ONE ALGORITHMIC APPROACH OF *FIRST-COME-FIRST-SERVED* QUEUEING SYSTEMS

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Abstract

This paper presents simulation algorithms for *first-come-first-served* queuing systems. Usually, they are studies in analytic way, but for certain complicated distributions of inter-arrivals time and service times that are not possible. In these cases, the simulation is necessary. Also, in this paper we introduce the variable number of servers queuing systems concept, that was not analytically studied. We demonstrate that the presented algorithms have a polynomial complexity. By comparing the results obtained by simulation with those analytical, the validity of the simulators based on these algorithms is checking.

Keywords.   Queuing system, computer simulation, algorithm, first-come-first-served discipline