

Team 48 - Hear Together



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Team Website:

<http://sdmay20-48.sd.ece.iastate.edu/>

Intended Users:

- Hearing impaired individuals
- Those desiring privatization of conversations

Uses:

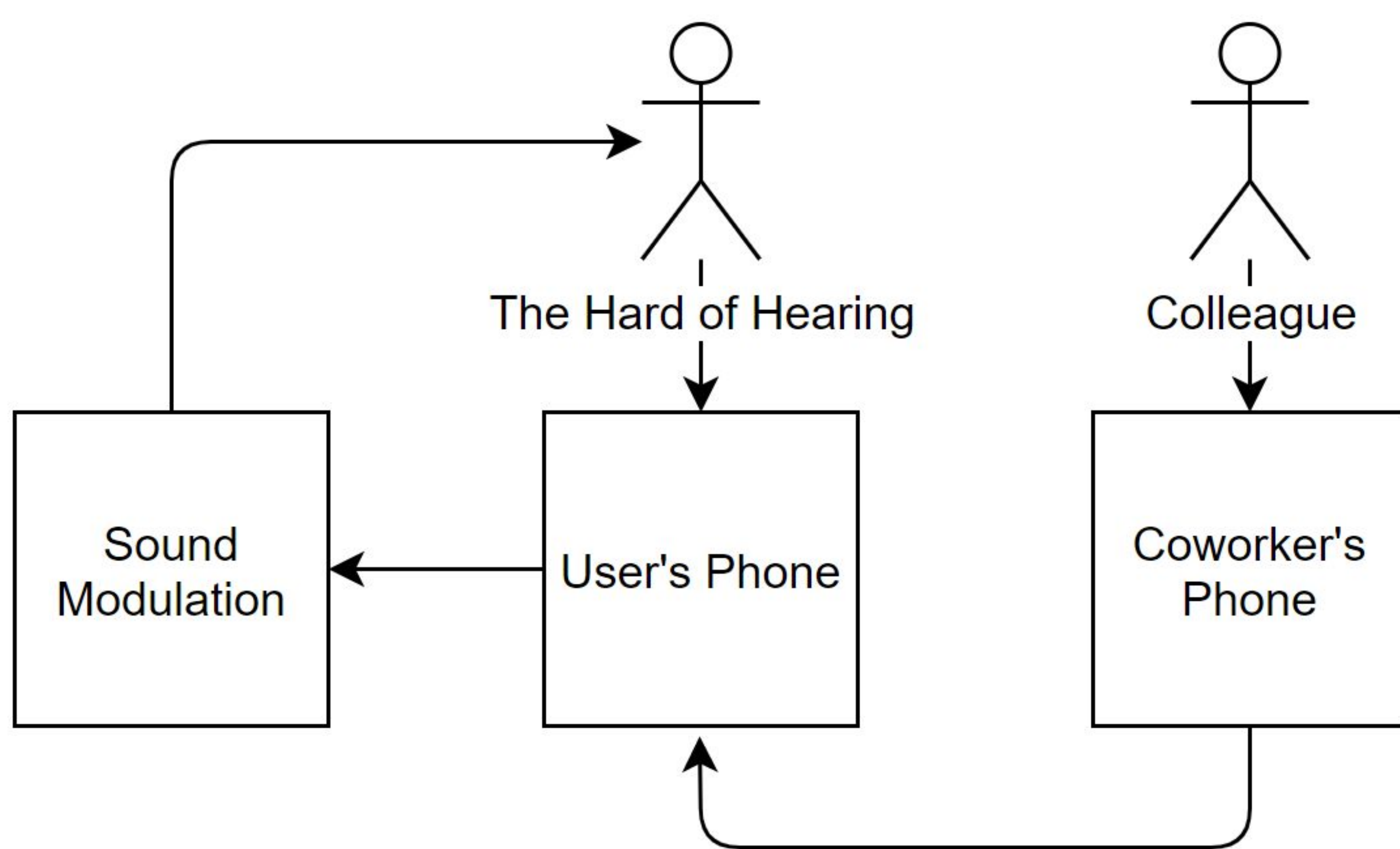
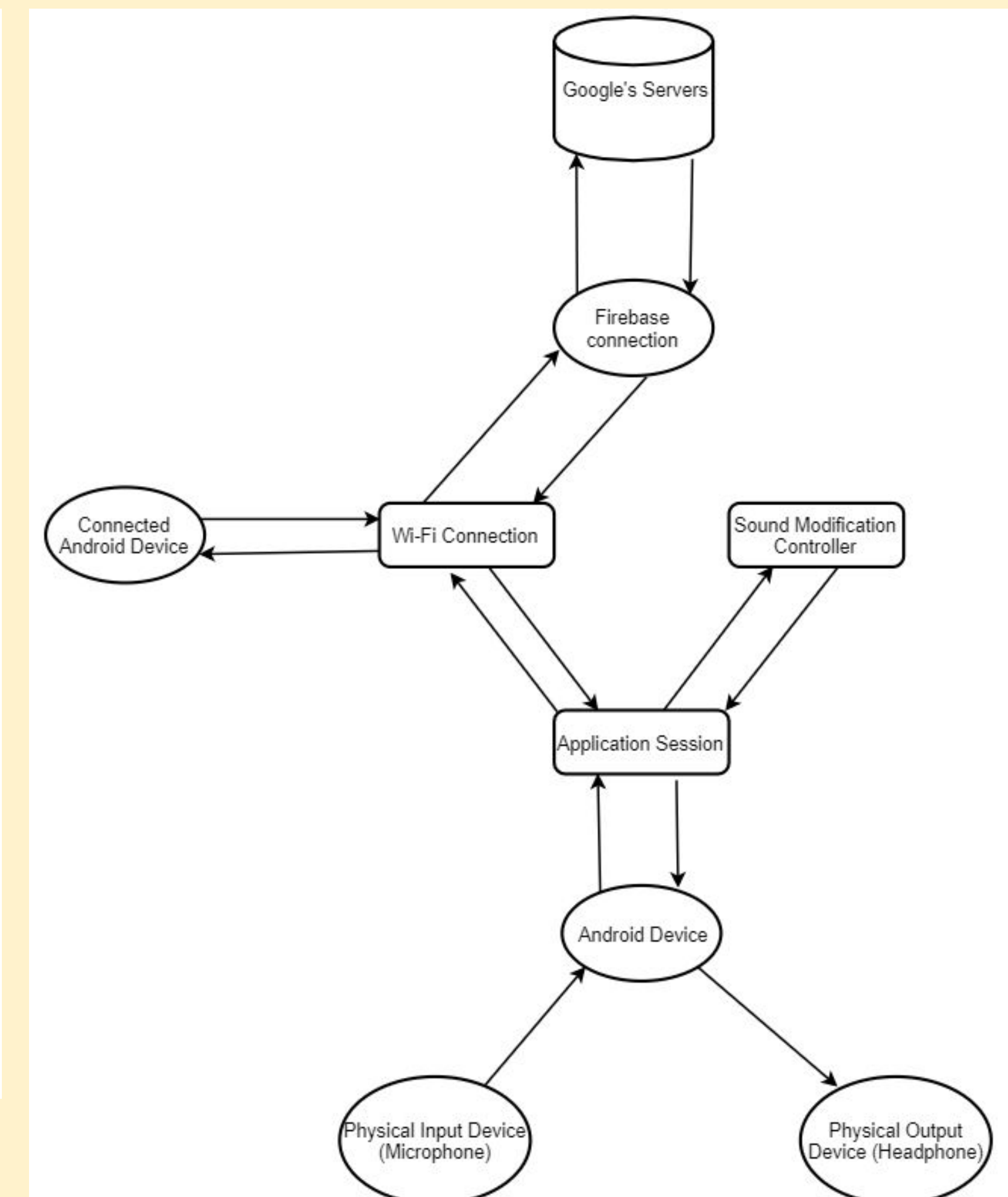
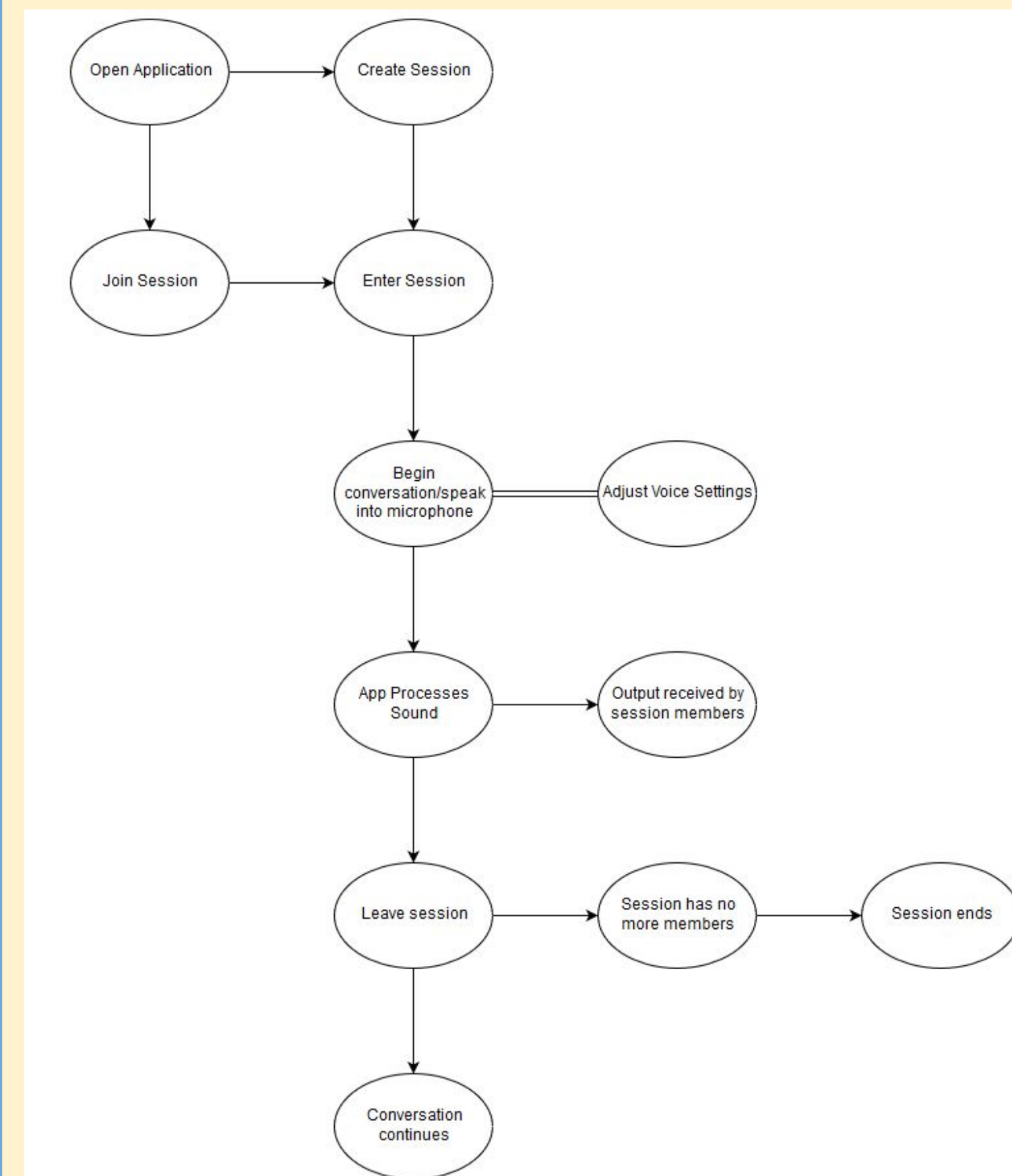
- Modification of inputted sound data
- Group conversations

Abstract:

The team was asked to provide some sort of Android based approach to aiding the hearing impaired. In response to this the team planned out an Android application that takes in an audio input, processes it, and emits an audio output capable of meeting the needs of the user. The system was designed in a way that recognizes the varying needs of individuals suffering from this type of issue and some capability of connectivity and user settings.

Problem Statement:

A low income individual with hearing impairment(s) has no reliable substitute for a hearing aid using their existing devices.



Functional Requirements:

- Must function on Android Devices
- Users should be able to set-up rooms that others can connect to
- Session must be secured so that only desired members can join
- Users should be able to adjust the volume of other group members' volume individually
- Users should be able to manipulate incoming frequencies based on their own hearing needs

Non-Functional Requirements:

- Android application works on Android 7.0 or later
- Data can be sent over WiFi P2P connections

Development Standards & Engineering Practices Used:

- Practices used:
- DRY principle
- Defensive Coding
- Regular Refactoring
- Simple Design
- Version Control Systems

Engineering Standards considered:

- IEEE 1448a-1996 - Software Life Cycle Processes
- IEEE 1233-1996 - IEEE Guide for Developing System Requirements Specifications

