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**Batch – C**

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**Aim: Case Study on Operating System with respect to following**

1. **Types of Operating System of Windows and Linux**

There are various types of windows operating and linux operating systems . They can be stated as

A – Windows

* Windows 1.0 – 2.0 (1985-1992)
* Windows 3.0 – 3.1 (1990-1994)
* Windows 95 (August 1995)
* Windows NT 3.1 – 4.0 (1993 – 1996)
* Windows 98 (June 1998)
* Windows ME – Millennium Edition (September 2000)
* Windows 2000 (February 2000)
* Windows XP (October 2001)
* Windows Vista (November 2006)
* Windows 7 (October, 2009)
* Windows 8
* Windows 10
* Windows 11

B – Linux

Some of the linux distros can be mentioned as

* Android
* Arch Linux
* Centos
* Debian
* Elementary OS
* Fedora
* Gentoo Linux
* Kali Linux
* Linux Mint
* Manjaro Linux
* Slackware
* Solus
* Ubuntu

1. **Comparison between Windows and Linux/Unix.**

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| --- | --- | --- |
| **Key** | **Linux** | **Windows** |
| Open Source | Linux is Open Source and is free to use. | Windows is not open source and is not free to use. |
| Case sensitivity | Linux file system is case sensitive. | Windows file system is case insensitive. |
| kernel type | Linux uses monolithic kernel. | Windows uses micro kernel. |
| Efficiency | Linux is more efficient in operations as compared to Windows. | Windows is less efficient in operations. |
| Path Seperator | Linux uses forward slash as path seperator between directorioes. | Windows uses backward slash as a path seperator. |
| Security | Linux is highly secure as compared to Windows. | Windows provides less security as compared to Linux. |

1. **Comparison between Arch Linux and Debian**

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| --- | --- |
| Debian | Arch |
| It supports different processors. | It supports only an x86-64 processor. |
| It lets you download Synaptic package manager. | It does not let you download the Synaptic package manager. |
| During its installation, it installs some common packages also. | During its installation, it does not install any other package apart from the base |
| Its structure is quite complex as compared to Arch. | It offers a simple structure as compared to Debian. |
| In this, the developer has to install header files as its not pre-included. | It already includes header files. |
| Its stability is not good as compared to Arch. | It offers high stability as compared to Debian. |