

STUDY OF RL -SEPARATION AXIOMS

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Abstract: In this paper, we introduce the notion of $RL-T_i$ spaces for $i = 1, 2, 3, 4$ by using the RL -closed sets. We investigate their characterizations for such notions and established some relations among these spaces.

Keywords and Phrases: RL -open sets, RL -closed sets, $RL-T_1$ space, RL - Hausdorff space, $RL-T_3$ space, $RL-T_4$ space.

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1. Introduction

In topological spaces, the separation axioms are primarily formulated to identify the non-homeomorphic topological spaces. The axioms T_0 or kolmogorov space, T_1 or Frechet space and T_2 or Hausdorff spaces were introduced by Andrey kolmogorov, Frechet and Felix Hausdorff respectively.

Later, several kind of separation axioms and their properties have been studied and investigated by many topologist. For instances, Alias Barakat Khalat and etal. [1] studied new type of separation axioms namely, w -regular and w -normal spaces via w -open sets [6]. Hariwan Z. Ibrahim [7] defined and studied some separation axioms called $Bc - T_k$ for $k = 0, 1/2, 1, 2$ spaces by using Bc -open sets. Benchalli etal. [2] defined δgb -closed sets and separation axioms namely, $\delta gb - T_1$, $\delta gb - T_2$, δgb - regular and δgb - normal spaces. Mahesh Bhat and Hanif Page [3] used the notion of sgp -open sets [11] in order to study $sgp - T_0$, $sgp - T_1$, and $sgp - T_2$ separation axioms. G. Navalagi and R. G. Charantimath [12] defined and studied gsp -separation axioms called, $gsp - T_0$, $gsp - T_1$, $gsp - T_2$ via gsp -open sets [4].