**Comp 4735 Winter 2015**

## Lab Instructor: \_Mirela Gutica\_ SET :\_4D\_

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# Lab 3

Solve the following exercises. Work in pairs. Discuss each exercise with your lab instructor.

1. Discuss Figure 4.1. What is the difference between the four models?
   1. Single process, single thread/process
      1. in real world terms, this really just means one function is executed at a time
   2. multiple process, single thread/process
      1. multiple programs may run, but only one function at a time
   3. single process, multiple thread/process
      1. one program may run multiple functions
   4. multiple process, multiple thread/process
      1. multiple programs may run multiple functions
2. Discuss Figure 4.2. What is the difference between processes and threads?
   1. In a single process, single thread model, each process will have it's own process control block, user address space, user stack, and kernel stack
   2. In a multithreaded process, each process will have it's own process control block and user address space. Each thread will have it's own thread control block, user stack, and kernel stack
3. Discuss Figure 4.6.
   1. Trace the execution of Process B.
   2. Why are Thread 2 in the running state and Process B Blocked??
4. What is the difference between ULT and KLT?
5. What are the advantages and disadvantages of each model?
6. Solve problems: 4.4, 4.7, 4.8