

UNIVERSITI TEKNOLOGI MARA

TECHNICAL REPORT

**PARKING SPACE OPTIMAL DESIGN BY BINGLE'S
PARALLELOGRAM CONCEPT IN PARKING LOT**

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ABSTRACT

Nowadays, the lack of sufficient parking spaces can cause congestion, especially in an urban area because the number of cars has rapidly increased. Thus, this study was done on how to overcome this problem by optimizing the number of parking lots. By using the parallelogram concept that was proposed by Bingle et al. (1987), the parking lot of McDonald's Seremban 2 was selected as a scope for our study. There were three factors involved in this concept which were the length, width, and angle of the parking lot. The angle of the parking lot was assigned as a main factor that influences the number of parking lots and the type of parking are categorized into three types. As a result, the angles that are the most appropriate to use for the parking lot in McDonald's Seremban 2 are 60° and 90° which can contribute to a greater number of parking lots. The AutoCAD software was used to illustrate the parking lot of McDonald's Seremban 2 based on the angles obtained from this result. In the future, the other factors such as length, width, or access lane of any width of a parking lot need to be emphasized so that an accurate result can be obtained.