# ABSTRACT

*Internet users are increasing, causing requests on a service to be high and the possibility of overload on a service may occur. Load Balancing is one of the methods that can be used to solve this overload problem. On the other hand, the development of network architecture at the moment has led to an architecture called Software Defined Network (SDN). SDN is a paradigm that transforms the way to design, regulate, and control the network, with the basic concept of separating between control plane and data plane.*

*In this final project designed load balancing using a weighted least connection algorithm. By comparing two different networks, SDN and conventional network. At the SDN use the mininet and ONOS controllers.*

*The test parameters used are throughput, response time, error connection and CPU utilization. The average throughput value on SDN is 90.986 KB/s and conventional networks are 89.94 KB/s. The average response time value on SDN is 768.243 ms and conventional networks are 784.256 ms. The average value of error connection on SDN is 343 connections and conventional networks are 342 connections. The average cpu utilization value on SDN is 16.762% and conventional network is 14.031%.*

***Keywords***: *Load Balancing, Weighted Least Connection, SDN.*