My profound thanks and gratitude are due to Dr. P. NARAYANASAMY, Professor of Computer Science, Anna University, for his valuable guidance, encouragement and supervision during this research work.

I also express my deep sense of gratitude to Dr. T. R. NATESAN, Professor Emeritus-AICTE, Anna University, for his committed supervision and guidance to acquire right perception and perspective for carrying out this research. But for his patience and time spared for discussion, I would never have been able to complete this thesis.

Thanks are due to Dr. V. SANKARANARAYANAN and Dr. K. M. MEHATA, Anna University for their encouragement. Special thanks go to Dr. V. RHYMEND UTHARIARAJ for his illuminating discussions. My appreciation and gratitude go to Dr. T. M. DURAIJAN, Dr. P. CHANDRASEKAR and Rev. Fr. Dr. PETER FRANCIS S.J., Loyola College for their editorial help.

Words cannot describe the anxious moments undergone by my Parents before the successful completion of this work. I sincerely acknowledge the patience, support, unstinted cooperation and service rendered by my wife Premila, my son Akhil and other family members.

JACOB V C