**Considerations**

**Operating Systems**

For the design of our system, we decided to focus on the consideration of the following operating systems:

1. **Microsoft Windows**

Developed, marketed and sold by Microsoft, Windows is a series of graphical interface operating systems. Programmed in C, C++, and Assembly language, its initial release occurred on November 20, 1985. The supported platforms include ARM, IA-32, x86-64 and Itanium. The design of our system will focus on the version Windows Vista and above, that is, Windows 7 and Windows 8.

**Versions:** We will focus on the following three versions of this operating system:

***1. Windows Vista:*** This operating system designed for use on personal computers. Among the included new features are an updated graphical user interface and visual style dubbed Aero, new multimedia tools and display sub-systems [1]. Windows Vista primary stated objective was to improve the sate of security in the Windows operating system.

**Specifications**

**Release Date:** January 30, 2007.

**Source Model:** Closed model/Shared Source.

**Kernel Type:** hybrid.

**Platform Support:** IA-32, x86-64.

***2. Windows 7:*** This version of the Microsoft Windows operating system was designed for personal computers. Among this new version’s features we include advances in touch and hand recognition, improved performance on multi-processors, and improved boot performance. The primary stated objectives of this version include a more “user-centric” system, and performance improvements.

**Specifications**

**Release Date:** October 22, 2009.

**Source Model:** Closed model/Shared Source.

**Kernel Type:** hybrid.

**Platform Support:** IA-32, x86-64.

***3. Windows 8:*** The latest version of the Microsoft Windows operating system, it was designed for personal computers. The main new features include support for ARM microprocessors in addition to the x86 microprocessors from Intel, ADM and VIA Technologies.

**Specifications**

**Release Date:** October 22, 2012.

**Source Model:** Closed model/Shared Source.

**Kernel Type:** hybrid.

**Platform Support:** IA-32, x86-64, and ARM.

1. **Mac OS**

It can be defined as a series of graphical user interface-based operating systems for Macintosh computer systems developed by Apple Inc. Programmed in C, C++, and Objective-C, This operating system is closed source.

**Versions:**

1. ***“Classic” Mac OS:*** An operating system completely graphical that captures the idea of a friendly user working environment.

**Specifications**

**Release Date:** 1984.

**Source Model:** Closed model/ With Open source components.

**Kernel Type:** hybrid.

**Platform Support:** IA-32, x86-64.

1. **OS X:** Introduced as Mac OS X, this UNIX operating system is based on the NeXSTEP operating system and the Mach kernel.

**Specifications**

**Release Date:** March 24, 2001.

**Source Model:** Closed model/With Open source components.

**Kernel Type:** hybrid.

**Platform Support:** IA-32, x86-64, and PowerPC.

1. **Linux**

This operating system is Unix-like, free and open source for development and distribution. This system’s defining component is Linux kernel. Among some of the designed general purposes besides desktops and servers are computer architecture support, embedded systems, stability, security, localization to a specific region or language, targeting specific user groups, support for and real-time applications.

**Specifications**

**Release Date:** 1991.

**Source Model:** Free and open source software.

**Kernel Type:** monolithic.

**Platform Support:** [Alpha](http://en.wikipedia.org/wiki/DEC_Alpha), [ARM](http://en.wikipedia.org/wiki/ARM_architecture), [AVR32](http://en.wikipedia.org/wiki/AVR32), [Blackfin](http://en.wikipedia.org/wiki/Blackfin), [C6x](http://en.wikipedia.org/wiki/C6x), [ETRAX CRIS](http://en.wikipedia.org/wiki/ETRAX_CRIS), [FR-V](http://en.wikipedia.org/wiki/FR-V), [H8/300](http://en.wikipedia.org/wiki/H8/300), [Hexagon](http://en.wikipedia.org/wiki/Qualcomm_Hexagon), [Itanium](http://en.wikipedia.org/wiki/Itanium), [M32R](http://en.wikipedia.org/wiki/M32R), [m68k](http://en.wikipedia.org/wiki/M68k), [Microblaze](http://en.wikipedia.org/wiki/Microblaze), [MIPS](http://en.wikipedia.org/wiki/MIPS_architecture), [MN103](http://en.wikipedia.org/wiki/MN103), [OpenRISC](http://en.wikipedia.org/wiki/OpenRISC), [PA-RISC](http://en.wikipedia.org/wiki/PA-RISC), [PowerPC](http://en.wikipedia.org/wiki/PowerPC), [s390](http://en.wikipedia.org/wiki/S390), [S+core](http://en.wikipedia.org/wiki/S%2Bcore), [SuperH](http://en.wikipedia.org/wiki/SuperH), [SPARC](http://en.wikipedia.org/wiki/SPARC), [TILE64](http://en.wikipedia.org/wiki/TILE64), [Unicore32](http://en.wikipedia.org/wiki/Unicore32), [x86](http://en.wikipedia.org/wiki/X86), and [Xtensa](http://en.wikipedia.org/wiki/Xtensa).

**Resources**

1. Website: *Windows*

Link: <http://windows.microsoft.com/en-us/windows/history>

1. Website: *Wikipedia: The Free Encyclopedia*

Link: <http://en.wikipedia.org/wiki/Microsoft_Windows>

1. Website: *Wikipedia: The Free Encyclopedia*

Link: <http://en.wikipedia.org/wiki/Mac_OS#OS_X>

1. Website: *Wikipedia: The Free Encyclopedia*

Link: <http://en.wikipedia.org/wiki/Linux>