Natural Language Processing

Problem set 2

1.

Noun classes:
Computer - Computerization
Bifurcate - Bifurcation
Cess - Cessation

Exception to Noun class:
Apology - Apologize - Apologization (Noun but never used).
Mouth - Mouthful (noun not an adjective)
Wonder - wonderful (noun not an adjective)

Verb classes:
Formal - formalize
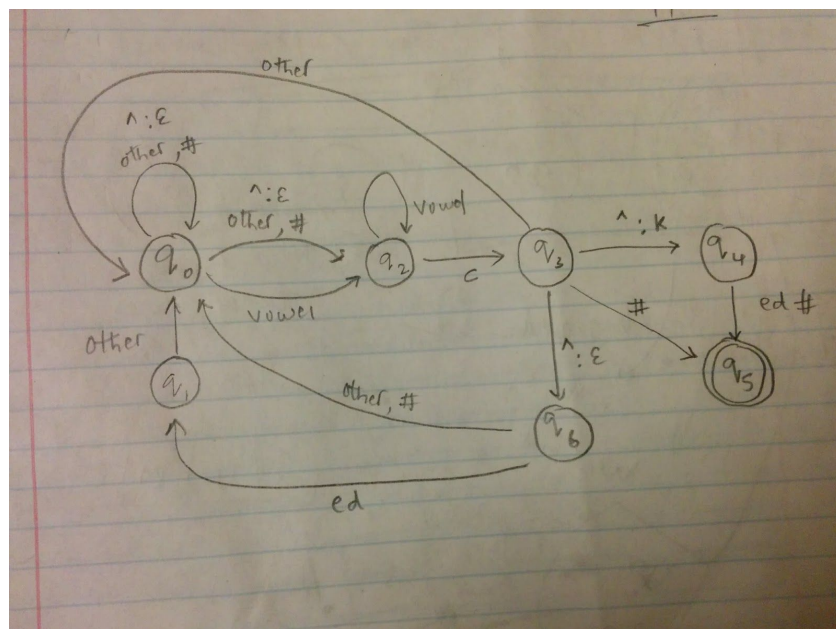Bifurcate - Bifurcative
Pass - Passive

Exception to verb class:
Bifurcate - bifurcatiness (Incorrect)
Detect - Detective (not an adjective, it's a noun)
Cause - Causativeness (incorrect)

2.

3.

Edit distance between *"Drive"* and *"Brief"*

E	5	↗6	↓5	↓4	↙3	←4
V	4	↗5	↓4	↓3	↗4	↗5
I	3	↗4	↓3	↙2	←3	←4
R	2	↗3	↙2	←3	←4	←5
D	1	↗2	↗3	↗4	↗5	↗6
#	0	1	2	3	4	5
	#	B	R	I	E	F

Edit distance between *"Drive"* and *"Divers".*

E	5	↓4	↓3	↓2	↙1	←2	←3
V	4	↓3	↓2	↙1	←2	←3	←4
I	3	↓2	↙1	←2	←3	↴4	↗5
R	2	↓1	↗2	↗3	↗4	↙3	←4
D	1	↙0	←1	←2	←3	←4	←5
#	0	1	2	3	4	5	6
	#	D	I	V	E	R	S

The EditDistance("Drive", "brief") = 4, whereas EditDistance("Drive", "Divers") = 3. Therefore, drive is closer to divers.