Jaime López-Hidalgo (A01638037)
César Alexis Sahagún Navarro (A01637885)
Jesús Palomino Hurtado (A01638492)

"Actividad 3.1 Practicando lenguajes regulares"
Implementación de métodos computacionales
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4. Let X = {*aa*, *bb*} and Y = {λ, *b*, *ab*}.

a) List the strings in the set XY.
b) How many strings of length 6 are there in X*?
c) List the strings in the set Y* of length three or less.
d) List the strings in the set X*Y* of length four or less.

a) {aa, aab, aaab, bb, bbb, bbab}
b) {aaaaaa, bbbbbb, aaaabb, aabbaa, bbaaaa, aabbbb, bbbbaa, bbaabb} = 8
c) {λ, b, ab, bb, bab, abb, bbb}
d) {λ, b, ab, bb, bab, abb, bbb, abab, babb, bbab, abbb, bbbb, aa, aabaaab, aabb, aaaa, aabb, bbaa}

14. The set of strings over {*a*, *b*, *c*} in which all the *a*'s precede the *b*'s, which in turn precede the *c*'s. It is possible that there are no *a*'s, *b*'s, or *c*'s.

a*b*c*

15. The same set as Exercise 14 without the null string.

aa*bb*cc*

16. The set of strings over {*a*, *b*, *c*} with length three.

a) (ϵ+a+b+c){3}

17. The set of strings over {*a*, *b*, *c*} with length less than three.

a) (b+c+aab+aac+ab+ac)* (ϵ + a +aa)

18. The set of strings over {*a*, *b*, *c*} with length greater than three.

(a+b+c)(a+b+c)(a+b+c)(a+b+c)*

19. The set of strings over {*a*, *b*} that contain the substring *ab* and have length greater than two.

(aa*bb*a*)+(bb*aa*bb*)