**Structure**

**Introduction**

Aspects of system:

Server, client, other(data exchange formats)

Brief overview of system

**Alternative Solutions/Software**

**CLIENT**

What will it need to do?

**Cordova/PhoneGap**

**HCI**

**SERVER**

Identify:

* What needs to be stored.
* Why does it need to be stored Data Objects (Structures).
* How will this data be processed (algorithms).
* Issues:
  + Multi user system (Semaphores?)
    - Locking Strategies <http://www.blackwasp.co.uk/optimisticpessimistic.aspx>
      * Make timeline example, as shown in link above
  + Access rights

What will it need to do?

* Handle audio files (receive/download)
* Process metadata and manipulate audio files accordingly
* Deal with multiple user input to a single session

**Python**

* Overview: Interpreted, syntax, speed, compatibility
* Object Oriented/Classes?
* Does it work with data exchange formats

Trends of use in web servers - http://w3techs.com/technologies/details/pl-python/all/all

Strengths

* Easy to understand syntax
* Large Library
* High level

Cons

* Large Library
* High-level

vs PHP

https://wiki.python.org/moin/PythonVsPhp

**CGI**

Part of http

What does it achieve

Advantages

disadvantages

<http://webdesign.about.com/od/cgi/a/aa021599.htm>

**OTHER**

**SOX (SOund eXchange)**

**JSON, XML - Data exchange formats**

**HTTP/FTP**

Upload to server

Download from server

**DESIGN**

**Client**

As soon as the user opens a session for collaboration, the client will send a notification to the server to create an active session.

**Server**

Active Session Class

Whenever a user starts interacting with the application or data on the server, python will create an active session object. This object will handle user input (audio files), and manage who is able to make changes to the Session. The session class will also implement locking mechanisms/semaphores to stop concurrency issues.