

ABSTRACT
DESIGN MATHEMATICS EDUCATIONAL GAMES BASIC
MULTIPLICATION AND DIVISION AS ALTERNATIVE LEARNING
MEDIA

By

Mohammad Rifa'i

19102044

Basic mathematical operations of calculating, division and multiplication are materials in mathematics subjects that began to be taught to grade 2 elementary school students. The lack of interactive learning media is a factor in the difficulty of learning multiplication and mathematical division. To overcome this problem, this study aims to design and build an educational game that emphasizes basic multiplication and division, with the aim of encouraging students' interest in understanding mathematical material. The application of games in the field of education has a positive impact where students can learn while playing.. The development method used to develop educational Games on multiplication mathematics and basic division is the Game Development Life Cycle where this method has 6 stages, namely: Initiation, Pre-Production, Production, testing (alpha and beta) and finally release. Alpha Testing will use Black Box Testing and Beta Testing will use User Acceptance Test. From the results of Black Box Testing that has been carried out on 9 Android devices on device compatibility, it can be concluded that the minimum specifications for this Game application are Android 6.0.1 (Marshmallow) and 1.5 GB RAM and for application functionality is as expected. And for testing, the User Acceptance Test obtained a score of 89% which is categorized very well.

Keywords : Game, Mathematics, Multiplication, Division, Game Development Life Cycle