## ACKNOWLEDGEMENT

All the Praise and thank to Allah SWT who has given His love, blessings and grace to me, so this thesis report can finish well and be completed on time. May peace be upon to Prophet Muhammad SAW whose guided us from the darkness into therbrightness. This thesis report is written to fulfill the requirements to obtain a Bachelor degree (S1) in Informatics Department of Mercu Buana University. In this occasion, I would like to express my deepest gratitude to all who helped me in completing the writing of this thesis:

- Mr. Ardiansyah, S.T, MTI as my Thesis Supervisor and also as Secretary of the International Class Program of Informatics Department for his supports, advice, and guidance.
- 2. Mr. Dr. Harwikarya as Dean of Faculty of Computer Science of Mercu Buana University.
- 3. Mrs. Desi Ramayanti, S.Kom., M.T. as the Head of Informatics Department of Mercu Buana University.
- 4. Mr. Diky Firdaus, S.Kom, MM as the Coordinator Thesis of Informatics Department.
- 5. My parents and my whole family, who have given me encouragement moral or even material and prayers to me throughout my life.
- 6. Kelapa Families and Infomatika who have stand together as one since 2014.
- 7. Radio Mercu Buana crews especially RMB 14.
- 8. Classmates, roommate, friends who have become like brothers and sisters, even as my family in Beijing.
- 9. The entire Committee of PPI Tiongkok and Lingkar Pengajian Beijing (LPB who have taught and provided valuable experience and knowledge during these two years of my study in China.
- 10. All of my friends who can't be enumerated by the limitation of the paper.

Last but not least, the author apologizes as much as possible for all the shortcomings and limitations in the writing of this thesis report. The author realizes that this thesis isn't perfect yet, therefore the author will be glad to receive any constructive criticism and recommendation to make it better. Hopefully, this thesis report can be useful for interested parties.

Jakarta, August 2018

