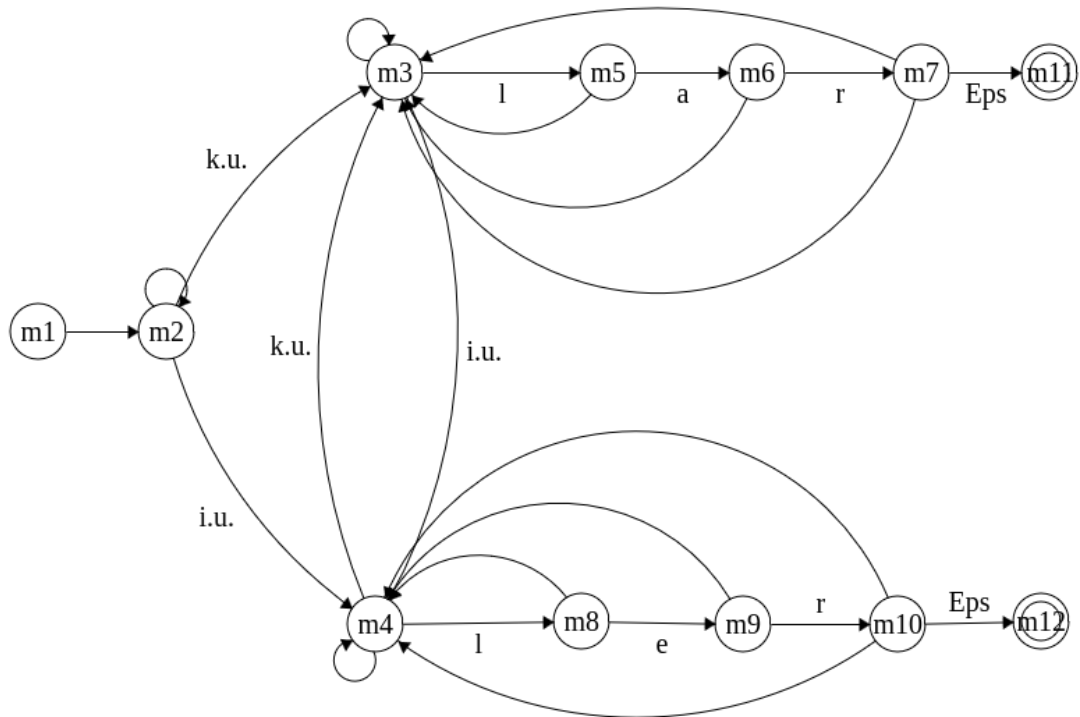


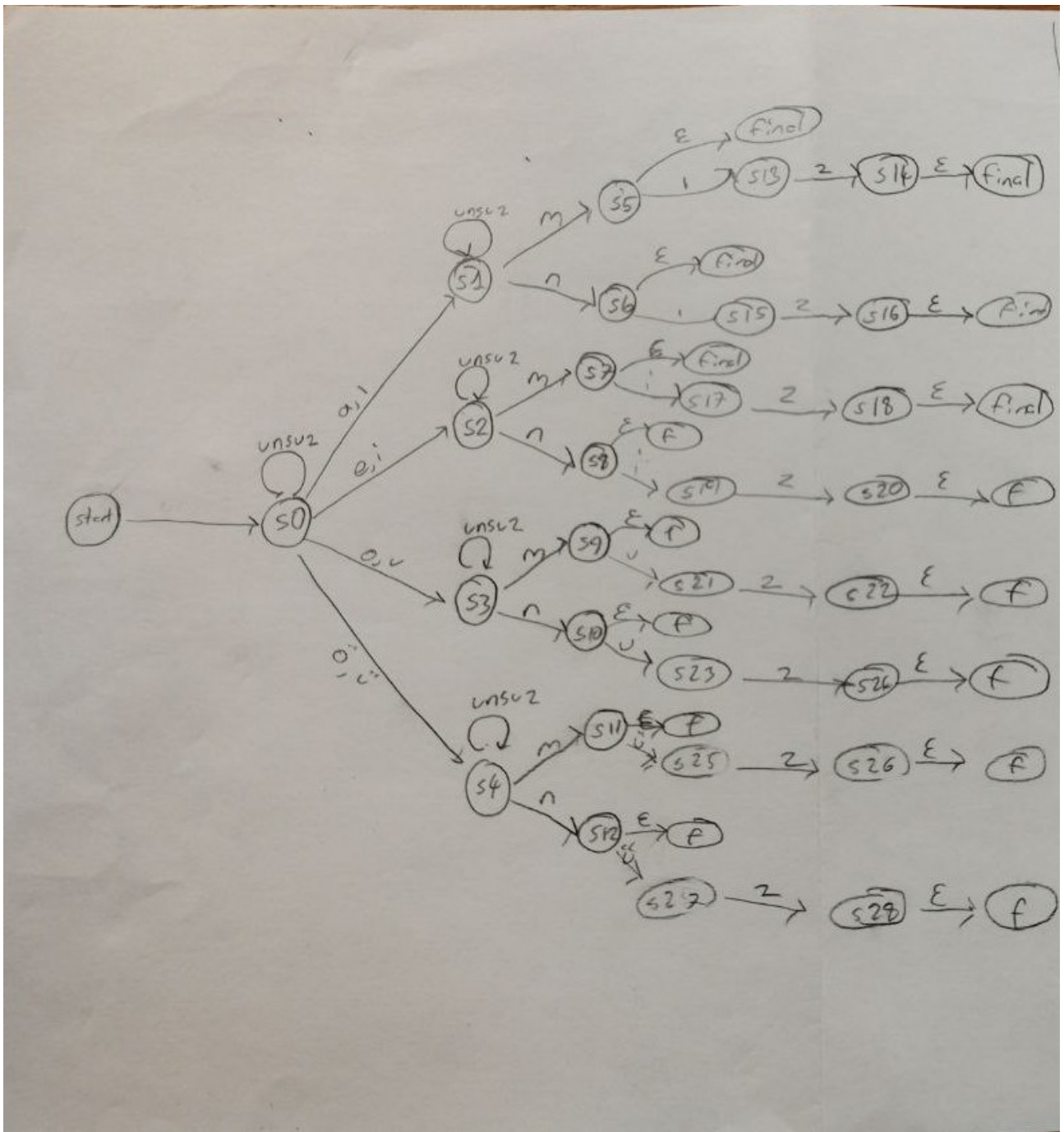
# CSE484

## HOMEWORK 1 REPORT

1. Firstly I draw finite state machines to visualize my logic.



This fsm handles checking if given word is plural or not.



This fsm handles if given word has possessive suffix or not.

2. Secondly I worked on installing openfst on my system but I could not installed due to python compatibility issues.

3. Because I was unable to install necessary libraries for building fsm structure, to show my fsm structures work; I implemented two fsm's without using external libraries, but implementing by hand.

For my implementation, every state represented as functions and my functions have same names with state numbers at my drawings.

Each function takes word, looks at first character of the input and calls next state with same word but without first letter of the word.

Ex:

State\_1("Word") → State\_2("ord") → State\_5("rd") ...

4. For the final step, to show results of my work, I run some tests on those fsm's...

```
(base) yagz@yagz-IdeaPad-1-15ALC7:~/Desktop$ python3 plural_fsm.py
Enter Words to check if they are plural, enter "-1" to stop entering word
Enter word : evler
Enter word : arabalar
Enter word : kediler
Enter word : evlar
Enter word : arabalar
Enter word : kedilar
Enter word : uçakler
Enter word : uçaklar
Enter word : klarnet
Enter word : -1
evler: Word is plural
arabalar: Word is plural
kediler: Word is plural
evlar: Word is not plural
arabalar: Word is plural
kedilar: Word is not plural
uçakler: Word is not plural
uçaklar: Word is plural
klarnet: Word is not plural
(base) yagz@yagz-IdeaPad-1-15ALC7:~/Desktop$
```

Test for plurals

```
(base) yagz@yagz-IdeaPad-1-15ALC7:~/Desktop$ python3 possessive_fsm.py
Enter Words to check if they are plural,enter "-1" to stop entering word
Enter word : ev
Enter word : evim
Enter word : evin
Enter word : evimiz
Enter word : eviniz
Enter word : kuş
Enter word : kuşum
Enter word : kuşun
Enter word : kuşumuz
Enter word : kuşunuz
Enter word : çekoslovakyalılaştırdıklarımız
Enter word : küreğim
Enter word : küreğin
Enter word : küreğimiz
Enter word : küreğiniz
Enter word : top
Enter word : topun
Enter word : topum
Enter word : topumuz
Enter word : topunuz
Enter word : çanta
Enter word : çantam
Enter word : çantan
Enter word : çantamız
Enter word : çantanız
Enter word : -1
Word is not possessive 'ev'
Benim 'evim'
Senin 'evin'
Bizim 'evimiz'
Sizin 'eviniz'
Word is not possessive 'kuş'
Benim 'kuşum'
Senin 'kuşun'
Bizim 'kuşumuz'
Word is not possessive 'kuşunuz'
Bizim 'çekoslovakyalılaştırdıklarımız'
Benim 'küreğim'
Senin 'küreğin'
Bizim 'küreğimiz'
Sizin 'küreğiniz'
Word is not possessive 'top'
Senin 'topun'
Benim 'topum'
Bizim 'topumuz'
Word is not possessive 'topunuz'
Word is not possessive 'çanta'
Benim 'çantam'
Senin 'çantan'
Bizim 'çantamız'
Sizin 'çantanız'
(base) yagz@yagz-IdeaPad-1-15ALC7:~/Desktop$ █
```

Test for possessive suffixes

Yağız Hakkı Aydın  
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