# Abstract:

This document describes some contextual information about the project that our team did for CSCI6990 Agile class. We discuss about the project in this document. The other document contains the sprint that recorded for each meeting we (our group members) had. We present some introductory idea in section2. In section 3, we have listed our group members with their emails. In section4, we list the agile practices we have came across while developing this project.

# Introduction:

As the market of media rose, there is wide spread use of media in varying fields ranging from top businesses to people’s daily life. Today, though video covers more market, audio is still used in many core and important tasks. For example: a psychologist mostly uses audio to record patient statement, a radio interviewer uses audio for recording. We specially talk about audio media in our context of work in this document. Section 5 present some diagrams of the basic components of our application with very brief explanation.

In this document, we briefly describe the group project that we did for our agile class for Fall 2015. Our project “Transcript Management System (TMS)” is a simple audio and text aligner. Given the audio file and the corresponding transcription text, TMS aligns them and provides features for the user to choose application-level bookmarking. The user is allowed to bookmark on word level and play audio with the previously bookmarked text. Such transcription system finds a wide range use. For example: TMS can be employed for learning pronunciation where it is necessary to have word/phoneme transcripts along with audio data. Another use of TMS can be in online class, where a lecture’s audio can be displayed with the synced/aligned text for the student’s ease.

Our goal in this project was not to do coding and meet the functional requirement, but rather was to learn agile practices and methods. Dr. Zibran, who is our professor and acting client in this project, assigned us with the project and what he needs us to do. We were involved in the project around 2 and half months. We had 9 members in our development group with Dr. Zibran as our client.

# Developers

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| --- | --- | --- |
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We start with the listings of agile practices we followed briefly without going into its details and then explain how we did our project.

# Agile practices used

The following are some of the agile related practices that we practiced in our project.

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|  | **Agile Practices** | **Tool used (if any)** |
|  | Less documentation and more fun coding | No heavy documentation |
|  | Scrum meetings and product backlogs | Short 15-20 minutes meetings every week |
|  | Pair programming | - |
|  | User stories | - |
|  | Test driven development | Jasmine, Selenium |
|  | Continuous Integration | Jenkins |
|  | Refactoring |  |
|  | Employing Code metrics or Quality Assessment tool | SonarQube |
|  | Logging | Log4j |

# Software components

## Input Preparation:

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| Figure 1: Input preparation |

We employed Sphinx4 library which is a speech recognition library to generate the required timestamp of each word in the audio. The required input to the Sphinx4 is 26KHz,16 bit, little endian, mono format for which we use ffmpeg for conversion.

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| Software Architecture |
| Figure 2:software architecture of TMS |

### Bookmark

The bookmark component takes both the audio and text as input and matches the word bookmarked with the tagged timestamp for exact match and on match saves the tagged timestamp and the corresponding word index.

### Aligner

Aligner takes the saved bookmarks as input and on playing with bookmark, marks the bookmarked words with highlighter. The user can click on the bookmarked word or any word at this time to march back and forth to its corresponding timestamp in the audio.