**OYEFIADE ADEWALE AKEEM**

**18/SCI01/077**

**CSC202 ASSIGNMENT**

There are two major types of computer keyboards: **Standard** and **Extended**.

**STANDARD KEYBOARD**

The standard keyboard also known as the basic keyboard contains at least, 84 keys and is enough to perform all the functions that can be done on a Windows PC. They consist of different keysets which include;

1. Alphabetic keys

2. A numeric keypad

3. Function keys

4. Control keys

The **alphabetic keys** include the letters of the alphabet, generally laid out in the same pattern used for typewriters. According to legend, this layout, known as **QWERTY** for its first six letters, helped keep mechanical typewriters' metal arms from colliding and jamming as people typed. Some people question this story -- whether it's true or not, the QWERTY pattern had long been a standard by the time computer keyboards came around.

The **numeric keypad** is a more recent addition to the computer keyboard. As the use of computers in business environments increased, so did the need for speedy data entry. Since a large part of the data was numbers, a set of 17 keys, arranged in the same configuration found on adding machines and calculators, was added to the keyboard.

In 1986, IBM further extended the standard keyboard with the addition of **function** and **control** keys. Applications and operating systems can assign specific commands to the function keys. Control keys provide cursor and screen control. Four **arrow** keys arranged in an inverted *T* formation between the typing keys and numeric keypad move the cursor on the screen in small increments.

**EXTENDED KEYBOARD**

The **Extended keyboard** may have additional keys, and the design varies among the companies manufacturing them. These are usually customized keyboards that are specific to certain operating systems or applications. The best example I can think of, for extended keyboards, is the Windows 8 keyboard designed by Microsoft for use with its first “start screen” operating system. It is also a larger version of a basic computer **keyboard** that has additional function keys which can be assigned to trigger regular actions such as printing, connecting to the internet and file saving.

Under the extended we have various designs of keyboards;

[1. Flexible Keyboard](https://www.tech21century.com/different-types-of-computer-keyboards/#1_Flexible_Keyboard)

[2. Ergonomic Keyboard](https://www.tech21century.com/different-types-of-computer-keyboards/#2_Ergonomic_Keyboard)

[3. Gaming Keyboard](https://www.tech21century.com/different-types-of-computer-keyboards/#3_Gaming_Keyboard)

[4. Wireless Keyboard](https://www.tech21century.com/different-types-of-computer-keyboards/#4_Wireless_Keyboard)

[5. Multimedia/Internet Keyboard](https://www.tech21century.com/different-types-of-computer-keyboards/#5_MultimediaInternet_Keyboard)

[6. Membrane Keyboard](https://www.tech21century.com/different-types-of-computer-keyboards/#6_Membrane_Keyboard)

[7. Mechanical Keyboard](https://www.tech21century.com/different-types-of-computer-keyboards/#7_Mechanical_Keyboard)

[8. Virtual Keyboard](https://www.tech21century.com/different-types-of-computer-keyboards/#8_Virtual_Keyboard)

[9. Laptop Keyboard](https://www.tech21century.com/different-types-of-computer-keyboards/#9_Laptop_Keyboard)

[10. Projection Keyboard](https://www.tech21century.com/different-types-of-computer-keyboards/#10_Projection_Keyboard)

**Laptop-size Keyboards**

Keyboards on [laptops](https://en.wikipedia.org/wiki/Laptops) and [notebook computers](https://en.wikipedia.org/wiki/Notebook_computers) usually have a shorter travel distance for the keystroke, shorter over travel distance, and a reduced set of keys. They may not have a numeric keypad, and the function keys may be placed in locations that differ from their placement on a standard, full-sized keyboard. The switch mechanism for a laptop keyboard is more likely to be a scissor switch than a rubber dome; this is opposite the trend for full-size keyboards.

**Flexible keyboards**

Flexible keyboards are a junction between normal type and laptop type keyboards: normal from the full arrangement of keys, and laptop from the short key distance. Additionally, the flexibility allows the user to fold/roll the keyboard for better storage and transfer. However, for typing the keyboard must be resting on a hard surface. The vast majority of flexible keyboards in the market are made from silicone; this material makes them water- and dust-proof. This is useful in hospitals, where keyboards are subjected to frequent washing, and other dirty or must-be-clean environments.

**Handheld**

Handheld [ergonomic keyboards](https://en.wikipedia.org/wiki/Ergonomic_keyboard) are designed to be held like a game controller, and can be used as such, instead of laid out flat on top of a table surface.

Typically handheld keyboards hold all the alphanumeric keys and symbols that a standard keyboard would have, yet only be accessed by pressing two sets of keys at once; one acting as a function key similar to a 'Shift' key that would allow for capital letters on a standard keyboard. Handheld keyboards allow the user the ability to move around a room or to lean back on a chair while also being able to type in front or away from the computer. Some variations of handheld ergonomic keyboards also include a trackball -mouse that allows mouse movement and typing included in one handheld device.

**Thumb-size**

Smaller external keyboards have been introduced for devices without a built-in keyboard, such as [PDAs](https://en.wikipedia.org/wiki/Personal_digital_assistant), and smartphones. Small keyboards are also useful where there is a limited workspace.

A [thumb keyboard](https://en.wikipedia.org/wiki/Thumb_keyboard) (thumb board) is used in some personal digital assistants such as the [Palm Treo](https://en.wikipedia.org/wiki/Palm_Treo) and [BlackBerry](https://en.wikipedia.org/wiki/BlackBerry) and some [Ultra-Mobile PCs](https://en.wikipedia.org/wiki/Ultra-Mobile_PC) such as the [OQO](https://en.wikipedia.org/wiki/OQO).

Numeric keyboards contain only numbers, mathematical symbols for addition, subtraction, multiplication, and division, a decimal point, and several function keys. They are often used to facilitate data entry with smaller keyboards that do not have a numeric keypad, commonly those of laptop computers. These keys are collectively known as a numeric pad, numeric keys, or a numeric keypad, and it can consist of the following types of keys: [Arithmetic operators](https://en.wikipedia.org/wiki/Arithmetic#Arithmetic_operations), [numbers](https://en.wikipedia.org/wiki/Numerical_digit), [arrow keys](https://en.wikipedia.org/wiki/Arrow_keys), [Navigation keys](https://en.wikipedia.org/w/index.php?title=Navigation_key&action=edit&redlink=1), [Num Lock](https://en.wikipedia.org/wiki/Num_Lock) and [Enter key](https://en.wikipedia.org/wiki/Enter_key).

**Multifunction**

Multifunctional keyboards provide additional function beyond the standard keyboard. Many are programmable, configurable computer keyboards and some control multiple PCs, workstations (incl. [SUN](https://en.wikipedia.org/wiki/Sun_Microsystems)) and other information sources (incl. Thomson Reuters FXT/[Eikon](https://en.wikipedia.org/wiki/Eikon" \o "Eikon), [Bloomberg](https://en.wikipedia.org/wiki/Bloomberg_Terminal), [EBS](https://en.wikipedia.org/wiki/Electronic_Broking_Services), etc.) usually in multi-screen work environments. Users have additional key functions as well as the standard functions and can typically use a single keyboard and mouse to access multiple sources.

Multifunctional keyboards may feature customised keypads, fully programmable function or soft keys for macros/pre-sets, biometric or [smart card](https://en.wikipedia.org/wiki/Smart_card) readers, [trackballs](https://en.wikipedia.org/wiki/Trackball), etc. New generation multifunctional keyboards feature a [touchscreen](https://en.wikipedia.org/wiki/Touchscreen" \o "Touchscreen) display to stream video, control audio visual media and alarms, execute application inputs, configure individual desktop environments, etc. Multifunctional keyboards may also permit users to share access to PCs and other information sources. Multiple interfaces (serial, USB, audio, Ethernet, etc.) are used to integrate external devices. Some multifunctional keyboards are also used to directly and intuitively control video walls.

Common environments for multifunctional keyboards are complex, high-performance workplaces for [financial traders](https://en.wikipedia.org/wiki/Trading_room) and [control room](https://en.wikipedia.org/wiki/Control_room) operators (emergency services, security, air traffic management; industry, utilities management, etc.).

**The Major Differences between Basic and Extended Keyboards**

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| --- | --- |
| **BASIC KEYBOARD** | **EXTENDED KEYBOARD** |
| It contains at least 84 keys. | It contains the between 110 keys and more. |
| It is not customized for other operating systems, it is only functional for the windows operating system. | It is designed and customized to perform on different operating systems |
| It performs the basic operations of a computer system. | It performs more complicated operations. |
| It requires little or no training to use. | It requires training to use |
| It is less expensive | It is expensive |