

Using Queueing theory-M/M/1 in Hospital Tetovo

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Modern information technologies require innovations that are based on modeling, analysing, designing and finally implementing new systems. The whole developing process assumes a well-organized team work of experts including engineers, computer scientists, mathematicians, physicist just to mention some of them. Modern infocommunication networks are one of the most complex systems where the reliability and efficiency of the components play a very important role. The aim of the paper is to present a basic method, approaches in a Markovian level for the analysis of not too complicated systems by using M/M/1 Queueing systems. Ours experience and advice are that if it is possible solve the same problem in different ways and compare the results. In this paper the concrete problem is expected in the laboratory blood tests at the hospital in Tetovo (Republic of Macedonia). Basis for achieving results was done an analysis on basis of a questionnaire and is studying the phenomenon for three months. From the data provided is concluded that on average 120 patient counter attainment of services on that day according to the model $M / M / 1$ represents Poisson's membership ians with parameter λ (arrival/time). But at the time of service pose an exponential ians μ (patient/time) of two parameters.