

The Various Forms of a Soft Set and Its Extension in Medical Diagnosis

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Abstract : In order to deal with the impreciseness and uncertainty of a system, D. Molodtsov has introduced the concept of 'Soft Set' in the year 1999. Since then, a number of related definitions have been conceptualized. This paper includes a study on various forms of Soft Sets with examples. The paper contains the concepts of domain and co-domain of a soft set, conversion to one-one and onto function, matrix representation of a soft set and its relation with one-one function, upper and lower triangular matrix, transpose and Kernel of a soft set. This paper also gives the idea of the extension of soft sets in medical diagnosis. Here, two soft sets related to disease and symptoms are considered and using AND operation and OR operation, diagnosis of the disease is calculated through appropriate examples.

Keywords : kernel of a soft set, soft set, transpose of a soft set, upper and lower triangular matrix of a soft set

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