PT Adhi Karya is one of the state-owned company engaged in construction services in Indonesia. This company got a contract to improve and maintain Demak-Trengguli road with performance based contract system. In PBC (Performance Based Contract) system, design, implementation, and monitoring process all done by the contractor, so PBC system have a greater risk than usual project contracts. The success rate of this PBC system is heavily dependent on the quality and professionalism of the contractor. Therefore, transparency relating to construction techniques, project cost estimates, project data management in handy when preparing reports, and all the responsibility that encompasses project work is needed.

Road construction projects, in fact, generate a large amount of operational data every day. These data is stored in different departments with different data storage systems. It is difficult for contractor to obtain and process the data quickly. Whilst these data should be distributed throughout functional system useful to support daily operations. Data warehouse can help contractors to bring together all the data from each different
source systems into a single integrated database so easily accessed, analyzed, and can produce required report quickly.

Data warehouse is a system that retrieves and consolidates data periodically from the source system to the dimensional or normalized data storage. There are many stages in implementing data warehouse, feasibility study to define business requirements, define functional and non-functional requirements, perform data profiling, designing dimensional models of business processes, designing physical model of the dimensional data storage, mapping the source system, and perform the extract, transform, and loading the data into database system. Further data processing is using Business Intelligence. Business Intelligence use association rule and Naive Bayes. Association rule is data mining technique to discover the rules of associative between combination of items. Naive Bayes is a simplification of Bayes method classification with probability and statistical methods.

The results of this Undergraduate Theses are reports of project maintenance integrated with database system. These reports help the contractor in making monthly and quarterly reports. The Business Intelligence result is the analysis of road damage cause. These analysis results can assist the contractor in performing preventive measures for maintenance projects.

**Keywords:** Association Rule, Business Intelligence, Data Warehouse, Naive Bayes, PBC.