PREFACE

I as the author would like thank all mighty God because of the blessing to let me finish this research. I also wish to express gratitude to my parents who always give me supports, so much care, and advices. I also would like to express my appreciation to all the lecturer from Telkom University for the guidance and the knowledge that given to me especially from the Information System Study program:

- 1. Mrs. Murahartawaty, S.T, M.T as my first advisor for this research
- 2. Mrs. Dr. Ari Pratiwi, S.T., M.M as my Second advisor for this research
- 3. Mr. Nur Ichsan, S.T., M.T as 'my third advisor for this research.
- 4. Mrs. Ir. Farda Hasun, M.Sc that always supported us while conducting this research.
- 5. Mr. Taufik Nur Adi, S.Kom, M.T that always gave me motivation while conducting this research.

My research partners, namely Muhammad Mufid Luthfi, Elzar Esen Uulu, and Nana Ramadhewi that always support me while conducting this research. Furthermore, I also say thank you to all of my friends who always beside me in any condition we have been through together during the college days whom I cannot mention them one by one.

The author realizes that this research is not infallible, therefore it is expected to get the criticisms and suggestions that will improve the next related research. Hopefully, this research can be useful for readers.

Bandung, June 02, 2016

Elzar Esen uulu