IMPLEMENTASI SISTEM ANTRIAN BANK MUAMALAT BOGOR

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ABSTRACT

The queue is one of the phenomena faced by customers in a bank. The waiting time felt by customers can cause serious problems for the bank. Hence, the use of the queuing system can assist bank management in designing optimized queuing models. This paper presents an optimal solution resolved by queuing system analyzed.

The data analysis of queuing models is based on the activities of a bank teller at Bank Muamalat, Bogor during peak hours. The method used to analyze the queuing system is uniformity test, distribution test, and the standard queuing system test. Then the gained results are compared to get the optimized queuing model, which is model contains the smallest total cost.

The queuing model occurred is a double path with single phase and multi-server. In existing condition, tellers who give services to customers amounted to 2 (two) persons with user service factor of 0,61 and customers' average waiting time in the system value for 119,21 seconds. Based on research, if the tellers amounted to 3 (three) persons, the user service factor decreased to 0,41 and customers' average waiting time in the system decreased to 16,59 seconds as well. In this developed queuing model, the additional cost for 3 (three) tellers is Rp 48.761, for 4 (four) tellers of Rp 56.383 and 5 (five) tellers of Rp 67.874. So during peak hours, the bank management should operate 3 (three) tellers since it has the optimal solution.

Keywords : queuing system, bank, teller