Software Engineering Principle 13016214

Project Report

Linguīs

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**Introduction**

**Requirement (UF, UNF, SF, SNF)**

**Design (3 use case (basic, alt, exc)+ sequence, others: basic; UML (UI, system); State chart (3); Source code**

**CD**

**I. Linguīs Project Description**

Linguīs, ‘into languages’ in Latin, is a phonetic and linguistics learning software which aims to provide learners of languages and linguistics the resources and tools to make their learning process more effective and convenient. It also aims to serve as a resource hub for easy access of language and linguistics knowledge. The app will achieve said goals by offering features such as Full International Phonetic Alphabet chart with complete pronunciations, access to various linguistic topics. The users will be able to mark their most used topics, as well as IPA characters, for quick access. The user will also be able to share their favourites list.

The application will be written in Python 3 and will utilise PyQt5 to render its Graphical User Interface. This is to illustrate the powerful capabilities of the Python programming language, as well as the flexibility of the Qt GUI framework.

The application will be split into two primary sections as followed:

**International Phonetic Alphabet**

The IPA Chart section will consist of two parts. The first part would be an overview containing information about International Phonetic Alphabet and its usefulness. The latter part is a complete interactive chart of all the International Phonetic Alphabet glyphs, which users can interact with to view in detail the description of each character, as well as its pronunciation and oral position. The users will also be able to save the character to their favourites list for easy access.

**Linguistics Information Hub**

The Information Hub section will consist of a database of information on linguistics topics such as Phonology, Orthographies, and more. Each topic in the information hub will also be able to be favourited for easy access. Users can expand the information by installing additional databases or revisions into the application.

Other in-section features in Linguīs are:

**Favourites**

The Favourites section is will contain all the glyphs and information topics that the user has marked to allow the user to access them easily. The favourites will be organised systematically according to their type. The user will also be able to attach their own notes to the snippets to aid in remembering or understanding.

**Quizzes**

Each section contains a quiz that relates to the corresponding material to test and check the learning progress of the user.

**Design**

**A**