**Project Plan**

**<Music Streaming System with Mobile Music Player Application>**

| Industry Partner | N/A |
| --- | --- |
| Primary Instructor | Anjana Shah |
| Team Member | Chi Calvin Nguyen |
| Team Member | James Weber De Asis |
| Team Member | Simon Ung |
| Team Member | Aryan Luthra |

Document Revision History

| Revision # | Date |
| --- | --- |
| 1.0 | October 9, 2021 |

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**1. Executive Summary**

The following describes the project to be executed.

| Objective | This project will deliver two products which are a mobile application and an online streaming service. Through consideration of the flaws of the competition such as features and will seek to gain users that are not within their target demographic. |
| --- | --- |
| Corporate Goals Addressed | * Provides an avenue for users to host their content online. * Allows independent creators to promote their products (music / podcasts) * Creates a base for the products, services and infrastructure which may be expanded upon at a later date. |
| Planned Start Date | September 20, 2021 |
| Planned End Date | April 1, 2022 |

**2. Project Approvers, Reviews and Distribution List**

Approvers, reviewers and distribution list

| Project Role | Name | E-mail | Date |
| --- | --- | --- | --- |
| Project Developer | James Weber De Asis | JamesWeber.DeAsis@georgebrown.ca | Oct 9, 2021 |
| Project Developer | Aryan Luthra | Aryan.Luthra@georgebrown.ca | Oct 9, 2021 |
| Project Developer | Simon Ung | simon.ung@georgebrown.ca | Oct 9, 2021 |
| Project Developer | Chi Calvin Nguyen | chicalvin.nguyen@georgebrown.ca | Oct 9, 2021 |

**3. Scope**

Define the sum total of all of its products and their requirements or features.

| In Scope | Out of Scope |
| --- | --- |
| Music Player Mobile Application   * One of the products to be delivered, software which is the front for the service | Monetization   * Project only considers the hosting and streaming of songs. Monetization may produce legal issues which must be dealt with before. |
| Streaming Service   * One of the products delivered from the project, it is the service where users can stream songs and upload their own. | Automatic DMCA   * Current project uses disclaimer, issue claims page, and strict removal of songs with conflicts. Other services use AI / ML based matching to handle conflicts. |
| Remote Servers   * Externally managed remote servers will be used to host our systems and services | Server Hardware   * Internal management and procurement of servers not considered. External servers will be used to host services |
| Software   * The programs which will be used to create the mobile application are Android Studio. The tools used to create the system are still to be determined. | Hardware   * The mobile app will be tested using Android Studio’s emulator and physical hardware will not be provided. It may be tested using the project team’s personal hardware at their own risk. |

**4. Deliverables**

This project will deliver the following.

| Deliverable | Description |
| --- | --- |
| Music Player App | An application running on mobile platforms such as Android and IOS which includes offline functionalities (local playback) and is the client side for the streaming service. |
| Streaming System | The system will be the backend for the online functionalities where it will provide the songs which are streamed to the client. The system will also convert songs uploaded into multiple formats (320 vs 128kbps) for quality selection and store these files. |
| Streaming Service | The service where users can register and gain online functionalities of the music player application which include streaming music and uploading music to the remote system. The service also provides recommendations to the user based on their preferences. |

**5. Assumptions**

This project makes the following assumptions;

* All project team members are able to complete the tasks in the estimated time.
* All project team members have the necessary resources to reach their goals of the project
* The external server is able to handle the load required by the product
* The proposed DMCA disclaimer and takedown are able to handle any conflicts and will not evolve into a larger issue
* The scope and products of the project will remain the same throughout the project cycle

**6. Dependencies**

The following are the internal and external dependencies that will have to be acknowledged and addressed;

1.0 Acquire development tools such as Android Studio (Internal)

1.1 Procure access to external servers to host the system (External)

1.2 Complete App design documents such as wireframes etc (Internal)

2.0 Development of the Music Player App (Internal, 1.2 Finish to Finish, 1.1 Finish to Start)

2.0.1 Local Playback Feature

2.0.2 Playlists

2.0.3 Equalizer

2.1 Development of the streaming system (Internal, 2.0 Finish to Finish, 1.1 Start to Start)

2.1.1 Streaming content development

2.1.2 User access development

2.1.3 User features development

2.2 Testing of the App (Internal, 2.0 Start to Start)

2.3 Testing of the System (Internal, 2.1 Start to Start)

3.0 Implementation of the App and System (2.2, 2.3 Finish to Start)

**7. Risk Management**

The following are the risk associated with the project and the strategies to use to avoid risk or solve the occurrence of the problem;

| Potential Risk | Severity (H/M/L) | Likelihood (H/M/L) | Management Strategy |
| --- | --- | --- | --- |
| Team member unable to work on the project (I.e. sickness, accident, jail, etc...) | M | L | Split work of missing team member between the remaining group members. |
| Application Errors | H | M | Use of branches to avoid errors and only commit guaranteed working code to the master version.  Using a version control software such as git would allow us to rollback to an older version. Each member would also keep a local backup just in case git goes down. |
| Bugs | M | H | Creation of Unit test and extensive testing on our part to avoid bugs. Bugs that are present on the application would be dealt with by putting it on the sprint backlog based on priority. |
| Unrealistic Timelines | M | H | Adjust deadlines and clear communication on what is actually feasible. |
| Group Disagreements | M | L | Group discussion and majority votes. |

**8. Communication**

**Reporting**

The following reports will be produced;

| Report | Audience | Frequency |
| --- | --- | --- |
| Minutes of Meeting Report | Team member / Instructor | Weekly |

**Meetings**

The following meetings/communication will be established;

| Meeting | Purpose | Attendees | Frequency |
| --- | --- | --- | --- |
| Minutes of Meeting | Group Discussion about the Project. Assigning who will work on which task. Addressing any concerns. | All Team Members | Weekly (2 hours) |
| Progress Meeting | Short discussion just checking progress. | All Team Members | Occasional (5 mins) |

**9. Task Listing (WBS- Work Breakdown Structure)**

The following resource proposal template summarizes the resource hours committed to this project, upon final approval of this document.

| Reference | Tasks | Duration | Dependency |
| --- | --- | --- | --- |
| A | Project Planning | Start of project -  October 10, 2021 | N/A |
| B | Design Application | October 12, 2021 - November 5, 2021 | Dependent on A |
| C | Coding of the Application | January 10, 2022 - March 11, 2022 | Dependent on finishing B |
| D | Building User Interface | March 11, 2022 - March 25, 2022 | Dependent on Finishing B and C |
| E | Testing / Fixes | March 25, 2022 - April 1, 2022 | Dependent on Finishing C and D |

**10. Gantt Chart**

Refer to Gantt Chart.xlsx provided in the submission.

**11. Milestones**

| Major Activity or Milestone | Estimated Milestone Target date |
| --- | --- |
| Environment Setup | January 21, 2022 |
| Research Packages | January 24, 2022 |
| Setting Up Database | January 28, 2022 |
| Functional Music Player | February 4, 2022 |
| Play Music from Local Files | February 4, 2022 |
| Uploading Music to Database | February 18, 2022 |
| Streaming Music | February 18, 2022 |
| Playlist Function | February 25, 2022 |
| Queue/Dequeue System | February 25, 2022 |
| Recommendation System | March 11, 2022 |
| User Interface | March 25, 2022 |
| Final Testing / Fixes | April 1, 2022 |

**12. RAM – Responsibility Assignment Matrix**

| **Project Team Responsibilities** | | | | |
| --- | --- | --- | --- | --- |
| **Project Name: Music Streaming System with Mobile Music Player Application** | | | | |
| **Task** | **Calvin** | **James** | **Simon** | **Aryan** |
| Assess Requirements | P | S | S | S |
| Streamline Working Environment | S | P | S | S |
| Design Application | S | S | P | S |
| Coding | S | S | S | P |
| Testing | P | S | S | S |
| P = Primary S = Secondary | | | | |

**13. Approval**

The signatures below indicate their approval of the contents of this document.

| **Project Role** | **Name** | **Signature** | **Date** |
| --- | --- | --- | --- |
| Project Developer | Chi Calvin Nguyen | CCNguyen | Oct 9, 2021 |
| Project Developer | James Weber De Asis | JWDA | Oct 9, 2021 |
| Project Developer | Simon Ung | SimonU | Oct 9, 2021 |
| Project Developer | Aryan Luthra | AryanL | Oct 10, 2021 |