Resolucion del problema

GENERACION AUTOMATICA DE ORACIONES

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**Resumen**—En anos recientes el campo de la ciencia de datos ha tomado especial importancia en la toma de deciciones de las empresas e instituciones, una parte vital de este campo es el dominio de un lenguaje con una amplia implementacion de librerias y paquetes para el manejo e interpretacion de datos; Python es uno de los lenguajes mas populares para la aplicacion de ciencia de datos, en parte gracias a su curva de aprendizaje. En el presente articulo se implementa un programa que resuelve el problema de la generacion automatica de oraciones mediante la conjugacion aleatoriamente elementos de una lista de sujetos, verbos, preposiciones y adverbios.

**Indice de terminos**—Python, Ciencia de Datos

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# 1 Introduccion

El presente articulo explicamos como se implementa un programa para el problema Generacion automatica de oraciones mediante el uso de Python en su version 3.8, para tal efecto se uso la libreria random perteneciente al core del lenguaje. Debido a que este lenguaje implementa tipado dinamico y programacion funcional es mucho mas sencillo y la curva de aprendizaje es menos pronunciada en relacion a otros lenguajes como Java o C++. Es necesario contar con un ambiente de desarrollo con Python y algun editor de su preferencia.

Una oracion basica debe estar compuesta por una secuencia similar a articulo, sujeto, verbo y adverbio; siendo el adverbio opcional ya que solo enfatiza la accion de verbo, nuestro programa genera oraciones con cualquiera de estas dos estructuras.

# 2 **Metodologia**

## 2.1 Seleccion aleatoria

La seleccion aleatoria esta implementada gracias al paquete random desde el core de Python, mediante el metodo *choice,* tecnicamente lo que hace es elegir al azar un elemento de una listay la funcion *randint*, este ultimo recibe dos argumentos que serian el limite inferior y superior del numero entero aleatorio que se desea generar*.* La especificacion completa de estas funciones se encuentra en <https://docs.python.org/3/library/random.html>

## 2.2 **Conjugacion de palabras**

Para la conjugacion de palabras necesitamos una estructura tipo array para contener la oracion generada o simplemente podriamos enviarlo directamente al stdout del sistema operativo en una sola cadena formateada que contenga los elementos elegidos de cada array, la funcion print recibe una cadena que puede ser formateada con variables gracias al uso de llaves {} como comodin del template. La especificacion completa de la funcion print en sus diferentes alternativas esta en <https://docs.python.org/3/tutorial/inputoutput.html>.

## 2.3 **Construccion del programa**

Primeramente necesitamos un conjunto de listas, estas pueden contener cuantas palabras necesitemos. En el programa declaramos 4 arrays (Articulos, Sujetos, Verbos y Adverbios) .

# declaring arrays

articles = ['the', 'an', 'a', 'those', 'that', 'these', 'this']

subjects = [ 'cat', 'puppy','friend', 'lover', 'woman', 'children', 'parents', 'relatives', 'neighibors' ]

verbs = ['eat', 'loves', 'run away', 'shows', 'picks', 'sit down', 'end up', 'turn out' ]

adverbs = ['loudly', 'well', 'badly','always', 'quietly', '']

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Fig. 1. Magnetization as a function of applied field. Note that “Fig.” is abbreviated. There is a period after the figure number, followed by one space. It is good practice to briefly explain the significance of the figure in the caption.

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## 6.4 Lists

TABLE 1  
Units for Magnetic Properties



Statements that serve as captions for the entire table do not need footnote letters.

aGaussian units are the same as cgs emu for magnetostatics; Mx = maxwell, G = gauss, Oe = oersted; Wb = weber, V = volt, s = second, T = tesla, m = meter, A = ampere, J = joule, kg = kilogram, H = henry.

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**Acknowledgment**

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