



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SECR2043-07 OPERATING SYSTEMS

EXERCISE 4

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4.3 Describe the actions taken by a kernel to context-switch between kernel-level threads.

Context switching between kernel threads typically requires saving the value of the CPU registers from the thread being switched out and restoring the CPU registers of the new thread being scheduled.

4.5 Assume that an operating system maps user-level threads to the kernel using the many-to-many model and that the mapping is done through LWPs. Furthermore, the system allows developers to create real-time threads for use in real-time systems. Is it necessary to bind a real-time thread to an LWP? Explain.

Yes, it is necessary to bind a real-time thread to an LWP. This is to ensure the thread will be able to run with a minimal delay time once it is scheduled.