ACKNOWLEDGE

Alhamdulillahirrabil'alamin, The author expresses gratitude to Allah SWT who has given grace and health to the author so that author could finish this bachelor's thesis. During the completion of this bachelor's thesis, The author received a lot of encouragement, motivation, and help from all parties. Thus, the authors would like to express the sincere gratitude to:

- Allah SWT for His grace, mercy, and guidance so that the writing of this bachelor's thesis can be completed.
- 2. The most important people in my life, my beloved parents, big sister, and young sister who play an important role in providing support, love, motivation, and prayers for the author.
- Dr. Leanna Vidya Yovita as head of the Telecommunication Engineering Study Program.
- 4. Ms. Yunendah Nur Fuadah and Mr. Dhoni Putra Setiawan as TT-42-INT Lecturer Guardian.
- 5. Dr. Gelar Budiman, S.T., M.T. as Supervisor I and Ms. Sofia Saidah, S.T., M.T. as Supervisor II who has helped and guided with author during the completion of this bachelor's thesis.
- All lecturers and staffs of the S1 Telecommunication Engineering Study Program at Telkom University.
- 7. Class of TT-42-INT and the author's closest friends, members of Tim Makan namely Meli, Auviera, Richardo, Ilmi, Ivan, Rozan, Aap, Raden, and especially Deo who have helped, supported, and entertained the writer for the last 4 years and hopefully so on.
- 8. All parties that the author cannot mention one by one who have helped both morally and materially.

Bandung, August 19, 2022

Febby Fitri Permadani