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In the Name of Allah, the Beneficent, the Merciful

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ABSTRACT

The study of waiting lines, called queuing theory, is one of the oldest and most widely used quantitative analysis techniques. Waiting lines are an everyday occurrence, affecting people shopping for groceries, buying gasoline, making a bank deposit, or waiting on the telephone. This paper contains the analysis of queuing systems for the empirical data at Employees Provident Fund organization branches in Kota Bharu Kelantan. This data is from the counter service department. One of the expected gains from studying queuing system is to review the efficiency of the models in terms of utilization and waiting length. In other words, trying to estimate the waiting time and length of queues is the aim of this research paper. The other goals of studying this queuing system are more interested in obtaining estimated solutions for multichannel single phase system. This paper describes about queuing formulation for a multiple server as well as for single queue system. This study may include the variable like, arrival rate, service rate, average server utilization, average number in the queue, average number in the system, average time in the queue, average time in the system and the probability system is empty.

1.3 Background Of Organization

1.3.1 Overview Of Employees Provident Fund Organization



The EPF is a social security institution formed according to the Laws of Malaysia, Employees Provident Fund Act 1991 (Act 452) which provides retirement benefits for members through management of their savings in an efficient and reliable manner. The EPF also provides a convenient framework for employers to meet their statutory and moral obligations to their employees. Private and Non-Pensionable Public Sector employees. The EPF, as at December 2012, has a total of 13.58 million members. The total number of active and contributing members is 6.38 million. The total number of active employers is 502,863.

A contribution constitutes the amount of money credited to members' individual accounts in the EPF. The amount is calculated based on the monthly wages of an employee. Current contribution rate is in accordance with wage/salary received. For employees who receive wages/salary of RM5,000 and below, the portion of employee's contribution is 11% of their monthly salary while the

APPENDICES

The Overall Calculation of an Average and Mean for the One Month Data.

WEEK	DAY	AVERAGE	MEAN
1	1	43	42.667
	2	34.22	33
	3	32.777	32.778
	4	29	29
	5	29.888	30
2	1	33.44	40.333
	2	39.777	37.889
	3	28.888	28.889
	4	27.33	27.222
	5	23.33	23.333
3	1	30.888	30.222
	2	26.111	26.111
	3	25.667	24.111
	4	22.222	22.444
	5	25	25.444
4	1	31.444	31.556
	2	24.778	24.111
	3	24	24.444
	4	32.889	33.111
	5	33.44	34.333

Data From The Employees Provident Fund

Counter/Room	Time		
	Issue	Call	Done
Counter 9	4/7/2013 8:23	4/7/2013 8:23	4/7/2013 8:24
Counter 9	4/7/2013 8:37	4/7/2013 8:37	4/7/2013 8:39
Counter 4	4/7/2013 8:47	4/7/2013 8:48	4/7/2013 8:48
Counter 4	4/7/2013 8:53	4/7/2013 8:53	4/7/2013 8:53
Counter 4	4/7/2013 9:05	4/7/2013 9:05	4/7/2013 9:05
Counter 9	4/7/2013 9:05	4/7/2013 9:06	4/7/2013 9:07
Counter 4	4/7/2013 9:09	4/7/2013 9:09	4/7/2013 9:10
Counter 4	4/7/2013 9:12	4/7/2013 9:12	4/7/2013 9:15
Counter 4	4/7/2013 9:15	4/7/2013 9:15	4/7/2013 9:15
Counter 4	4/7/2013 9:16	4/7/2013 9:17	4/7/2013 9:17
Counter 9	4/7/2013 9:17	4/7/2013 9:17	4/7/2013 9:18
Counter 5	4/7/2013 9:20	4/7/2013 9:23	4/7/2013 9:23
Counter 5	4/7/2013 9:23	4/7/2013 9:23	4/7/2013 9:25
Counter 5	4/7/2013 9:24	4/7/2013 9:25	4/7/2013 9:25
Counter 6	4/7/2013 9:30	4/7/2013 9:30	4/7/2013 9:32
Counter 2	4/7/2013 9:31	4/7/2013 9:32	4/7/2013 9:32
Counter 6	4/7/2013 9:35	4/7/2013 9:39	4/7/2013 9:39
Counter 2	4/7/2013 9:38	4/7/2013 9:40	4/7/2013 9:41
Counter 4	4/7/2013 9:47	4/7/2013 9:49	4/7/2013 9:49
Counter 4	4/7/2013 9:47	4/7/2013 9:50	4/7/2013 9:51
Counter 8	4/7/2013 9:57	4/7/2013 10:00	4/7/2013 10:01
Counter 8	4/7/2013 9:57	4/7/2013 10:02	4/7/2013 10:02
Counter 2	4/7/2013 10:08	4/7/2013 10:16	4/7/2013 10:19
Counter 9	4/7/2013 10:09	4/7/2013 10:18	4/7/2013 10:20
Counter 4	4/7/2013 10:10	4/7/2013 10:19	4/7/2013 10:19
Counter 8	4/7/2013 10:14	4/7/2013 10:20	4/7/2013 10:21
Counter 8	4/7/2013 10:30	4/7/2013 10:36	4/7/2013 10:37
Counter 2	4/7/2013 10:40	4/7/2013 10:42	4/7/2013 10:44
Counter 4	4/7/2013 10:40	4/7/2013 10:43	4/7/2013 10:43
Counter 4	4/7/2013 10:48	4/7/2013 10:50	4/7/2013 10:51
Counter 3	4/7/2013 10:49	4/7/2013 10:53	4/7/2013 10:57
Counter 4	4/7/2013 10:55	4/7/2013 11:02	4/7/2013 11:03
Counter 9	4/7/2013 11:02	4/7/2013 11:12	4/7/2013 11:20
Counter 4	4/7/2013 11:03	4/7/2013 11:12	4/7/2013 11:13
Counter 4	4/7/2013 11:26	4/7/2013 11:33	4/7/2013 11:34
Counter 4	4/7/2013 11:27	4/7/2013 11:34	4/7/2013 11:35