Abstract
The rate of student’s boredom in study is increasing year by year. It seems that the student already bored with the traditional learning method that normally used by most of the school. In order to reduce the rate of student’s boredom this thesis is proposed an alternative learning method, using game-based learning.
This game based learning will provide flexible features that will allow the user to learn as their journey in the game begin. To test the opportunities of game-based learning, one application prototype is developed: Phyplanet. The game is developed using macromedia flash 8 and powered with action script 2.0. Flexible features are provided in this game in order to keep the application meet the user expectation. In order to find the opportunities of acceptance, user testing is conducted for the students, teachers, public and parents. These tests will be able to identify the advantages and disadvantages of using game-based learning, and the also the acceptance rate from the target user.
As the result, the thesis project has been able to meets the requirements, but yet the parents and public respond is not positive, there are some reason that make the public respond is against the implementation of game-based learning. And the effectivity of game-based learning also still questionable.
In conclusion, there are possibilities that game-based learning can be used as an alternative tools to study. Although, the parents and public respond is not positive, but in fact the students is love to study while playing. And there are a big possibility that the effectivity of game-based learning is higher than study using book.

Keywords
Game-based learning, Education Game, Macromedia Flash Game