

Universiti Teknologi MARA

**MOBILE GAME TO TEACH
CHILDREN PROBLEM SOLVING
AND PROGRAMMING LOGIC
USING GAME-BASED LEARNING**

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STUDENT'S DECLARATION

I certify that this report and the project to which it refers is the product of my own work and that any idea 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

The important aspect of computer science is computational processes and critical thinking which is essential in our daily life. The purpose of this project is to motivate and attract the attention of children 7 years old and above based on problem solving and logical thinking. Through Game-based learning (GBL) is an activity of game that involves problem solving and challenges which provide learners or players a sense of achievement since it is the way that can attract children by playing a game. This mobile game will use Android as a platform. There are a few techniques or theory had been used to design the mobile game in order to increases children focus in learning programming such as Logical Principles, Computational Thinking Strategy, Game Elements and guidelines of design development. ADDIE model was chosen as a framework in methodology because it based on pedagogical principles of instructional development. The conclusion from finding the usability testing shows that participant can accept the game learning that was implied and satisfaction to the mobile game. In the future, more features such as add English Language option, and develop in computer-based which can be added to make it more attractive and more interesting.

Keywords: *problem-solving, computational thinking, Game-Based Learning, Children, mobile game, game elements*

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