Parlance Proposal

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# Changelog

|  |  |  |
| --- | --- | --- |
| Who | What Changed | Date |
| Javen Kazebee | Initial creation of document | 6/2/2022 |

# Product Summary

## Vision

Parlance is a web application that will generate a unique language with phonology, grammar, and vocabulary with the click of a button. There is only one other similar tool available which while functional, has numerous UI and usability flaws.

## Target Users

* The Creatives
  + These are writers, game designers, or other creatives wanting a functional language they can use in worldbuilding with minimal knowledge of linguistics
  + In order to support them, an entire language can be generated by hitting just one button. Words, definitions, and names will be easily accessible. They don’t need to muck around in the details if they don’t want to.
* The Conlangers
  + Conlangers are people that create constructed languages (conlangs). They tend to have a strong grasp of linguistics.
  + In order to support them, each subsection (phonology, grammar, etc.) will be customizable, editable, and can be independently generated.

## Features

* Phonology (sounds) generation
* Phonotactics (words) generation
* Grammar generation
* Content (words, sentences) generation
* Account System

# Architecture

|  |  |  |
| --- | --- | --- |
| Technology | Layer | Version |
| Typescript | Programming Language | TBD |
| VueJS | UI Framework | Vue 3 |
| Quasar | UI Styling | TBD |
| Pinia | State Management | TBD |
| Passport | Authentication | TBD |

# Prospective Analysis

## Opportunities

|  |  |  |
| --- | --- | --- |
| Opportunity | Likelihood | Benefit |
| Demo testing with real users through conlanging forums | 3 | 4 |
| Familiar with many of the technologies used in the project | 5 | 5 |

## Threats

|  |  |  |
| --- | --- | --- |
| Threat | Likelihood | Impact |
| Haven’t programmed around using non-English characters | 5 | 1 |
| Will have to develop custom algorithms for content generation | 5 | 3 |
| Lack of readily available information to research if a problem comes up on the linguistics side | 2 | 5 |

# Story List

* **Phonology Generator**
  + [POC.1] S, Display IPA consonants in a full consonant table
    - Unknown difficulty in displaying IPA characters
  + [POC.2] S, Display IPA vowels in a full vowel table
    - Unknown difficulty in displaying IPA characters
  + [POC.3] M, Click on a vowel or consonant to play its audio
    - Reliance on two third-party libraries, one to convert IPA into a format readable by the TTS library as well as the actual TTS library
  + [POC] M, Generate logical sets of consonants and vowels
* **Word Rules**
  + [POC.4] S, Map common sounds to spelling
  + [POC.5] S, Sound to spelling map display
  + [POC.6] M, Add, remove, and edit sound to spelling map in display
  + [1.1] S, Generate stress
  + [1.2] M, Display for editing stress
  + [1.3] L, Generate phonotactics
    - Requires more research into possibilities
  + [1.4] M, Display for editing phonotactics
* **Grammar**
  + [3.1] M, Generate noun cases
  + [3.2] M, Editable display of noun cases
  + [3.3] S, Generate articles
  + [3.4] M, Editable display of articles
  + [4.1] S, Generate basic word order
  + [4.2] M, Editable display of word order
  + [4.3] S, Generate pronouns
  + [4.4] M, Editable display of pronouns
  + [5.1] M, Generate verb tenses, modalities, and mode
    - Requires more research into possibilities
  + [5.2] M, Display for editing verb tenses, modalities, and mode
  + [5.3] M, Generate derivational morphology
    - Requires more research into possibilities
  + [5.4] M, Display for editing derivational morphology
* **Content Generation**
  + [6.1] L, Generate and display vocab words
  + [6.2] XL, Generate and display sample sentences
    - Requires extensive research and may not be a realistic goal
* **Account System**
  + [2.1] M, Register an account
    - Not sure if I’m using Firebase or Passport.js for account system
  + [2.3] S, Logout of account
  + [2.2] S, Login to account
  + [2.4] M, Save languages to account
    - Not sure if I’m using Firebase or a custom database solution
  + [2.5] M, Load saved language

# Proof of Concept

Most of the features in the app will be using the same UI building blocks so the POC is largely focused at getting those building blocks put together. The majority of the threats are around extending the functionality of basic features through me gaining more knowledge around how languages work. I already have all the needed learning materials so not much threat mitigation can be done in the POC.

|  |  |
| --- | --- |
| Story | Acceptance Criteria |
| Display IPA consonants in a full consonant table | A table is displayed with columns: Labial, Dental, Alveolar, Retroflex, Palatal, Velar, Uvular, and Glottal. The rows: Oral Stop, Fricative, Affricate, Nasal Stop, Glide, Flap/Tap, Trill, Lateral  There should be room for 2-4 characters per cell and the cells should be filled with the IPA alphabet consonants. |
| Display IPA vowels in a full vowel table | A table with the columns: Front, Central, and Back. The rows: Close, Close-Mid, Open-Mid, Open.  The cells should be filled with the IPA alphabet vowels. |
| Click on a vowel or consonant to play its audio | Each individual character in the consonant and vowels table should play the sound the character makes. |
| Generate logical sets of consonants and vowels | Certain pairings, series, and amounts of vowels and consonants are more common or natural than others. When the generate button is clicked, the tables should be filled with one of these logical sets. |
| Map common sounds to spelling | A function that takes in an IPA string and converts IPA symbols to the Latin alphabet |
| Sound to spelling map display | UI card that shows the list of IPA symbols to Latin letters used by the function. |
| Add, remove, and edit sound to spelling map in display | The UI card should be able to modify the underlying function, adding, removing, and editing the IPA to Latin alphabet conversion. |