ABSTRACT

Dengue is an infectious disease caused by the dengue virus and included in a group of arthropod borne by the Female Aedes aegypti mosquito as a vector. Transmission of the disease Dengue virus then modeled mathematically, will be determined value of the basic reproduction number R_0 as a parameter to determine the rate of spread of the disease Dengu Fever. This final project using mathematical models of stochastic processes with continuous time Markov chains scaling method to describe the dynamics of the spread of dengue. Differences in behavior model solution with the vaccine against susceptible and infected does not decrease the rate of spread of the disease R_0 of the model Because the rate of change $R_0 > 1$ and the results of the tests on the simulation results show the rate of infected cells in host increases.

Keyword : Dengue, susceptible, Infected, removed, basic reproduction ratio.