**Life Cycle Document**

**Prepared by: Date: *2017 11 05***

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***1) Adaptive: Concern about changes of all supporting software (and possibly hardware), because of possible conflicts that may impact operations.***

**List of Development and Implementation Tools:**

1. Eclipse Oxygen 4.7.0
2. Java JDK and JRE 1.8
3. MySQL 5.7
4. Struts2 (2.5.13)
5. jersey 2
6. apache-log4j (1.2.17)
7. json-simple 1.1
8. Python 3 (3.6)
9. Anaconda 4
10. pandas (0.21.0)
11. numpy (1.11.3)
12. Scikit learn (0.19.1)
13. flask (0.12.2)

***Note: No 3rd party, proprietary reusable objects were used for this application, so far.***

**Client Software & Hardware:**

Most of the components of the application runs on the server and the client only interreacts with the web application so there are no requirements for any client software except a web browser to access the web application. But we would recommend having the latest version of the browsers which can support HTML5 and CSS3. For example (> IE9, Firefox 56.0 and chrome 59).

**Server Software & Hardware:**

1. There is no associated hardware with our project.

**Potential Future Concerns:**

1. Updates to Java language causing unfunctional classes or methods.
2. Changing demand for the public regarding how a person listens to music, interacts with music (different audience desires), causing the product to be obsolete.
3. Improvements to technology causing the website to seem antiquated.

***2) Perfective: Enhancing software functionality.***

1. Add the online learning for the recommendation so that the recommendation system can keep training itself from the new data it sees, such as whenever someone listen to a song they add some information to the system which can be used to further improve the recommendation model to become better in recommending the playlist.
2. Add features to the system that allow the user to do more with the product.
3. Integrate the product with a music playing system, and track the user’s activity on that system.
4. Improve the look and feel of the webpage.

***3) Corrective: Fixing problems.***

1. Nothing to report yet. This is a new system.

***4) Preventive: Preventing problems.***