## **PREFACE**

Alhamdu lillahi rabbil 'alamin, praise to Allah, the most gracious, the most merciful, with the mercy and guidance, the author has successfully finished this thesis with the title of "COMBINED MANGO QUERY AND COMPOSITE KEY STRATEGY FOR QUERY OPTIMIZATION IN HYPERLEDGER FABRIC SUPPLY CHAIN SYSTEMS". The author compiled this thesis to be filled in the graduation requirements in Program of Master of Electrical-Telecommunication Engineering, School of Electrical Engineering, Telkom University.

The suggestions for improving this thesis are highly appreciated. Hopefully, this thesis is expected to be improved and provided contributions for the reader and Indonesia especially for education and research of telecommunication on the future.

Bandung, 12th August, 2025

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