*Lab file of*

***Operating Systems (SE-205)***

*Submitted towards the partial fulfillment of the requirement for the award of the degree of*

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*In*

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*submitted by*

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**Experiment 1**

An operating system (OS) is the program that, after being initially loaded into the computer by

a boot program, manages all of the other application programs in a computer. The application

programs make use of the operating system by making requests for services through a defined

application program interface (API). In addition, users can interact directly with the operating

system through a user interface, such as a command-line interface (CLI) or a graphical UI

(GUI).

***Different Types of Operating System***

Network Operating System

* Every terminal is smart terminal i.e have its own main-memory,etc
* The purpose of the Network Operating System is to share the device like CPU,

hard-disk etc

* In network OS every user has its own CPU unit main-memory unit. .

Batch Operating System

* A batch operating system grabs all programs and data in the batch form and then processes them.
* The main aim of using this OS is to decrease the setup time while submitting similar

jobs to the CPU.

* To manage past main-frame computers, an OS was designed, that OS is known by the

name Batch Operating System.

* In Batch Operating System, who is the owner or manager of system prepare a batch of

similar type of job, then we will load compiler in main-memory then we will load batch

in main-memory, at the end of execution we get outcome of batch.

Multiprogramming Batch Operating System

* Some modification has been done in the batch operating system to increase CPU

utilization.

* Multiprogramming means more than one program at a time in main-memory.
* In this type of operating system, if any program requests for I/P then the CPU will

suspend the execution of the current program and switch to the next program and as

soon as I/O of the second program completes the CPU again switches to the first

program. So here, the CPU will not be waiting for any I/O.

Distributed Operating System

* This OS is a modification of the network operating system.
* Existence of multiple systems is transparent(not visible) to users.

Real Time Operating System

● Operating System for Time - Critical Application are real time operating systems.

● That application which does not tolerate a delay, is a time critical application.

***Difference between Linux and Unix***

Unix was developed in AT&T bells by Ken Thompson and Dennis Ritchie. This operating

system is written in C language.

Unix is not open source and comes under the licence of AT&T Bells.

Examples are Solaris, SCO Unix, SunOS, ULTRIX

On the other hand Linux is developed by Sir Linus Torvalds and is maintained by the linux

community. Linux is open source and is free to use. This operating system has a special place

in the heart of programmers as they can modify the operating system according to their needs

as whole source code is available. As a result many popular distributions of Linux have been

launched in the market.

Initially, Linux was compiled using the GNU C compiler.

Examples are Arch Linux, Debian GNU , Fedora, Ubuntu