

**UNIVERSITI TEKNOLOGI MARA**

**TECHNICAL REPORT**

**OPTIMIZATION OF PRODUCTION PLANNING  
IN CLOTHING COMPANY BY USING GOAL  
PROGRAMMING**

**P52S18**

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**Report submitted in partial fulfillment of the requirement  
for the degree of**

**Bachelor of Science (Hons.) Mathematics  
Faculty of Computer and Mathematical Sciences**

**DECEMBER 2018**

## Acknowledgements

IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL. Firstly, we are grateful to Allah S.W.T for giving us the strength and guidance to complete this final year project successfully. We would like to express our deepest gratitude to our supervisor, Madam Nur Rasyida Binti Mohd Rashid, who is willing to guide, support and give us encouragement throughout our journey in completing this final year project. A great amount of information has been gained from her in order to help us improve our project. We also would like to extend our appreciation to Sir Mohd Azdi Bin Maasar and Dr Mat Salim Bin Selamat, who gave us consultation and guidance regarding our report. Special thanks to the owner of the Nofwah Exclusive Boutique, Madam Nuratikah Izzati Binti Zulkipli, who gave us the permission to use the data of her company's production planning. Furthermore, special thanks go to our parents who are always there to pray, giving constant blessing and affection toward us during the whole term of the project. Without their blessing, this work would not be completely successful. Lastly, thanks to our classmates who have made helpful comments and suggestions on this paper.

## Abstract

The textile and apparel sector are considered as one of the fastest growing sectors in our country. This sector plays a vital role for the economic growths of Malaysia either in the short term of period or long term of period. Textile industry will continue to be relevant in the future years as more emphasis is immediately devoted to serve the demands of the niche markets and upstream activities. Hence, companies involved in this industry must have a proper production plan for success. Planning a business plays a significant role in the success of a production system where planning should consider the limitation of resources such as labor, machine usage, time and budget. Textile and apparel companies dealt with many objectives in their production planning such as to minimize the total production cost, to maximize the total sales income and to minimize the use of raw materials. Therefore, this research will apply a goal programming method to achieve all objectives of the production planning simultaneously. This research presents a goal programming model for the optimization of production planning for a boutique in Senawang, Seremban. Then, LINGO Software is then being used to test the model. The result of the preemptive model is then compared to the previous data of the last Eid al-Fitr season by using the weighted Means Absolute Percentage Error (MAPE). The result shows that the objectives were fully achieved and this proves that goal programming approach is a useful tool and can be used to solve the textile and apparel production planning problem as well as other multi-objective problems.

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