Overview:

The client for this project is committed towards a global health cause - that of helping affected people across the world combat and overcome the issue of stuttering. In order to bring this to effect, they have undertaken a unique approach of getting speech pathologists and clinical psychologists to collaborate, and device solutions that offer a unique blend of learnings and expertise from both these fields. Having received significant encouragement and impetus for the government, the client is focused on performing deep research in this field. The rigor put in is remarkable and intersects many disciplines. All this is being done with a single intent: to understand the disorder better, and device new types of therapies to combat it.

Mindfire Solutions was approached to develop an application that would enable them to further one of their online treatment programs. Generally, there is always a learning curve that comes with executing any Health IT project. Executing one of this nature, that involved infusing the learnings of many researches and having a target audience as widespread, had its own set of revelations and challenges for the team.

Client details:

Name: Confidential | **Type:** Healthcare | **Location:** Australia

Technologies:

PHP, Codeigniter, MySQL, Apache, JQuery, HTML5 Audio/Video, Speech-to-Text Google Cloud API

Project Description:

The project involved developing an online treatment program for adults who stutter. Treating stuttering in adults involves teaching them to speak with a fluency technique. The fluency technique is initially taught in a very slow and exaggerated manner. The technique sounds very strange. It is taught to clients by way of models e.g. with accompanying video or audio examples.

Once the participants have learnt how to speak quite naturally with the fluency techniques, they are made to work through a problem solving module to enable them to apply the learnings from their fluency techniques in their every day life.

So we segregated the whole program into various modules. Each module comprises of Text/Audio/Video content. The users of the application (patients who stutter) are meant to go through each of the modules in a sequential manner. They cannot skip any module. The administrators have access to all the modules. Each module is again made up of multiple sub sections. Overall, it is like a structured series of tutorials, with each serving a specific purpose, and collectively adding up to deliver the holistic benefits.
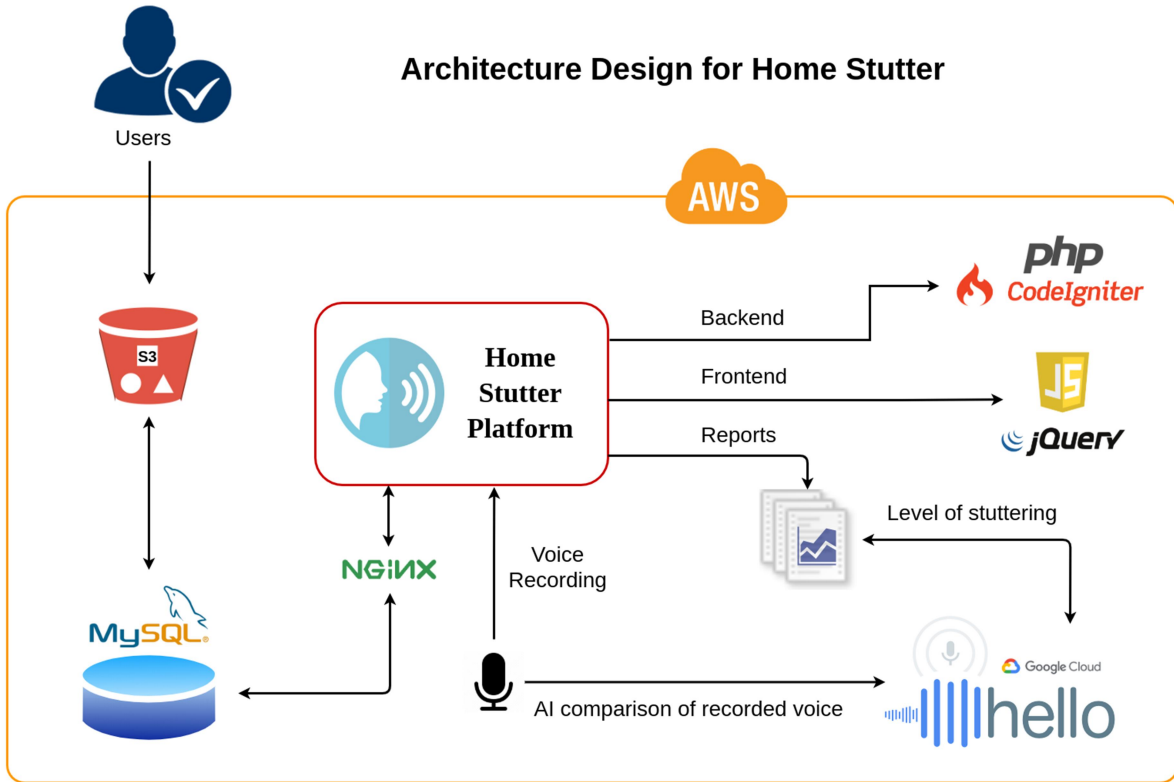
During the course of the program there is provision to capture ratings provided by the users themselves on a rating scale. A sample of the scale used is as follows:
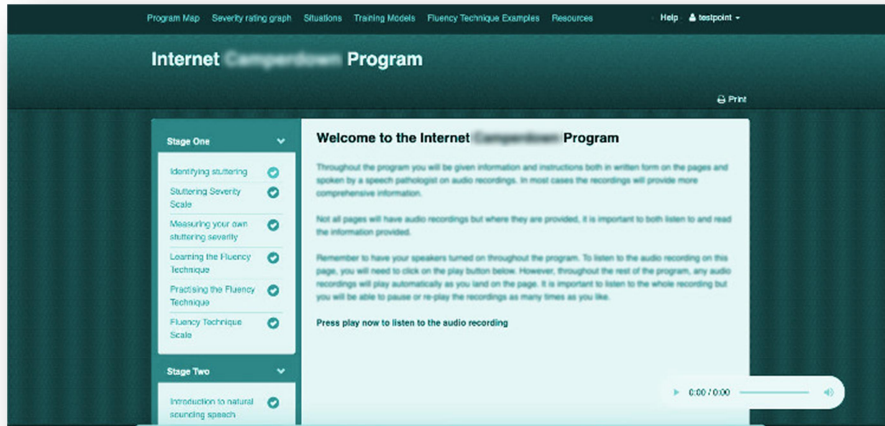

In some modules, the users are required to record themselves while they are talking. Their audio is captured and sent to Google Speech Recognition API which transcribes it into text. It makes it possible to compare it with previous inputs for users. This helps in making a judgment on the improvement that has happened, or otherwise.

There is an admin portal where admins can manage other users (create/edit profile etc.), edit site content for module pages, run various reports like user login report, patient's stuttering data etc.
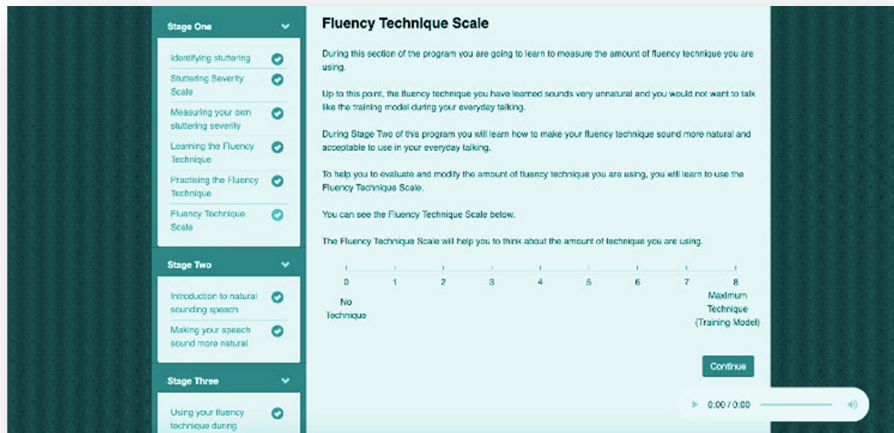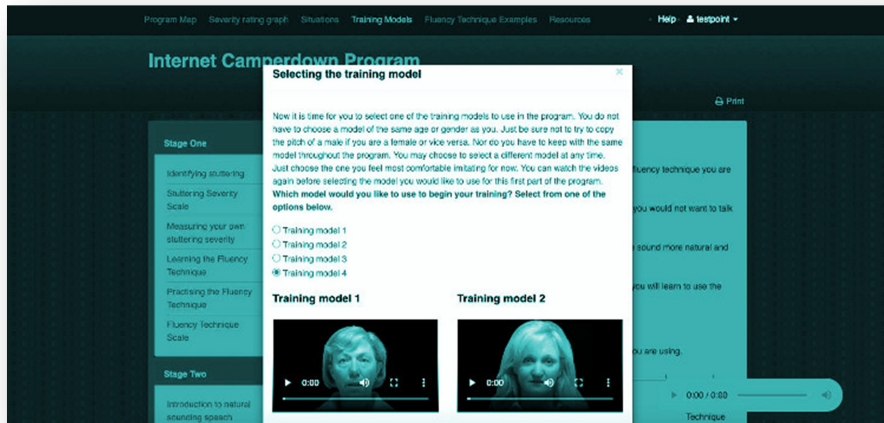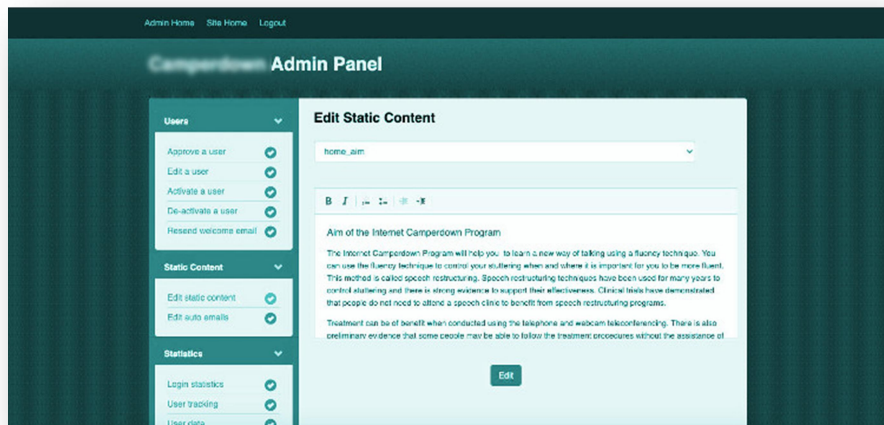
Architecture:

Architecture Design for Home Stutter

Screenshots

Screenshot 1: Home Page

Screenshot 2: Sample Module Page

Screenshot 3: Video Models

Screenshot 4: Admin Portal