

Digital Signal Processing Project 3

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1. Compilation

`$make`: Compile all.

2. Execution

`$make map`: Generate ZhuYin-Big5.map.

`$make run`: Run mydisambig.

3. Implementation

(a) `generate_map.py`:

I use a python3 string to set `dict()` `zhuyin_big5` to store the mapping. For line 吃 / ㄘㄧˊ - , the value 吃 will be added to set `zhuyin_big5[吃]`, `zhuyin_big5[ㄘ]` and `zhuyin_big[ㄣ]`.

(b) `mydisambig.cpp`

`last_paths[i]`: A line (`Path` a.k.a `vector<string>`) that ends with `last_paths[i].back()` and has the maximum probability.

`last_probs[i]`: The probability of `last_paths[i]`.

For each line, use Viterbi algorithm to update `last_paths[i]` and `last_probs` from the first character to the last, and find the path that has maximum probability.

4. Environment

Linux (CSIE workstation)