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*Summary and Conclusion*

## SUMMARY AND CONCLUSION

Soft set theory and Supra soft set theory became a very good source of research for many mathematicians of recent years because of its wide range of applicability. The development in the fields of soft set theory and supra soft set theory had been taking place in a rapid pace.

This thesis is devoted to the study of

- 1) Supra Soft Sets and Supra Soft Topological Spaces
- 2) Supra Generalized Closed (Open) Soft Sets in Supra Soft Topological Spaces
- 3) Supra Semi\* Generalized Closed (Open) Soft Sets in Supra Soft Topological Spaces
- 4) Supra Regular Generalized Closed (Open) Soft Sets in Supra Soft Topological Spaces
- 5) Supra b-Open Soft Sets and Supra b-closed Soft Sets in Supra Soft Topological Spaces
- 6) Fuzzy Soft Topological Spaces
- 7) Application of Fuzzy Soft Sets

The first chapter deals with the preliminary definitions and notations regarding soft sets, soft topological spaces and supra soft topological spaces. Different kinds of subsets of Supra Soft topological spaces and their relations between subsets of supra soft topological spaces are discussed and decomposition of some forms of supra soft continuity is studied.

In the second chapter, definitions and examples of supra generalized closed (open) soft sets are studied and its extension to the topic of soft ideal is also being discussed with examples.

Definitions and some properties of supra semi\*generalized closed (open) soft sets is studied in chapter III.

In the fourth chapter, the concept of supra regular generalized closed (open) soft sets and its extension to soft ideal is studied with interesting examples.

Chapter V deals with the concept of supra b-closed (open) soft sets. Relation between supra b-open soft set and the other subset of supra soft topological space are discussed. Definition and Examples of supra b-continuous soft is studied.

In the sixth chapter, the definitions of fuzzy soft sets, fuzzy soft open sets, fuzzy closed sets, fuzzy soft closure and fuzzy soft interior are studied with interesting properties.

Chapter VII deals with the application of fuzzy soft sets. In this chapter a decision making model is developed using soft sets to identify the effects, both favourable and adverse, caused by the usage of Electronic Gadgets.

It is a good research work to study various real life problems by applying different types of Supra Soft Sets and Fuzzy Supra Soft Sets.