

**Universiti Teknologi MARA**

**Selection of House for Purchase Decision  
by Using Fuzzy PROMETHEE**

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**Report submitted in fulfilment of the requirements for  
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## **STUDENT'S DECLARATION**

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.



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## **ABSTRACT**

Buying a house as an asset is a major financial plan, as the market value of a house will increase over time. However, it is difficult to select houses for purchase decisions, because there are many criteria that need to be considered. In addition, the decision taken on the basis of information derived from human perception is vague and imprecise. Home advertisements may also be misleading. The sole objectives of this study are on the ranking of houses for purchase decisions. In this study, three houses in Perlis were assessed on the basis of certain criteria, such as the price of the house, the size of the house on square feet, the type of house, the number of rooms, the distance from the house to the workplace, and the availability of accessibility and facilities in the vicinity. A fuzzy multi-criteria decision-making process called a fuzzy PROMETHEE was used for house ranking in this study. The findings showed that the most preferred house to purchase is a one-storey semi-detached house located in Taman Ria, Perlis. This study shows that the fuzzy PROMETHEE is applicable to be used as a practical method for anyone to choose the best house for purchase decisions. In addition, this study may also help any house developer to identify the demand of their potential customer.

**Keywords:** Fuzzy PROMETHEE, decision making, real estate, house buyer's preference.

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