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Ejercicio 3.1

Resuelve los siguiente ejercicios:

Exercise 3.3.2: Describe the languages denoted by the following regular expressions:

a) $\mathbf{a}(\mathbf{a}|\mathbf{b})^*\mathbf{a}$. una cadena de multiples a's y b's que siempre empieza con una a y termina con una a.

b) $((\epsilon|\mathbf{a})\mathbf{b}^*)^*$. Una cadena de a's y b's

c) $(\mathbf{a}|\mathbf{b})^*\mathbf{a}(\mathbf{a}|\mathbf{b})(\mathbf{a}|\mathbf{b})$. una cadena de a's y b's donde hay una 'a' dos posiciones antes del final

d) $\mathbf{a}^*\mathbf{b}\mathbf{a}^*\mathbf{b}\mathbf{a}^*\mathbf{b}\mathbf{a}^*$. cadena que contiene exactamente 3 b's

!! e) $(\mathbf{aa}|\mathbf{bb})^*((\mathbf{ab}|\mathbf{ba})(\mathbf{aa}|\mathbf{bb})^*(\mathbf{ab}|\mathbf{ba})(\mathbf{aa}|\mathbf{bb})^*)^*$.

Incisos a, b, c

Ejercicio 3.1

Exercise 3.3.5: Write regular definitions for the following languages:

a) All strings of lowercase letters that contain the five vowels in order.

ruido=[consonantes] ruido* a ruido* e ruido* i ruido* o ruido* u ruido*

b) All strings of lowercase letters in which the letters are in ascending lexicographic order. $a^* b^* c^* d^* \ldots y^* z^*$ ← (todas las letras restantes del abecedario en orden.

c) Comments, consisting of a string surrounded by /* and */, without an intervening */, unless it is inside double-quotes (").

Incisos a, b

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Exercise 3.3.6: Write character classes for the following sets of characters:

a) The first ten letters (up to "j") in either upper or lower case. [A-Ja-j]

b) The lowercase consonants.

c) The "digits" in a hexadecimal number (choose either upper or lower case for the "digits" above 9). [0-9a-f]

d) The characters that can appear at the end of a legitimate English sentence (e.g., exclamation point).

Incisos a, c