Project Report

Aims and objectives

The focus of our project is linguistics, specifically phonemes. We aim to create a way in which linguist enthusiasts can find the common features of phonemes quickly and efficiently, with ease of functionality. We aim to achieve this through the use of Python, mySQL and API's.

We aim to build a tool that automates the use of the Phonetic Features Chart[1]. Alongside the use of this tool we aim to incorporate the availability to choose a language and its corresponding common features.[2] The aim of this is to reduce time spent searching for the common features of phonemes manually.[3] We also aim to create a way for the user to add a language which will then be added.

We want the program to run so that the user can input their language and phonemes selection; then the program will search within that language how those phonemes can be characterised so that they form a unique group.

Planning

We will build a database in SQL that contains many phonemes.

We will complete test driven development in Python to ensure query accuracy. We will also complete unit testing.

In order to ensure effective communication regarding the project goals and ideas, the project team will communicate over chat in Slack. We will also use GitHub for the purpose of work sharing amongst our group so

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[1] Phonetic Features Chart by Jason Riggle (current version 12.12) chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/http://www.artoflanguageinvention.com/papers/features.pdf

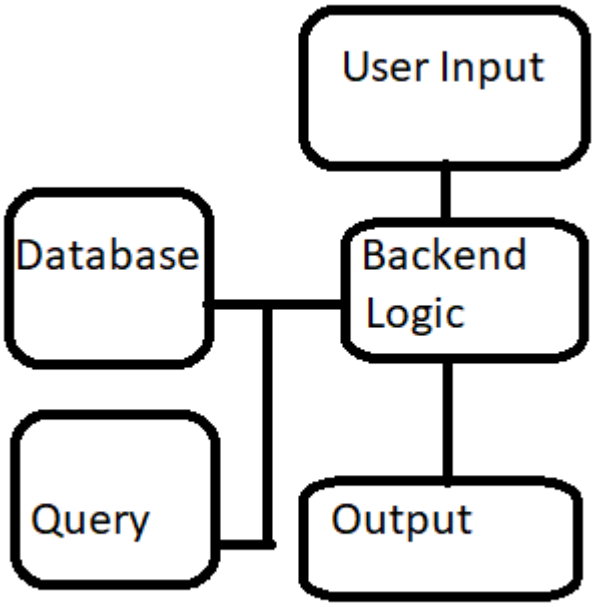
[2] 2 For more information on phonetic features refer to Chapter 12 (What is a possible language: Distinctive features, pp. 254–274) of Zsiga, E. C. (2013) The sounds of language: An introduction to phonetics and phonology. Oxford: Blackwell.

[3] http://www.artoflanguageinvention.com/papers/features.pdf

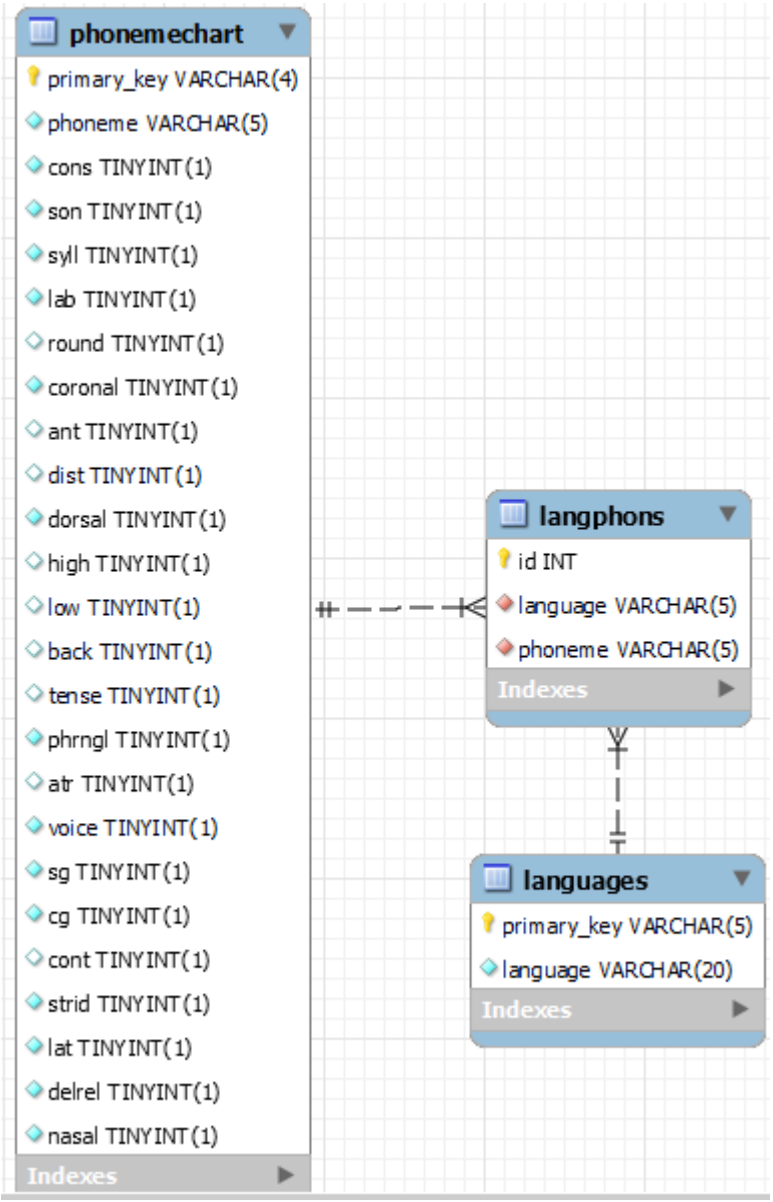
that we can all have access to what it is we are working on collectively. We will also utilise Jira project tracking software so that we can set out our aims and possible project enhancements.

Design

Here is a diagram showing the design of our product. There will be user input that interacts with the database and outputs the results. The user inputs the language and phonemes they wish to be grouped by unifying characteristics.



This is a diagram to illustrate our database created by Juli in mySQL that shows how the tables relate to one another.



Implementation

After the development of the product, it will be implemented. The functionality between front end and back end logic is established by Hannah, with front end development completed by Ana.

Testing and Integration

Testing will be completed throughout the development life cycle in order to ensure a quality product. We will also complete unit testing in Python. We will each test each element of the code to ensure it runs correctly

and efficiently and attempt to see if possible errors can be identified and corrected before the final product is released. This is crucial to ensuring the product runs correctly to the best of our abilities.

Maintenance

When the product is finalised, we will supervise the product and continue to perform testing and ensure no possible errors can be detected and if they occur, correct them to ensure the product performs as it should.