ABSTRACT

North Toraja is one of tourism desrination sector in South Sulawesi which has been taking many visitors attention to visit and exploring the place. Due to the big numbers of visitation of tourist on this land, accordingly it is need a special guide to make it possible for the coming visitors in North Toraja to explore the place easily. That is why, the tourism information system of North Toraja required web based system as a medium to share the information to the visitors about places and tourism object in North Toraja. On this research, a web based system was build as a guidance for tourist on concerning the most optimum route recommendation. The optimum route that will maximize the tourism object exploration for 3 days and also to find out the shortest route to take each day. Traveling Salesman Problem (TSP) is an obstacle on optimizing to decide the shortest traveling route to passing by on few region where each region must be pass once in a time and back to the start point. One of the TSP's problem is to determined the most optimum tourism route in North Toraja. To solve this TSP's problem on determined the optimum route, were impelemted K-Nearest Neighbour Algorithm (KNN) which can classified the data based on the nearest distance. The Implementation of the system using MySQL database and Language Programing PHP. From this research, an incoming result is a Tourism website that able to give an information about the tourism object in North Toraja and also web based most recommended route for tourist. On dealing with TSP problem using KNN Algorithm used K=1. The results obtained are the mileage savings obtained by the KNN method on the problem of Traveling Salesman Problems in determining tourism recommendations in North Toraja, namely on the first day there is a distance savings of 7.08 km with a percentage of 31.19%, the second day of savings a distance of 14.28 km with a percentage of 32.45% and on the 3rd day distance savings of 50.94 with a percentage of 56.91%.

Keywords *: Tourism, Travelling Salesman Problem, K-Nearest Neighbor*