

**Universiti Teknologi MARA**

**Mobile Application for Learning and  
Memorizing Japanese Characters using  
Game-Based Learning**

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**Thesis submitted in fulfilment of the requirements  
for Bachelor of Computer Science (Hons.) Faculty  
of Computer and Mathematical Sciences**

**January 2020**

## ACKNOWLEDGEMENT

I am grateful to Allah S.W.T for the good health and wellbeing that were necessary to complete this thesis within the period given. First and foremost, I have to thank my supervisor, Miss Fadzlin Binti Ahmadon. Without her assistance and dedicated involvement in every step throughout the process, this thesis would have never been accomplished. She raised many precious points in our discussion and I hope that I have managed to address several of them here. I would like to thank you very much for your support and understanding over these past two semesters.

I would also like to show gratitude to my lecturer, Dr. Shafaf Binti Ibrahim for her teaching style and enthusiasm for the topic made a strong impression on me and I have always carried positive memories of her classes with me. I would also like to give a special thanks to my examiner, Madam Nurazian Binti Mior Dahalan for her sincere and valuable guidance and encouragement for this research.

Most importantly, none of this could have happened without my family. To my parents and my siblings, it would be an understatement to say that, as a family, we have experienced some ups and downs. Every time I was ready to quit, you did not let me and I am forever grateful. This thesis stands as a testament to your unconditional love and encouragement. Last but not least, I am also grateful to my friends who supported me throughout this venture.

## ABSTRACT

Japanese language has three writing system which are Hiragana, Katakana, and Kanji. In order to help with the pronunciation of Hiragana and Katakana characters, they include special accented characters known as '*Dakuten*' and '*Handakuten*'. However, most students have difficulties in remembering and recognizing Hiragana and Katakana characters and how these characters can be pronounced. Therefore, a game was developed to help students in memorizing, recognizing the difference symbols of Hiragana and Katakana characters, and increase a better understanding towards them. This project uses ADDIE model as a framework in Methodology because the model is commonly used in educational and instructional design development. The game elements implemented are level, challenge, rule, timer, and score. The game involves two types, the first one is Memory Song Game and the second one is Match Puzzle Game. The game's theme is 'Pirate' where the player needs to find the character that matches the puzzle space while memorizing the characters through Game-Based Learning principle. The game is developed for Android mobile phone device. Thirteen students in UiTM Jasin Melaka who are learning Japanese language and who are also planning to take Japanese as a third language are involved to test the usability of the game. Majority of the respondents are satisfied the game is beneficial and good in the enhancement of learning in Japanese language. It was discovered that they really enjoyed the challenge part of the game. The testing analysis also suggested some improvements in the future to be added to the game, such as adding variety of games and displaying high score lists to make the game available to compete with friends. In conclusion, this project has successfully achieved all three objectives that have been identified at the beginning of the process.

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