# An Authentic Algorithm for Ciphering and Deciphering Called Latin Djokovic

**Authors :** Diogen Babuc

**Abstract :** The question that is a motivation of writing is how many devote themselves to discovering something in the world of science where much is discerned and revealed, but at the same time, much is unknown. Methods: The insightful elements of this algorithm are the ciphering and deciphering algorithms of Playfair, Caesar, and Vigenère. Only a few of their main properties are taken and modified, with the aim of forming a specific functionality of the algorithm called Latin Djokovic. Specifically, a string is entered as input data. A key k is given, with a random value between the values a and b = a+3. The obtained value is stored in a variable with the aim of being constant during the run of the algorithm. In correlation to the given key, the string is divided into several groups of substrings, and each substring has a length of k characters. The next step involves encoding each substring from the list of existing substrings. Encoding is performed using the basis of Caesar algorithm, i.e., shifting with k characters. However, that k is incremented by 1 when moving to the next substring in that list. When the value of k becomes greater than b+1, it'll return to its initial value. The algorithm is executed, following the same procedure, until the last substring in the list is traversed. Results: Using this polyalphabetic method, ciphering and deciphering of strings are achieved. The algorithm also works for a 100-character string. The x character isn't used when the number of characters in a substring is incompatible with the expected length. The algorithm is simple to implement, but it's questionable if it works better than the other methods from the point of view of execution time and storage space.

**Keywords :** ciphering, deciphering, authentic, algorithm, polyalphabetic cipher, random key, methods comparison
**Conference Title :** ICKSE 2022 : International Conference on Knowledge Security and Encryption
**Conference Location :** Istanbul, Türkiye
**Conference Dates :** December 20-21, 2022