

FOREWORD

Praise I pray to the presence of Allah SWT for His mercy and grace, which have given grace and guidance so that the writer can complete the final project by the allotted time. This final project is one of the requirements for passing the Bachelor of Industrial Engineering final project course, Faculty of Industrial Engineering, Telkom University. The report and work on this final project were made by the author with various supports from many parties to complete the final assignment, as well as some of the obstacles the author faced while working on this final project. Therefore, the author expresses his deepest gratitude to the following:

1. Allah SWT, who always gives grace and blessings so that the writer can complete this thesis on time.
2. Parents and younger siblings who always support and pray for the smooth preparation of this Final Project.
3. Mrs. Ir. Sri widaningrum, M.T., as a supervisor for final project preparation courses.
4. Mrs. Sheila Amalia Salma, S.T., M.T., as a supervisor for final project preparation courses.
5. Relatives and friends who always support and encourage me.

The author realizes that this final project is certainly far from perfect because the writer still has many shortcomings; therefore, the writer hopes to receive and apply various criticisms and suggestions that would be able to help develop this final project. Finally, the writer hopes that this report can be useful for other parties someday.