

## ABSTRACT

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### **GAMEPLAY APPLICATION OF *CAPSA SUSUN* USING BREADTH FIRST SEARCH ALGORITHM**

(xiii + 70 pages; 32 figures; 5 tables)

*Capsa* (or more widely known as Big Two) is one of the most popular card game in Indonesia, even in the whole world. In Indonesia, *Capsa* is divided into two type of games, which are *Capsa Susun* and *Capsa Banting*. This final project tried to implement *Capsa Susun*, because it is widely known in Indonesia. With this final project hopefully many people can play it in the computer.

In this application, player play against the AI (Artificial Intelligence). In this final project, an attempt to build AI is performed by using Breadth First Search Algorithms. The AI will arrange cards, based on predefined rules, in such a composition that will result the biggest value to optimize the AI's chance of winning.

The AI is tested to two categories of players, which are players who advanced to play *Capsa Susun* and players who do not adept to play *Capsa Susun*. The overall result shows that AI winning precentage over players who advanced to play *Capsa Susun* is 84% and 92% over players who do not adept to play *Capsa Susun*.

References : 10 (2005 – 2012).