DSP
HW3 Report

b03901011 電機三 林芳宇

How to compile

Headers of Makefile

```
SRIPATH ?= /Users/jacquelinelin/NTUEE_105_2/DSP/dsp_hw3/srilm-1.5.10
MACHINE_TYPE ?= macosx
LM ?= bigram.lm
```

For mydisambig.cpp

type **`make all`** in command line

Detailes in Makefile :

```
CXX = /usr/bin/g++ -std=c++11
CXXFLAGS = -O3 -I$(SRIPATH)/include -w
vpath lib%.a $(SRIPATH)/lib/$(MACHINE_TYPE)

TARGET = mydisambig
SRC = mydisambig.cpp
OBJ = $(SRC:.cpp=.o)
TO = ZhuYin-Big5.map
FROM = Big5-ZhuYin.map
.PHONY: all clean map run

all: $(TARGET)

$(TARGET): $(OBJ) -loolm -ldstruct -lmisc
	$(CXX) $(LDFLAGS) -o $@ $^

%.o: %.cpp
	$(CXX) $(CXXFLAGS) -c $<
```

How to execute

For ./mydisambig

type **`make run`** in command line

(or `./mydisambig [input file name(path)] ZhuYin-Big5.map bigram.lm 2 > [output file name(path)]`)

Detailes in Makefile :

```
run:
	@#TODO How to run your code toward different txt?
	@for i in $(shell seq 1 10) ; do \
	 echo "Running $$i.txt"; \
		./mydisambig ./testdata/seg_$$i.txt $(TO) $(LM) 2 >
result2/$$i.txt; \

	done;
```

#To run ./disambig and compare the outputs at the same time, we can add :

```
./disambig -text ../testdata/seg_$$i.txt -map $(TO) -lm $(LM) -order
2 > result1/$$i.txt;\
diff -y result1/$$i.txt result2/$$i.txt > test$$i; \
```

in the for loop above

For mapping.py

type **`make map`** in command line

Detailes in Makefile :

```
map:
	@echo "Mapping!"
	@python3 mapping.py $(FROM) $(TO)
```

Environment

Mac OSX

Introduction

1. I use Python to generate ZhuYin-Big5.map, since parsing is easier in Python.
2. Viterbi Algorithm is implemented by c++, with the library in SRILM
3. Do not support Trigram