

DNA ENCRYPTION

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ABSTRACT

DNA Encryption is the technique for encrypting the secret message using Bio molecular computation which makes this unique from mathematical computation. DNA Cryptography provides parallelism and fast computation that it can break DES Encrypted message and less power consumption .These four nucleotides of DNA and their positioning and their corresponding conversion into binary strands plays the major role in encryption .The DNA materials are stable and long lasting.

We presented traditional method and improved complimentary pair method. For each method, we secretly select a reference DNA sequence **S** and incorporate the secret message **M** into it such that we obtain **S'**. We send this **S'**, together with many other DNA, or DNA-like sequences to the receiver. The receiver is able to identify the particular sequence with **M** hidden in it and ignore all of the other sequences. He will also be able to extract **M**. The DNA Cipher text to be converted into plain text involves biological process of PCR (Polymerase Chain Reaction) as well. The enzymes and protein material plays the role in DNA Computation .Each DNA Cryptography methods first converts the plain text into ASCII Code and then further process starts .There are various applications of DNA other than security as used in inks and for analyzing the human behaviour and various others.

KEYWORDS: The DNA Materials, ASCII Code, RSA and DES