

COMP-3150

Lab 1

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Project Conceptualization

What? My objective is to create an application that maintains a database of Japanese kanji (A logographic writing system borrowed from China). My application stores information about kanji, including the character itself, Unicode hexadecimal value, the number of strokes, the readings (Kunyomi / Onyomi) of the kanji using hiragana, katakana (Japanese syllabary) and romaji (romanization of Japanese) and, the meaning in English. Other features include common reading compounds, the stroke order (picture), Radical/Parts of the kanji, type of kanji, JLPT (Japanese Learning Proficiency Test) level, related words, description or history of the kanji, and example sentences.

Why? I have been a learner of Japanese for over a year now. I can understand a great portion of conversation in the language. However, I am not great at reading kanji. Japanese has a writing system comprised of hiragana and katakana which are characters that pronounce a set sound like English. This writing system has kanji mixed in which is a writing system that is pictographic. This means each kanji represents an idea and not a specific sound. There are thousands of kanji to represent thousands of ideas and combinations of ideas. There is a great amount of information associated with each kanji and there are many combinations to create new meanings. I would like to store kanji that I have learned and that I am currently learning to answer questions about the kanji present for review and memorization. This will help me to study by only having the kanji I want to focus on present in the database. Kanji that I already know in the database can stay because reviewing kanji is always a good idea to not forget. Looking up information about a kanji like pronunciation and stroke order is necessary to know to memorize. Looking up kanji using sounds or English meanings can help me express an idea I am not sure how to express. Lastly, being able to see my progress physically is a motivation booster.

Use Case? For this kanji database, I would like to (1) store, (2) update, (3) Lookup or (4) delete information about kanji, its related compound words, stroke order, example sentences, related words. I would also like to (5) retrieve many forms of information from the database including:

- Lookup kanji by its meaning in English or Japanese
- Lookup kanji(s) by its pronunciation (Onyomi / Kunyomi)
- Lookup kanji by the number of strokes
- Lookup kanji by its level for the JLPT (N5 – N1)

- Lookup related kanji in terms of compounds or meaning
- How many kanji were learned (added) in a certain timeframe (month or year)
- What the progress of kanji learned is in terms of JLPT
- What is a kanji's pronunciation (Onyomi / Kunyomi)
- What are a kanji's meaning
- How many strokes a kanji has
- What parts or radicals a kanji is made up of
- What is the history of a kanji
- What is an example of the kanji in a sentence
- What is the stroke order of a kanji
- What is a kanji's Unicode value (Hexadecimal)