

2. Why is this an important problem (1-2 paragraphs)

We believe music has played a crucial role in shaping the cultures of communities around the world. Effects of music often ripple beyond the individual to other members of a community as well. The power of music is capable of altering an atmosphere to further facilitate positive interactions among audience members. Therefore, we believe successful creation of the app will help strengthen social bonds between different members of a community.

* Why would a business buy a solution to this problem?

Throughout history, music has been utilized as a medium to bring people together. MusicMedley will spike interest across businesses as it aims to resolve conflict that arises on a daily basis. Our app has the capability to be successful on both small and large scales, whether it be used in college towns, larger cities across the nation, or different countries around the world. Since YouTube is recognizable to virtually anyone who has access to the internet, MusicMedley would be an ideal business expense as it incorporates YouTube through its core nature.

* What good things will come from your solution; what bad things won’t happen as a result of your solution.

Successful implementation will result in stronger ties among people who use the app with one another. Affording everyone with the ability to add to and influence the playlist order will help ensure inclusivity and a selection of songs that people actually want to hear. Hosts will be able to divert their attention from the music to other important matters. Lastly, people will have something else to do and talk with one another while further solidifying their social bonds.

Project Description:

1. What is your proposed solution (1-2 paragraphs)

* Briefly describe your solution to the problem.
* How does your solution address the problem?
* How will you implement your solution?

MusicMedley will enable users to join ‘parties’ in their immediate area. Once a party is selected, users will be prompted for a party password before being able to officially join and influence the playlist. Once the password is entered, users will be able to add youtube videos to the playlist and influence the order of its content via likes and dislikes. Affording party goers with the same amount of privilege will result in a more cohesive party with a playlist that accurately reflects the eclectic song desires of its attendees. As far as implementing our project, the AGILE development method will be used to manage time as we iterate through prototypes created in Android Studio's. MySQL will be utilized to keep track of user's, parties, and other relevant information.

* Are there any similar solutions out there? If so, what makes your solution better or different than existing technologies?

A similar technology called Turntable.fm was launched in 2011 and was functional until its end in 2013. The social media website afforded users with an ability to join a ‘room’ where selected users designated as ‘DJs’ would decide songs that would be added to the playlist. ‘Non-DJs’ were allowed to listen and chat about the music being played. Instead of a social media website dependant on the Digital Millennium Copyright Act, our design will be an android application dependant on Youtube’s Terms of Service for its creation and implementation. Unlike turntable.fm, our design will include an option to utilize GPS location services to ensure that no party crashing occurs. Most importantly, our application will include the option for every user to have the ability to add songs to the playlist and influence the order in which they appear.