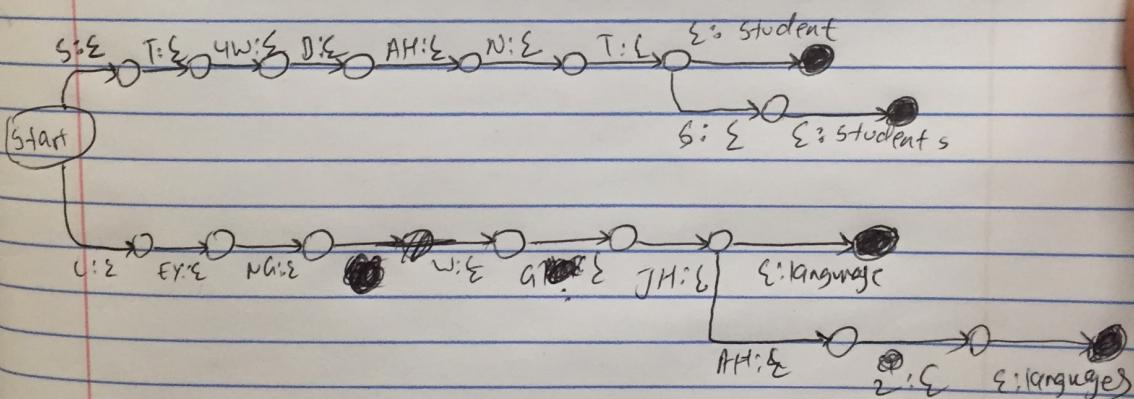


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Part 1:

Input:  $\Sigma = \{ S, T, UW, D, AH, N, L, EY, NG, WG, JH, 2 \}$

Output:  $F = \{ \text{Student, students, language, languages} \}$



Part 2:

```
go(CurrentState, InString, OutString):- % Getting standard In and Out  
transition(CurrentState,eps,NextState,eps), % From Curr to Next State  
go(NextState, InString, OutString).           % Goes to next state
```

Part 3:

```
go(CurrentState, InString, OutString):- % Getting standard In and Out  
transition(CurrentState,eps,NextState,eps), % From Curr to Next State  
go(NextState, InString, OutString).           % Goes to next state
```

```
soundslike(X,Y) :-  
    fst(Z, X),fst(Z,Y).
```

Part 3 after running soundslike:

For soundslike(["computational", "linguistics"], A). The code generated a very big loop. After few iterations I observed the trend of code interpreting the word "linguistics" is same it is being written the same way in all iterations. "Computational" word changes many times, with many different ways and all of them sounds like computational.

```
A = [com, pew, tay, ...]
?- soundslike([ice, cream], W).
W = [aye, scream]
W = [ice, cream]
W = [i, scream]
W = [eye, scream]
W = [ay, scream]
W = [ai, scream]
W = [aye, scream]
W = [ice, cream]
W = [i, scream]
W = [eye, scream]
W = [ay, scream]
W = [ai, scream]
W = [aye, scream]
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W = [eye, scream]
W = [ay, scream]
W = [ai, scream]
W = [aye, scream]
W = [ice, cream]
W = [i, scream]
W = [eye, scream]
W = [ay, scream]
W = [ai, scream].
?-
```