Q1:

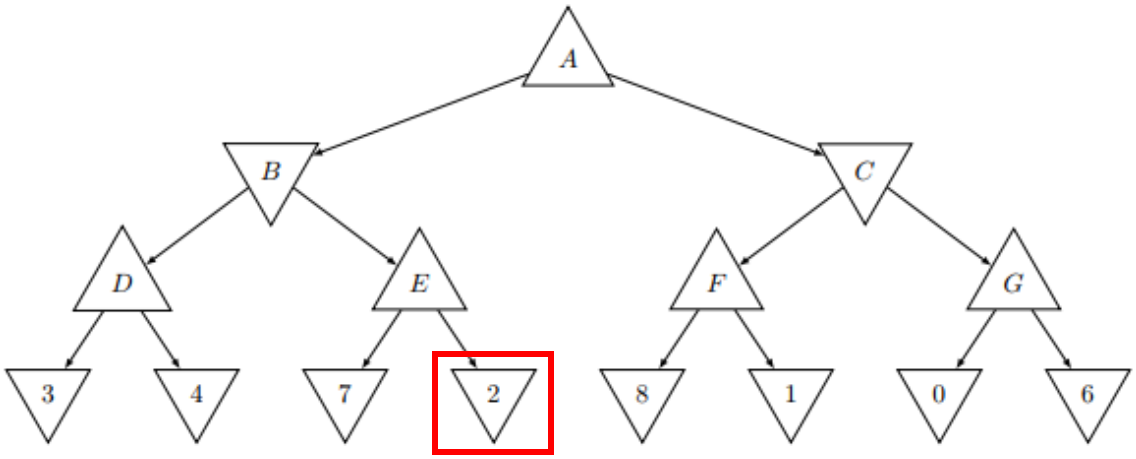
1.

A	B	C	D	E	F	G
4	4	6	4	7	8	6

2.

	A	B	C	D	E	F	G
Minimax	4	4	6	4	7	8	6
α	4	4	4	4	7	8	6
β	∞	4	6	∞	4	∞	8

3.

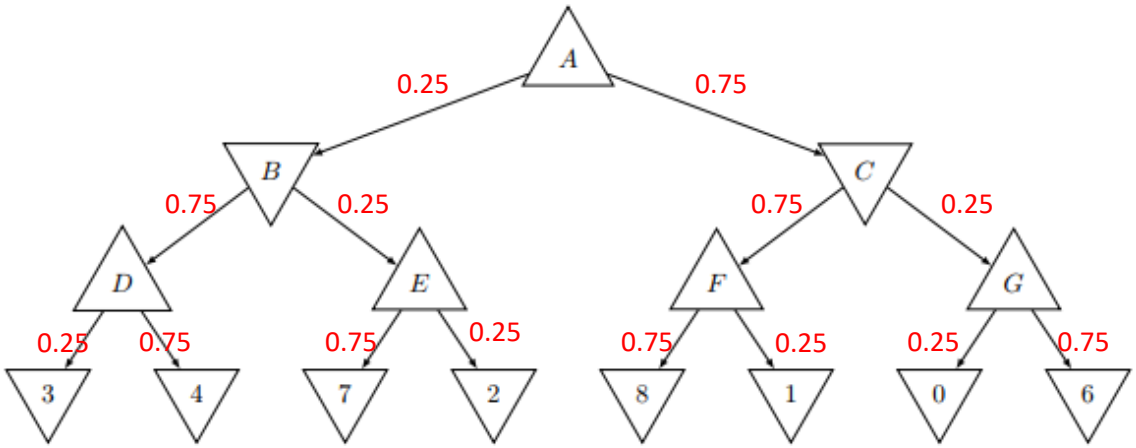


Pruned elements are highlighted in red box

4. It saves time as we prune part of the tree

5. $\frac{1}{2}+\frac{1}{2}\times\frac{1}{2}=\frac{3}{4}$

6.



7.

A	B	C	D	E	F	G
5.67	5.25	5.81	3.75	5.75	6.25	4.5

Q2:

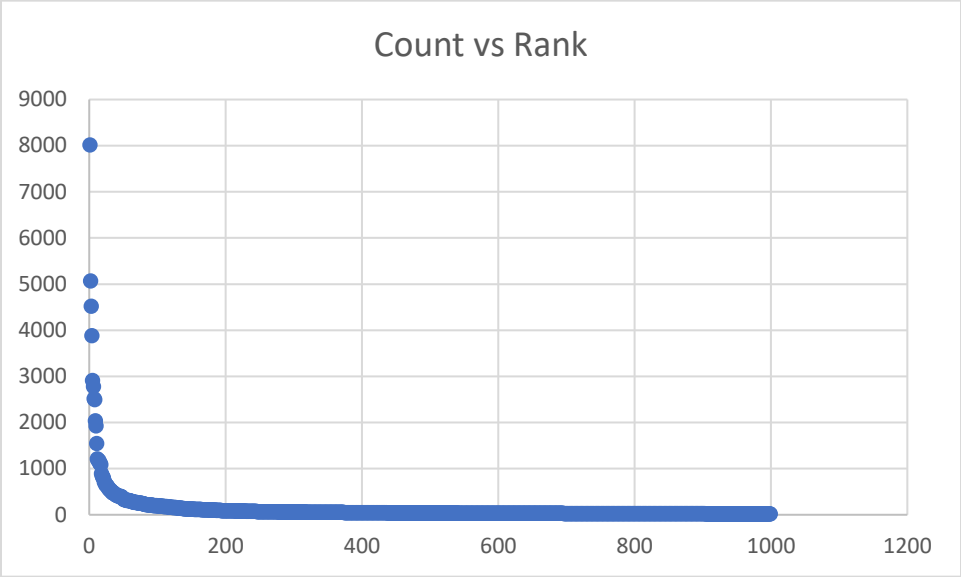
1. We can use java's scanner library to read from the text files and separate the strings and count the number of words.
2. 307556 occurrences and 15192 unique occurrences
3. Most used

Word	Count	Word	Count	Word	Count	Word	Count	Word	Count
the	8012	in	2911	be	2032	are	1185	as	1088
to	5069	a	2779	AI	1926	it	1178	with	890
of	4518	is	2513	will	1543	on	1119	The	850
and	3879	that	2493	for	1209	not	1111	have	811

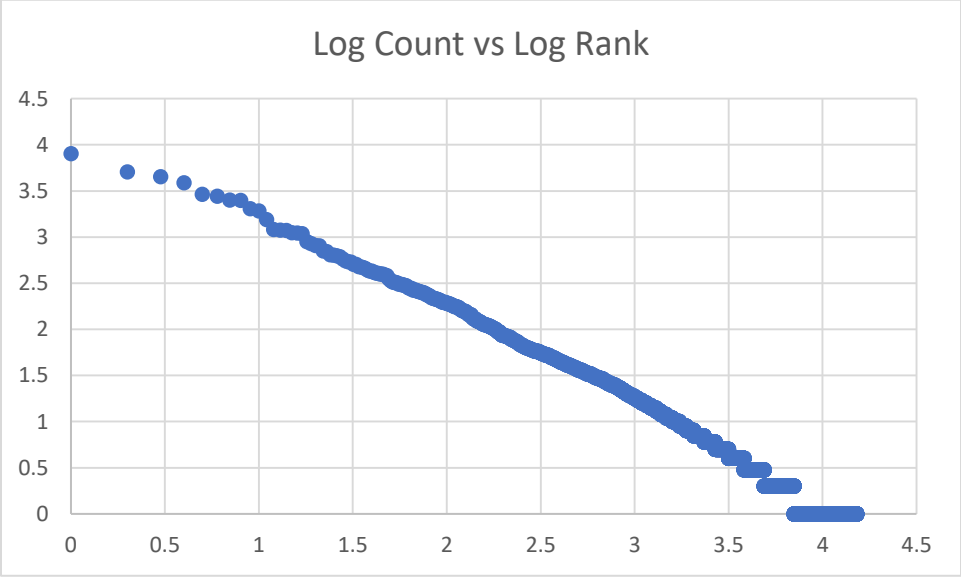
4. Least used

children?s	Employment/	q	(p.22).	Power)	?deep	(FDA)	$400.	Yorka??s	"let's
(AI	Trucks.[1]	i	ICD-9	'drivers'	SET?,	al,	540.	35,000	5.1%

5. (Items after 1000th item is trimmed to show the curve of the graph)



6.



7. This shows that only about a few hundred unique words are used in these files, all others are unique words.
8. One issue is that when punctuation marks are used, the system cannot differentia the words from its original form thus count it are two different unique words
   Another issue is that frequently used words are too few. Only about a hundred or so has a high rate of using.