## **ACKNOWLEDEMENT**

During the completion of this final project, the author received a lot of assistance in the form of support, guidance, materials, and input from many parties. On this occasion, the author would also like to express heartfelt thanks to those who helped in compiling this Final Project Book, especially to:

- 1. Allah SWT who has granted His mercy and grace so that the author has obtained smoothness in executing and compiling the final report.
- 2. Both the parents and the family of the author who always provide support and send prayers to the author, so that they can complete their studies smoothly.
- 3. Mr. Dr.-Ing Fiky Y. Suratman, as Supervisor I and Mrs. Khilda Afifah, S.Pd., M.T., Ph.D as Supervisor II, who have guided and directed the completion of the Final Project and provided all the knowledge. Thank you for taking the time to mentor from start to finish, may the knowledge shared be beneficial, especially for the author.
- 4. Mr. Dr. Eng. Dr. Willy Anugrah Cahyadi, as a lecturer, has given advice, counsel, opportunities, and knowledge that are very beneficial for the author.
- 5. Syalbia Noor Rahmah, Bossuko, Michael Octavian, Muhammad Al Fitra Zulfikhar Akbar, and Vincentius Adisurya Fransisco Antu as a partners in undergoing the undergraduate degree and helping to solve the problem and supporting the author to finish the final project
- 6. SPELL Laboratory friends who helped the author in the data collection process and completing this Final Project.
- 7. Classmates of EL-45-INT and Daskom Laboratory who supported the author in completing the Final Project research.
- 8. Electrical Engineering undergraduate lecturers who have provided knowledge to the author in order to develop during lectures.

the kindness of all parties who have helped either directly or indirectly in completing the author's final project, may they receive returns that are multiplied many times over. Thank you