

ABSTRACT

The most popular means of entertainment by many people today are games or games on electronic media such as smartphones or Personal Computers (PCs). To create game to play, the game needs to be made as realistic as possible by implementing an Artificial Intelligence (AI) system or artificial intelligence on the NPC (Non-Player Character) as a behavior and navigation system in the game.

One of the commonly known systems is the pathfinding algorithm or route search algorithm. Pathfinding algorithm is the basic concept of an algorithm that is commonly used as a character navigation system in a game. By using a pathfinding algorithm, NPCs can move by themselves after the algorithm is applied. This can make the game created will be more interesting.

In this study, the results of the comparison of manual calculations and the implementation program of the A Algorithm on the NPC YOLO Maze Game are appropriate, so it can be concluded that the application of the A* Algorithm for NPCs in finding the fastest path to find the Player on YOLO Maze Game was successfully carried out and based on the results of the questionnaire with a validity value of 0.54 which means it is valid and reliable with a reliability value of 0.77 to question number 5 "How is the difficulty level of the NPC in YOLO Maze Game?" 17 respondents from 43 respondents or 39.5% said that the NPC difficulty level in the YOLO Maze Game was difficult.*

Keywords: *A* Algorithm, AI, Game, NPC, Pathfinding.*