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Computer Programming for Constructing

Minimal Sets and all Normal and

Regular Topologies on Finite Sets

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Abstract

In this paper if

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X

is a topological space then for each subset

A

of

X

a specific subset

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A

of

X

called the

τ

- minimal set

at

A

is defined. These sets are defined a

nd some of their properties are presented. Using these, we characterize the normal

principal topological spaces and discuss some properties of th

e connected topological spaces. Employing these characterizations

and properties, we describe an

algorithm for enumerating and constructing all

minimal sets, regular and normal topologies on

finite sets.