Assignment 1

1. Comparison between Linux and Windows:

### Linux:

* It’s an open source operating system.
* Ubuntu is having the better user Interface.
* Security point of view Ubuntu is very safe because of its less useful.
* Font family in Ubuntu is very much better in comparison of windows.
* It has a centralized software Repository from where we can download the all required software from that.
* Unix Environment is the best for the programmer.
* Command Line interface – It has both command line interface as well as GUI interface.
* Cost- It’s an open source which is free of cost.

### Windows 10:

* Windows 10 is the latest and the best update of the Windows series.
* It is the best Operating system for gamers.
* The UI interface of the Windows 10 is very good.
* Windows 10 supports many apps and keyboard and mouse attraction is very nice in this.
* We can sync our windows mobile with the Windows 10 operating system very easily.
* It has a Cortana which is a visual personal assistant is very useful and helpful.
* It has a new browser name as Microsoft edge.
* It has a better snap assist.

1. Comparison between multithreading multitasking os



On one hand, **Multitasking** is a logical extension to multiprogramming, and on the other hand, **Multithreading** is thread-based multitasking.

The basic difference between Multitasking and multithreading is that **Multitasking** allows  CPU to perform multiple tasks (program, process, task, threads) simultaneously whereas, **Multithreading** allows multiple threads of the same process to execute simultaneously.

| **BASIS FOR COMPARISON** | **MULTITASKING** | **MULTITHREADING** |
| --- | --- | --- |
| Basic | Multitasking let CPU to execute multiple tasks at the same time. | Multithreading let CPU to execute multiple threads of a process simultaneously. |
| Switching | In multitasking CPU switches between programs frequently. | In multithreading CPU switches between the threads frequently. |
| Memory and Resource | In multitasking system has to allocate separate memory and resources to each program that CPU is executing. | In multithreading system has to allocate memory to a process, multiple threads of that process shares the same memory and resources allocated to the process. |