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TOPOLOGY ON INVOLUTIVELY BORDERED WORDS

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Abstract: We introduce a topology on Involutively Bordered Words for Morphic and Antimorphic involution on the language $L \subset V^*$ and we have analysed certain topological concepts such as neighbourhood, closure, Hausdorff space, limit point.

Keywords and Phrases: Involutively Bordered Words, Topology, Prefix Topology.

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1. Introduction

The Main aim of this paper is to introduce Topology on Involutively Bordered Words for Morphic and Antimorphic involution inspired by the work of the authors [7]. DNA, Deoxyribonucleic Acid, is the molecule or group of molecules responsible for encoding all genetic information and instructions in living organisms. The structure of DNA was pieced together by Francis Crick and James Watson [8] based on X-ray images of Rosalind Franklin. DNA Single strand consists of four different types of units called nucleotides or bases strung together by an oriented backbone like beads on wire. The bases are Adenine (A), Guanine (G), Cytosine (C) and Thymine (T), A can chemically bind to an opposing T on another single strand, while C can bind to G. Bases that can bind are called Watson Crick (WK) complementary [4], and two DNA single strands with opposite orientation and with WK complementary bases at each position can bind to each other to form a DNA double strand in a process called base-pairing. DNA strands can be viewed as finite strings over the alphabet A,G,C,T and are used in DNA computing to encode information. These and other biochemical properties of DNA are all harnessed in biocomputing. The concept of DNA computation studied by by Adleman [1] opened a wide area of research. The main objective of the research by Lila Kari