The background of the slide is a grayscale photograph of a modern architectural interior. It features white, curved walls and a floor made of large, light-colored square tiles. On the left side, there are white structural elements that look like part of a staircase or a modern railing. The lighting is soft and even, creating a clean and minimalist aesthetic.

Unlocking the Power of Audio NLP for Student Assessment

TEAM MEMBERS

DEVISETTI SAI ASRITH (2021111022)

SIDHI SANKALP PANDA (2021111024)

PACHAVA PAVAN (2021101013)

THOTA VENKATA SAI LAKSHMI GEETHIKA (2021101020)

Agenda

Enabling Teachers to Take Their
Student Assessment to the Next Level



Brief Problem Statement

- This application is for students to improve their skills by ongoing day-to-day assessment and being supervised by an experienced teacher. Doing this physically is time-consuming and is an administrative burden.
- The current work proposes to automate the test taking/grading process by using the audio of the student-teacher interactions during class, to perform this assessment. The work shall start with a limited set of known questions with clear answers in the form of multiple choices or True/False. Based on progress of work, exploration into use of semantic matching for allowing rephrasing of the questions by the teacher may be carried out.

To summarise main features of this application are:

- Automate the student assessment based on the student-teacher interactions during class.
- Start with basic MCQ's and True/False questions and further expand the work to long answer questions.

TIMELINE HISTORY

WEEK 1

Understood the project concept and did scoping.

WEEK 2

Documentations and selection of ASR module which suits our project.

WEEK 3

Implementation of the ASR model to identify true/false audio.

WEEK 4

Developed the framework for the UI.

WEEK 5

Developed the Basic UI.

What is Audio-NLP?

- AudioNLP is a powerful tool that helps teachers quickly and accurately assess student performance.
- The model we are making helps in understanding the input given through the student and assesses him based on a set of pre-added questions and answers.
- This model reduces the workload on teachers by assisting them in assessing the students instead of going through each one individually.
- It is really efficient as it is automated.

How can It be used for Student Assessment?



Collect audio recordings from students



Process audio recordings through AudioNLP



Evaluate student performance based on NLP results

Objectives



'Whisper'

Target/Objective # 1

Choosing the ASR model for the project by shortlisting.

True/false

MCQs

Target/Objective # 2

Give a few sample questions to the model to check its working.

Target/Objective # 3

Making
the User
Interface

Making the User Interface which is
the frontend.

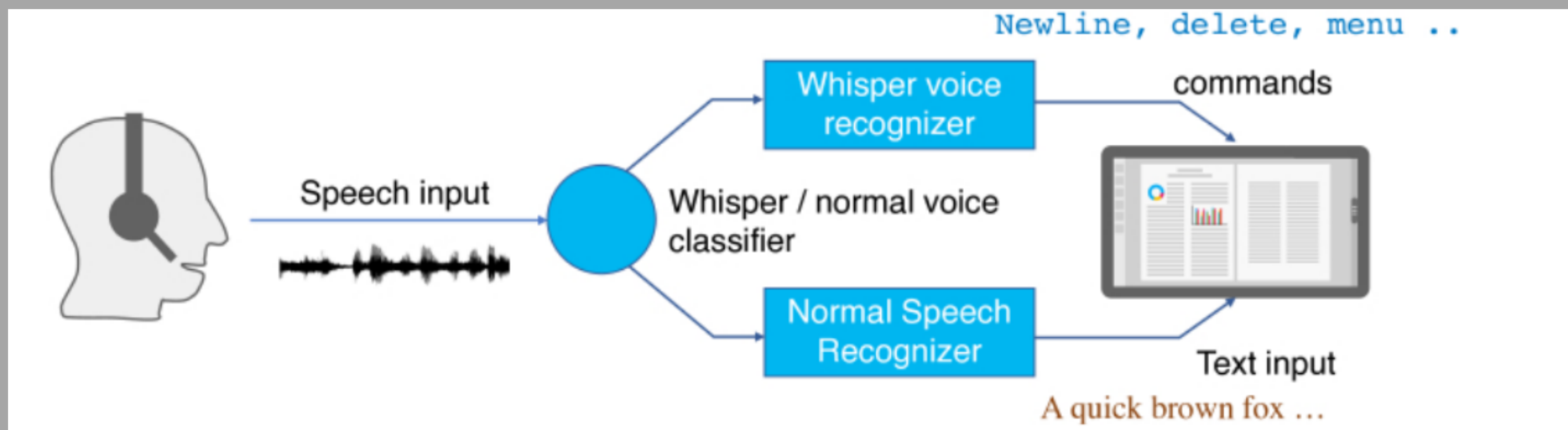
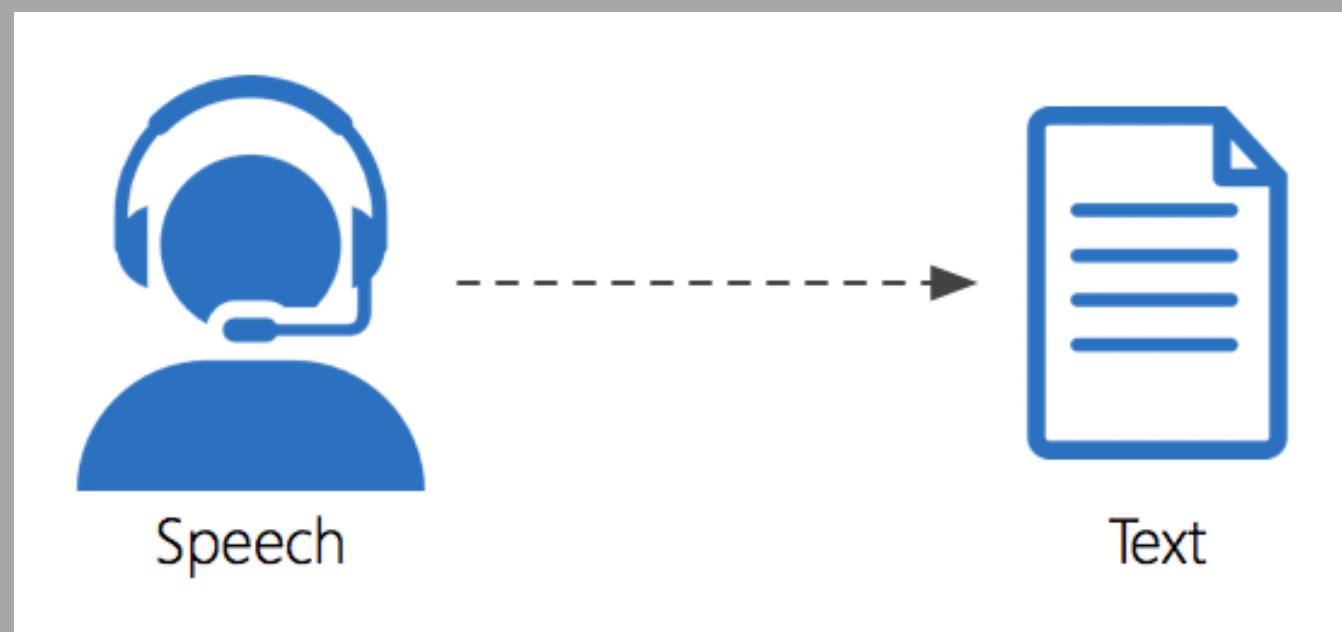
Target/Objective # 4

To be
done yet

Database management

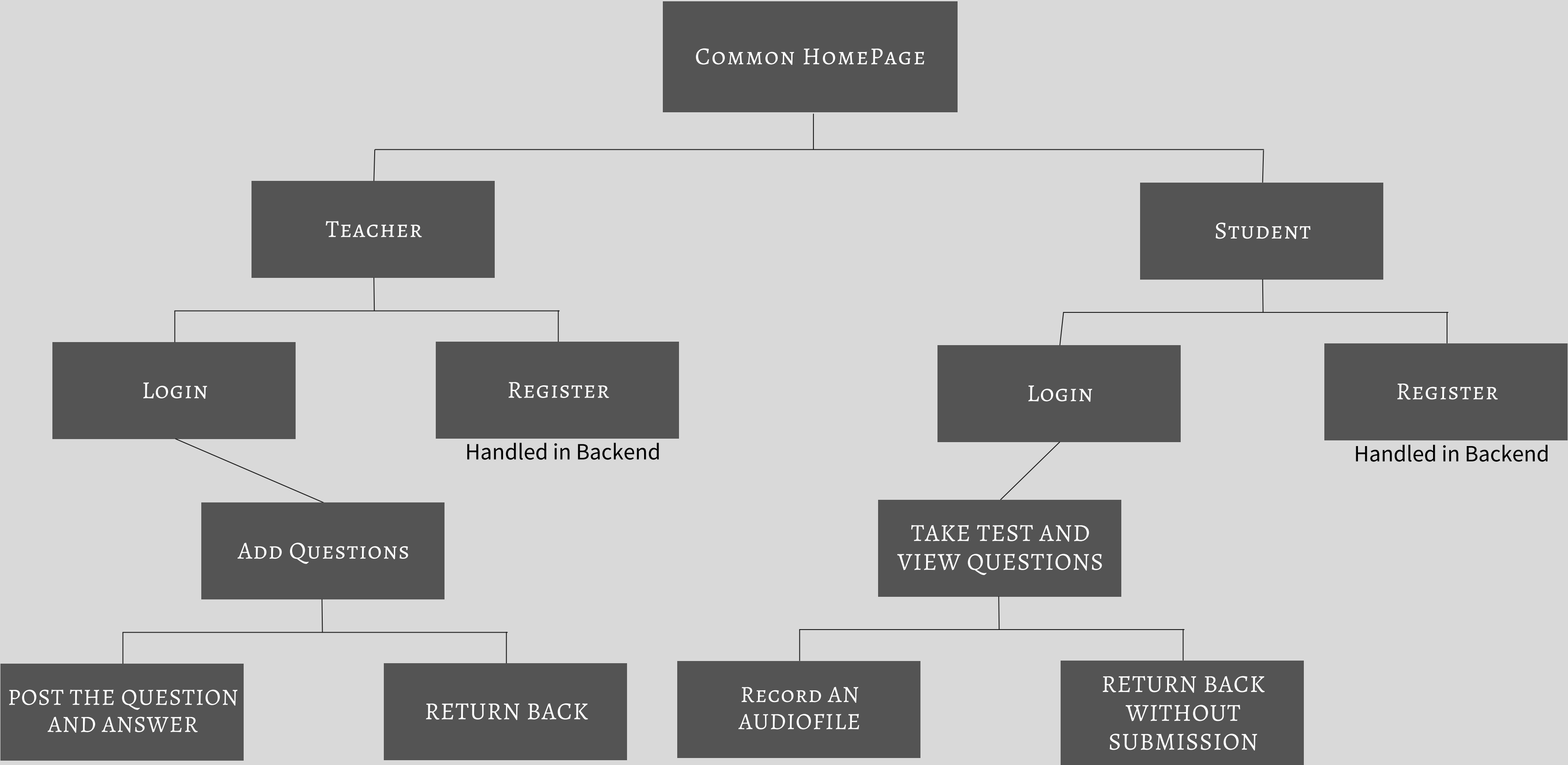
WHISPER MODULE

- Whisper is an automatic speech recognition (ASR) system trained on multilingual and multitask supervised data collected from the web.
- We show that the use of such a large and diverse data-set leads to improved robustness to accents, background noise and technical language.
- Moreover, it enables transcription in multiple languages, as well as translation from those languages into English.



USER INTERFACE

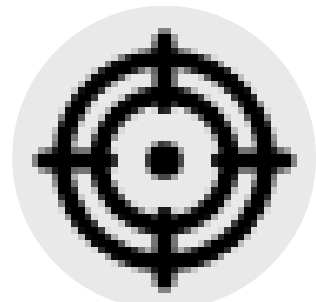
GRADE MATE



Increase in Accuracy and Efficiency



Audio NLP reduces the burden of manual assessment, allowing teachers to save time and focus on other tasks.



Audio NLP is an accurate and reliable way of assessing students, making it easier to track progress and identify areas of improvement.



Audio NLP is easy to use, requiring minimal training for teachers to get started.

Easy to Use

To illustrate how user-friendly AudioNLP is



Natural Language Processing

Audio NLP uses natural language processing to quickly assess student performance



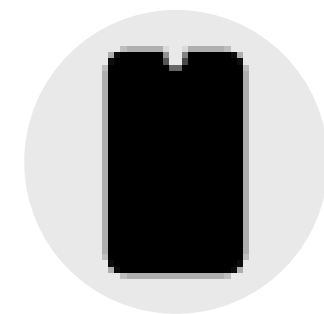
Identify Pattern

Audio NLP can identify patterns and trends in student performance



Generate Reports

Audio NLP can generate reports to provide teachers with the necessary tools and resources to assess student performance



Mobile Friendly

Audio NLP is mobile friendly and intuitive, allowing teachers to easily access and assess student performance



Saves Time!!

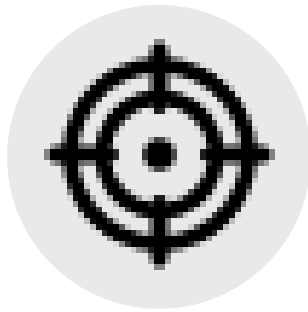
How does Audio-NLP
save time?



Audio NLP can be used to automatically grade spoken assessments, such as oral exams, presentations, and debates. This saves teachers a significant amount of time, as they don't have to manually listen to each recording and evaluate the student's performance. Instead, the audio NLP technology can automatically assess factors such as pronunciation, grammar, and fluency. It can also provide students with immediate feedback on their spoken performance, which can save time for both students and teachers. Students can receive feedback on their pronunciation, grammar, and other language skills in real-time, allowing them to quickly correct mistakes and improve their performance. It provides an objective evaluation of a student's spoken performance, which can reduce bias and inconsistency in assessment. This ensures that all students are evaluated based on the same criteria and that the assessment process is fair and accurate.

Benefits of Using Audio NLP for Student Assessment

To summarise the benefits of using AudioNLP for student assessment



Increase in Accuracy and Efficiency

Audio NLP enables teachers to assess students quickly and accurately



Easy To Use

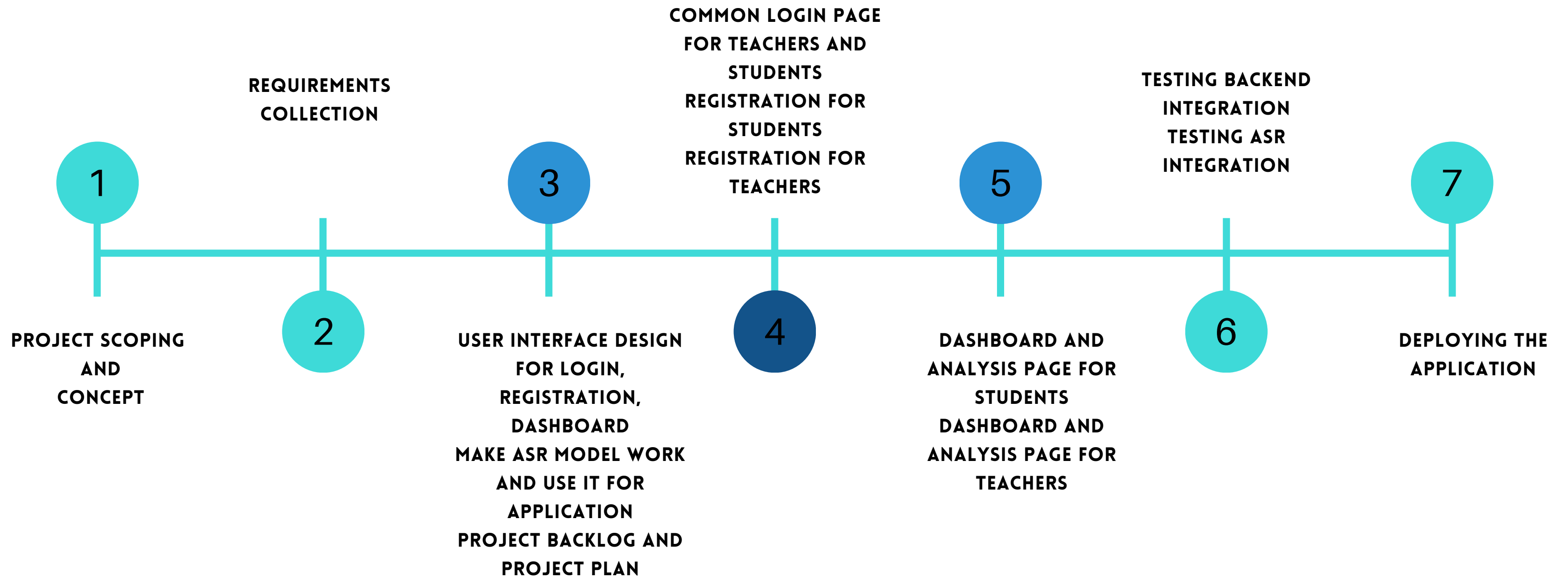
Audio NLP requires no special training and is easy to use



Saves Time

Audio NLP can quickly process large amounts of data, reducing the time required for manual assessment

MILESTONES



THANK
YOU!

