ABSTRACT

Mathematics is one of the important subject that is crucial for child's development, almost every knowledge in this world based on mathematics, e.g., basic calculation and algebra equation. The other reason for children to learn mathematics are to think systematically, precisely, and decision making.

Many methods were developed to help children understand mathematics. Such as developing a mobile application or desktop application that aim to teach mathematics. Nowadays we learn augmented reality. With augmented reality it is possible for us to generate some illustrated picture from real object, i.e., showing the description of some item from just scanning it with phone camera. The aim of this project is to use augmented reality to help children especially in the primary school. This project will run on Android-based phone, because almost Indonesian uses Android-based phone. The general feature of this project is generates some 3D animation and the book as the object. The generated animation is based on which page of the book that is scanned also this project has exercise feature based on the book. By using this augmented reality technology we hope that learning mathematics will be more fun for the children.

With the help of this application children can easily imagine or understand the content of the book. For example, if the book says there are 5 balls, the application will generate an
animation of 5 balls on the screen. There is also a notification feature that will tell the user whether if he/she answered the question correctly or not. This application uses mathematics books for first grade student that is published by Ministry of Education and Culture of The Republic of Indonesia.

**Keyword:** 3D Animation, Android, Augmented Reality, Mathematics, Mobile Application