What'sThatTune

COEN 691
Programming on cloud

Project Team

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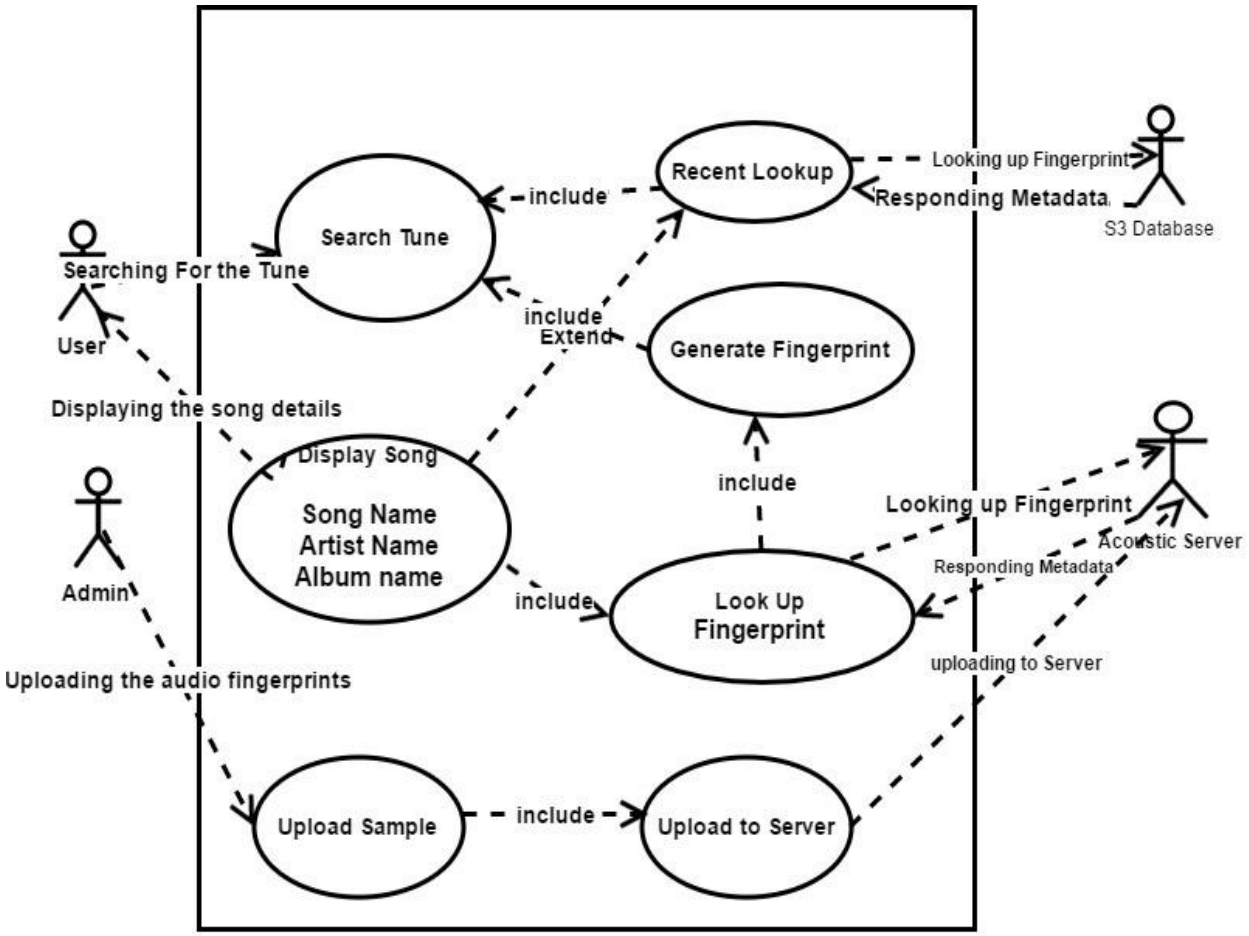
- **Main function of your web service (or application)**

  A cloud based service to sample an audio clip using a PC or Smartphone's microphone and identify the song by comparing with a cloud based music repository.

- **Architecture design (e.g. UML diagrams to represent the structure of the design, interaction and deployment) :**



- **Technologies used and what have you accomplished so far?**

- A cloud based REST API designed using Python and Django framework for retrieving the song details and uploading an audio fingerprint.
- MySQL for creating database.

- FFmpeg is used to creating the fingerprints.
- A light web page to capture the audio sample and match with server.

➢ **What we have accomplished so far**

- We have a webpage to capture audio
- We have Button to upload sample
- Rest API to receive sample and convert to fingerprint
- Upload fingerprint to server and identify songs
- We have replaced open source acoust id server with Dejavu .

➢ **What issues have you faced and how have you overcome them?**

- **FFmpeg has unresolved dependencies on FFT** – dependencies were manually looked up on the internet and downloaded
- **Issues in setting up acoustic ID server** – Default documentation lacks clarity and skips on a few steps. These had to be figured out
- **AcoustID uses a custom PostgreSQL extension** – The distributable of this extension refers to a link that does not exist anymore. So the source code was downloaded, compiled and installed
- **Accuracy concerns with AcoustID** – There are serious doubts about the accuracy of the software as it fails to identify the song correctly most of the time. An alternative is being looked as of now.

➢ **What do you have left to do?**

- Deploying application and server on AWS cloud service
- Data partitioning approach of music database.
- User database pending
- Android application
- Enhancing app user's experience by providing music suggestions based on past searches

➢ **Are your goals still the same?**

Yes our goals are still same.

We hope to develop a lightweight music discovery platform which will allow users to utilise our cloud service without having to download heavy mobile apps. We also hope to be able to identify songs with accuracy, and in case of reasonable doubt, provide a list of best matches without compromising on the audio sample size and making the operation heavy.