

# Abstract

The research incorporates C and C++ with Builder XE2 to product an interactive educational game of augmented reality. With augmented reality features and game-themed packaging, make user can learning scientific concepts and knowledge of Japanese language.

In order to reach the achievement which the interactive game of augmented reality on teaching, the research develop four interactive educational games concerning the Japanese syllabary, kinds of Force, Time and Lever. Using the feature which is easy to understand and easy to operate to makes user to know how to separate the Contact force and Non-contact force, to learn time of judgment, the principle of the Lever and Japanese syllabary.

This plan is divided into five parts. First part is background and literature review. Chapter 3 we show the system architecture and image processing techniques. In chapter 4, the descriptions of research methods and designed process for the proposed games are introduced. Finally, the future works are given in Chapter 5.