On the Tietze extension theorem in soft topological spaces

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Abstract: The theory of soft set was introduced by Molodtsov in 1999 as a new mathematical tool for deal with uncertainties. The idea of soft topological space was first given by Shabir and Naz. The purpose of this paper is to prove Tietze Extension Theorem using Uryshon's Lemma in the so-called "soft topological space". After giving the necessary separation axioms based on the soft point definition in [3] such as soft completely regular space and soft normal space, we prove important theorem for soft separation axioms. Later we give Uryshon's Lemma. Finally we prove Tietze Extension Theorem using Uryshon's Lemma.

Keywords: Soft set, soft completely space, soft normal space, Urysohn Lemma and Tietze Extension Theorem.

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