ABSTRACT

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IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE IN CLUEDO CARD GAME USING MEANS ENDS ANALYSIS METHOD

Cluedo Card Game is a game which simulates a simple murder case. At first, cluedo is a board game which then developed into a card game. Devising an interesting cluedo game will require the implementation of artificial intelligence which can solve the murder case quickly yet accurately like a professional detective.

Implementing artificial intelligence in this game requires logical implication to receive information from every possible action of other players, and also requires the ability to draw a conclusion from the informations received. Other than that, in devising the artificial intelligence for cluedo card game will also requires the use of a problem solving technique which is means ends analysis to analyze every possible action of other players to find the most efficient move. This game application is tested through 10 possible cases.

From those 10 cases, the result concludes that the game system works accordingly. Beside game system test, there has also been done a system reliability test to test the ability of the artificial intelligence. This system reliability is tested in 2 ways, which the first test is tested by players against the same type of artificial intelligence, while the other way is against 3 types of artificial intelligence. From the game system test, player won 2 out of 5 games against first and second artificial intelligence, while against third artificial intelligence player only won 1 out 5 games. From the artificial intelligence system test, the first artificial intelligence have a winning rate of 21% followed by the second artificial intelligence with winning rate of 25%, and lastly the third artificial intelligence have the highest winning rate of 30%. From these tests, the result concludes that the implementation of artificial intelligences in card game cluedo using means ends analysis method have a higher winning rate than a human player or tester.