# UNIVERSITI TEKNOLOGI MARA

## The 11th International, Invention, Innovation & Design 2022

# INDES 2022

## Ushering in the Age of Endemic

# THE 11TH INTERNATIONAL INNOVATION, INVENTION & DESIGN COMPETITION INDES 2022

# EXTENDED ABSTRACTS BOOK

## *The 11th International Innovation, Invention and Design Competition 2022*

*Organised by*

*Office of Research, Industrial Linkages,*
*Community & Alumni Networking (PJIM&A)*
*Universiti Teknologi MARA Perak Branch*

*and*

*Academy of Language Study*
*Universiti Teknologi MARA Perak Branch*

# GAME-BASED RAMADAN EDUCATION FOR KIDS

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## ABSTRACT

Ramadan is a month that is so special for Muslims all over the globe. During this month, Muslims seek the opportunity to obtain more rewards by doing good deeds and aiming to improve good moral character and habits. Parents in Malaysia wish that their children also get the same value and spirit of Ramadan. Passing down the values and knowledge to the children is not an easy task. Game-based learning is popular nowadays, especially in educating children effectively. The amount of existing mobile games that contain Islamic content related to Ramadan suitable for Malaysian values is limited. Therefore, this research aims to motivate and educate Muslim children in Malaysia about fasting and good deeds during Ramadan. The objective of this study was to develop a mobile game application for Ramadan that is suitable for children according to Malaysian values. This research focused on the development of User Interface (UI), User Experience (UX), gameplay, game design, environment, and narrative. Unity, Adobe Illustrator, and Adobe Photoshop were the applications used to produce the 2D mobile game aimed at Android users. Game Development Life Cycle (GDLC) model was used as the methodology in the development of this research. The completed game was evaluated for effectiveness among selected target audiences aged 6-12 and families with children aged 6-12. Technology Acceptance Model (TAM) was adapted to measure user acceptance in terms of game design, functionality, and overall game performance. The result shows that 100 % of the respondents agreed that the Ramadan Spirit game provides knowledge that can be applied in their life.

*Keywords: Ramadan, Game-Based Learning, Malaysian values, Muslim children, fasting and good deeds, mobile game*

## 1. INTRODUCTION

The month of Ramadan is a special time in Malaysia and is the most anticipated month of the year for Malaysian Muslims. In Malaysia, however, the Ramadan spirit is generally limited to Muslim adults because fasting throughout this month is mandatory for adult Muslims, while children are not supposed to fast until they reach puberty. An effort to bring a sense of the importance of Ramadan and excitement for children to the celebration of Ramadan needs to be done. Instilling the joy of celebrating Ramadan to our children at an early age is very important so that the children will understand Ramadan and learn about the values of generosity, devotion, and the benefits during Ramadan. Children nowadays have made a lot of interactions with smartphones and tablets and focus more on playing digital mobile games than the old generation who played together outdoors. Mobile games of various genres can be easily found and downloaded from digital marketplaces. In recent years, digital games have also been used for teaching and learning. The term game-based learning (GBL) refers to the use of games with educational values or various software applications that use games for educational purposes or learning effects (Huang et.al, 2017). Mobile learning games (MLGs) are a rapidly emerging

trend in the digital game-based learning genre. The purpose of developing the game is to provide entertainment, and implicitly arouse the player's interest in learning. Digital games based on Islamic values also aim to teach Islamic values and knowledge and to help players learn and improve their Islamic knowledge. However, Malaysia still lacks digital games with Islamic values and expertise, especially those related to Ramadan. The existence of Ramadan-themed digital games has yet to be developed in Malaysia. Maintaining children's excitement in studying is crucial considering all the aforementioned factors as well as the significance of Islamic education and the spiritual illumination of Ramadan for spreading Islamic teachings and values among Muslim children. Thus, the major goal of this project is to use a mobile game to encourage and instruct Muslim kids about fasting and doing good deeds throughout the month of Ramadan. It explains why fasting and doing good deeds are important during Ramadan and how mobile games may be used to draw people to them. It provides insight into the importance of fasting and good deeds during Ramadan and how mobile games can be used to attract them.

## 2. METHODOLOGY

The Game Development Life Cycle (GDLC) methodology defined by (Rido & Yani, 2013) is applied to the development of the game Ramadan Spirit. This methodology is considered the best method for this study because it has a simple procedure that is suitable for the study conditions and objectives. In the development of the game Ramadan Spirit, there are six stages including initiation, pre-production, production, testing, beta, and release.

## 3. FINDING

The effectiveness of the completed game was tested among selected target audiences aged 6-12 and families with children aged 6-12. The survey is based on an online Google survey, interviews, and observations of respondents ages 6 to 12. Based on the data collected from the part of the questionnaire that linked to one of the objectives of this study, that is to educate Malaysian Muslim children about fasting and good deeds in the month of Ramadan found that

all the respondents (100%) agreed that the Islamic and Ramadan knowledge provided in the game can be applied in real life. The data also shows that the game can be used to educate Malaysian Muslim children about fasting and good deeds during Ramadan. Therefore, the objectives of the project were achieved.

## 4. CONCLUSION

Muslims have always understood the significance of Ramadan. It can be difficult to explain Ramadan to kids. As a result, the creation of this game will stimulate and educate Malaysian Muslim children about the spirit of Ramadan, make them aware of the significance of deeds committed during Ramadan, and encourage them to do so in their own time. It is also an essential tool for the children during Ramadan, engaging children during Ramadan and

cultivating their passion for children during Ramadan. Additionally, the game may arouse the interest of Muslim children and encourage them to play digital games with more Islamic values.

**REFERENCES**

Huang, Y. L., Chang, D. F. & Wu, B. (2017). Mobile game-based learning with a mobile  app: Motivational effects and learning performance. *Advanced Computational    Intelligence and Intelligent Informatics*, 963-969.

Rido R. & Yani W. (2013). Game development life cycle guidelines. *Proceeding International Conference on Advanced Computer Science and Information Systems (ICACSIS),* 95-100.

Surat kami : 700-KPK (PRP.UP.1/20/1)
Tarikh : 20 Januari 2023

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**2 5 JAN 2023**
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Sekian, terima kasih.

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Saya yang menjalankan amanah,

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