



Centre de Référence des Troubles du Langage et de l'Apprentissage

Alongside the game application, an administration interface enables the speech therapists to monitor the improvements of their patients. Because they are used to working on a computer, having a web interface eases the personalized remote follow-up.

By connecting to the website, the speech therapist will be able to manage each of their patients individually. They will be able to create a specific list of words for each patient every week. Then the patient will have to train with this list before the next session. On top of that, the speech therapist will be able to visualize the results of their patient and will be able to adapt the next session by analysing them.

ADMINISTRATION



Artiphonie is an application for Android tablets that aims to provide an additional tool for speech therapists in the treatment of their patients' language disorders and difficulties. Presented in the form of a game, Artiphonie allows the child to keep learning outside the sessions. They can learn new sounds, practice with some words or rest by playing mini games.

We have several objectives for this year's project :

- improve the personalization of the words on which the patients will train, so that the speech therapist can work precisely on the patient's disorder
- improve some of the designs and game features
- provide a web interface for the speech therapists to monitor their patients
- improve the software infrastructure of the application

The game application is developed on the Godot software, using template scenes in order to standardize further applications. The administration interface consists in a web application in VueJS, communicating with a SQLite database, thanks to FastAPI. Eventually, a Python server is in charge of the main calculations on both game and web applications.

3 mini games are available for the child to keep learning while having fun : a goose game, "listen and choose" and a memory game. Through all the activities, the main goal of the patient will be to correctly pronounce the words displayed. It is the parents' responsibility to assess their child's correctness. With each success, the patient accumulates points allowing him to personalize his avatar.

LEARN



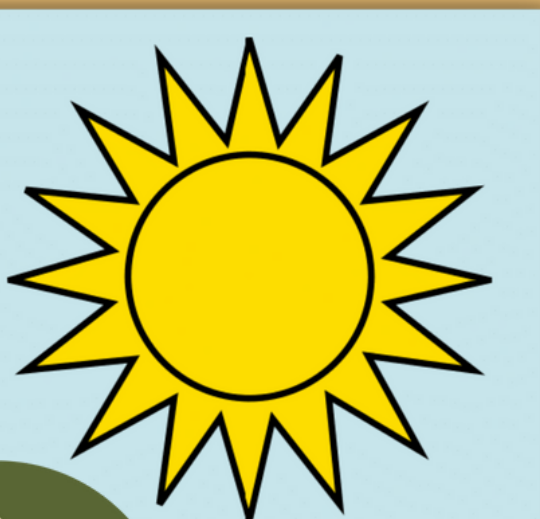
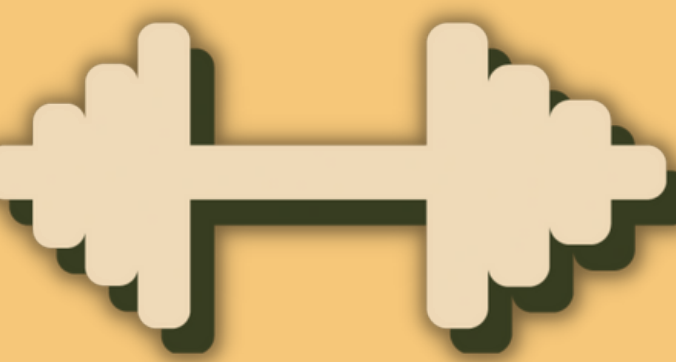
Borel-Maisonny "L"



Borel-Maisonny "B"

The first step for the child is to learn the sounds (vowels and consonants) with which he will have to work throughout the app. For one sound, an image and a video are available. Both derive from the Borel-Maisonny method, which means they portray a specific hand gesture (either drawn or video captured), designed to help remind the child of the way they have to move their mouth to pronounce it.

TRAIN



The second step for the child is to test his knowledge. Each word the child will try to guess has hints in order to help him. The first hint is the word written. The second is a picture that represents the current word. The third one is Borel-Maisonny pictures, representing the phonemes of the word. The child can also hear the sound of the word he has to pronounce. Thanks to the 3 levels, one or more hints may be removed for the patient. Finally, since the parents are supposed to stay next to their child while practicing, a button allows them to confirm or not that the word has been well pronounced.

PLAY

