Ryerson University
Department of Electrical & Computer Engineering
ELE709 - Real-Time Computer Control Systems

Lab 3 - POSIX Threads and Concurrent Programming (Week 1)

Name:

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1. **Exercise 3.2**
   (a) Record the required execution time in Table 1 below.
   (b) Should these execution time be similar to those obtained in Lab 2? Explain.

2. **Exercise 3.3**
   (a) Record the required execution time in Table 1 below.
   (b) Compare the results obtained for Exercises 3.2 and 3.3. Are the results similar. Explain why.

Table 1: Execution Time per Iteration

Exercise 3.2					Exercise 3.3				
	$+$	$-$	$\times$	$\div$		$+$	$-$	$\times$	$\div$
1					1				
2					2				
3					3				

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1. **Exercise 3.4**

   (a) Repeat Exercises 3.2 and 3.3 with the `load` program running concurrently. Record the results in Table 2 below.

   (b) Are the timing results similar to those obtained when the `load` program *wasn't* running concurrently? Explain why (or why not).

2. **Exercise 4.1** Demonstrate your concurrent matrix multiplication program to the TA.

Table 2: Execution Time per Iteration (With Load)

Exercise 3.2 (With Load)					Exercise 3.3 (With Load)				
	+	−	×	÷		+	−	×	÷
1					1				
2					2				
3					3				