CS3350: is a language regular or not?

What we know is that:

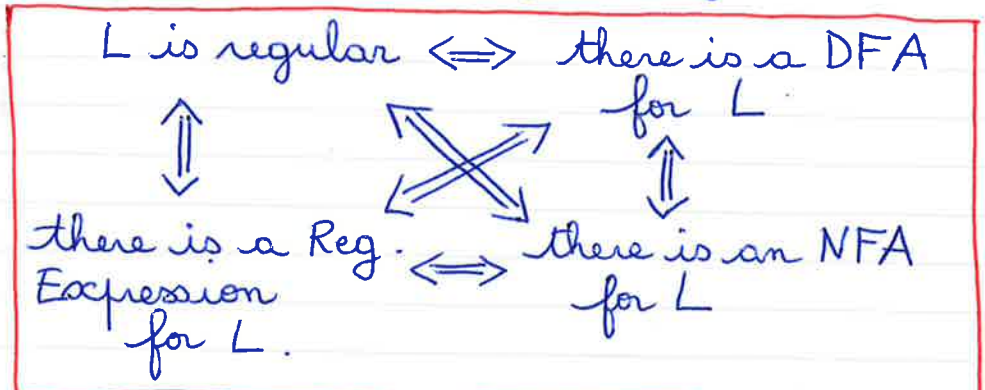
(*) if L is regular $\Rightarrow$ L satisfies the pumping lemma.

⚠ the opposite implication is not true:

if L can be pumped it DOES NOT mean that L is regular!

e.g., $L = \{\$a^n b^n / n \geq 0\} \cup \{\$w / w \in \{a,b\}^*\}$

What is important to know about regular languages is the following:



*so the pumping lemma is not used to show that a language is regular.

regular or not?

g lemma.

s not true:

t L is regular!

{$w / w∈{a,b}*}

about regular
ng:

is a DFA
L

⇕

is an NFA
L

used to show
.

On the other hand, given (*), we have that:

if L does not satisfy the pumping lemma

⇓

L is not regular.

this is how we will show that language are not regular.