ABSTRACT

In Artificial Intelligence (AI) there was some problem solving techniques that are used and one of them is planning. Planning is the actions of search techniques used for the initial state can be turned into a goal state. In AI there are algorithms A * and BDA* that combine heuristic search techniques with the planning. There are two methods in planning, Forward and Backward Planning Planning. In the Forward Planning, will prove the achievement of goals of the initial state to goalstate. While the Backward Planning will prove the achievement of goals from goal state to initial state.

In this final project is implemented and how the algorithm A * and BDA * by using heuristic additive in determining the actions to achieve the goal in case study logistics. The system will display the output in the form of actions performed by the system to reach the goal state, displays the number of actions taken, and displays the time the system needed to solve problems.

The results of this research found that the algorithm A * and BDA * can run with the existing case studies. A * algorithm proved better in terms of time are compared with the algorithm BDA *. For complex cases (the number of airports and cities of more than 2), algorithm A * take a long time. The solution obtained from the algorithm A * and BDA * are optimal compared to the resulting solution Graphplan algorithm and the algorithm is used as a benchmark for optimal parameters.

Keyword : A*, BDA*, heuristic additive, artificial intelligence, planning, Forward Planning, Backward Planning.