

# Operating System Lab Report

## (ITL252)

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**Branch: Information Technology**

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**Submitted to: Dr. Janib ul Bashir**

**Lab 01** → Install any version of Ubuntu on your system and learn the basic shell commands

**Lab 02** → Implement the process manipulation system calls like fork(), exec(), etc.

**Lab 03** → Implement the file manipulation system calls like open(), close(), etc.

**Lab 04** → Implement the system calls for manipulating the file descriptors.

**Lab 05** → Implement the system calls for Inter-Process communication.

**Lab 06** → Implementing the new signal handlers for the standard signals.

**Lab 07** → Understand the use of free and pmap utilities in Linux.

**Lab 08** → Install the Qemu emulator on your system and run xv6 operating system on Qemu.

**Lab 09** → Implement a multi-threaded program doing the matrix multiplication using multiple threads.

**Lab 10** → Use Pthread lock functions to provide solution to the critical section problem.

**Lab 11** → Implement the condition variables and semaphores using Pthread library.

**Lab 12** → Understand the working of file system calls in xv6.

**Lab 13** → Understand the working of file status system calls in xv6.

**All the above lab Implementations are provided in a *zip file* providing along with this.**

**Regards,**

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