

**UNIVERSITI TEKNOLOGI MARA**

**TECHNICAL REPORT**

**GOAL PROGRAMMING APPROACH: BUSINESS  
PLANNING IN A COSMETIC BUSINESS**

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## **ABSTRACT**

The cosmetics business needs to strategize to achieve huge profits, and they also require accurate calculations to prevent high losses after launching their supplies. Goal Programming Model is a method that is used in the business field. This study focused on cosmetics retailers who freshly began operating and wish to manage their inventory in part using goal programming. All the information that was required, including financial and historical data that might be used to solve the problem, was successfully gathered. Because of the limitations, the corporation occasionally finds it challenging to decide on a plan of action to reach its objectives. Thus, this project handled the occurrence of issues with varied organizational priorities, such as getting sales amount, cost price and gross profit. Utilizing the Goal Programming approach, the objective is to reduce cost price and increase company profit while considering the cost and sales price of the product sold. In addition, the outcomes were obtained using LINGO software. The Mean Absolute Percentage Error (MAPE) calculation was performed to validate the accuracy of the outcomes. It was found that the project successfully achieved all its goals, with no negative or positive deviation variables. Based on the positive results obtained, the study concludes that the Goal Programming approach is suitable for business planning and can assist businesses in achieving their objectives effectively. It is recommended for those operating in the cosmetics industry or the broader business industry to adopt this approach and gain the correct strategy.