GRATITUDE NOTE

Praise and gratitude the author pray for the mercy and grace of Allah SWT, finally the writer can finish this thesis. In preparing this thesis, the author received a lot of guidance, support, and assistance from several parties so that this thesis can be completed. Therefore, the author would like to express his deepest gratitude to:

- Allah SWT, to the almighty, who has given sustenance, health, knowledge, and enlightenment so that the author can complete this thesis to completion. May Allah SWT always give and make it easy for His servants who always help each other with patience and sincerity, may your kindness be rewarded infinitely by Allah SWT.
- 2. **Rasulullah SAW**, as the author's role model in living this life, is the most perfect creature in this universe. As a guide for every human being in pursuing and achieving happiness in this world and the hereafter.
- 3. Cholly Yanty and Suroto, as the writer's parents always give full support in any form until the writer can survive until this point and finish this thesis. Thank you for giving prayers, full of love and affection, may Allah SWT give you double sustenance. Thank you for being a good parent, may Allah give you abundant sustenance in the form of health so that you can see the author become a successful and proud person.
- 4. Alya Azalia Sabrina, and Anindya Azqiara Shakila, the sister of the author always give encouragement and prayers in any form so that the author can complete this thesis. Hopefully, you are given a lot of sustenance so that you can become a dutiful child and hopefully the author can motivate you.
- 5. **Melania and Zainal Abidin**, the author's grandmother and grandfather, have provided support in the form of love. May Allah SWT give you sustenance in the form of health so that you can see the author become a successful and proud person
- 6. **Dr. Iman Hedi Santoso S.T., MT.**, is the author's supervisor who has provided the best direction and solution when working on the thesis. Thank you to Mr. Iman who has always been patient and sincere in guiding the author so that the author can be in his current position. Sorry if the author has

words or behavior that is not pleasing to Mr. Iman. I hope you will always be given health and always be a role model for other students and always be blessed by God.

- 7. Mr. Arif Indra Irawan, S.T., M.T., as supervisor II of the author has provided the best direction and solution when working on the thesis. Thank you to Mr. Arif who has always been patient and sincere in guiding the author so that the author can be in his current position. Sorry if the author has words or behavior that is not pleasing to Mr. Arif. May Mr. Arif always be given abundant sustenance and always be given smoothness.
- 8. Mrs. Yunendah Nur Fuadah, S.T., M.T., as the author's guardian from semester 1 to semester 4 and until now continuing her education to get a doctorate degree in South Korea, hopefully always given fluency.
- 9. Mr. Dhoni Putra Setiawan, S.T., M.T., PhD., as the author's guardian lecturer from semester 5 until now has helped the author in obtaining information about lectures.
- 10. **Kemal Maulana**, as a group partner writer has helped the author in the preparation of this thesis. Thank you for taking the time to discuss together to achieve the goal.
- 11. **Ultramilk Team**, as friends and family of the two authors while studying at Telkom University. Thank you for being the writer's second family when the writer is far from his parents. Thank you for alw ays being there, caring, and giving full support to the author. We have gone through the joys and sorrows of Bandung together. I hope that you will also make it easier for me to write this thesis. Thanks for everything. See you above friends.
- 12. Rahayu Octaviana, Anggy Putri, Tamara Christalia, Veronica Putri, Lovita. Thank you for giving full support to the author.
- 13. Briefing Team, Thanks to Juvinka Rhisa, Kiki Apriana, Muqitasya, Melly Amalia, Naila, Deva, Tiara Marchella, and Tika. Who has given full support to the author
- 14. **Telecommunication Engineering Student Association**, Thank you for the process together during college
- 15. Class TT-42-INT, thank you for all the memories, support, and place for the

process during college.

16. **Other parties**, who helped the author in completing the lecture period and are sorry that they cannot be mentioned one by one. May Allah SWT give you abundant sustenance.

Bandung, 21 Februari 2021 Anissa Aulia Salsabillah