Interaction Design-1
D5.E2

INTERFACES OF 1980'S

Kalyani A, Swetha K V and Diya Bijoy

INTRODUCTION 

- The 1980s was the turning point in the evolution of human-computer interaction.
- During the 1980s, Human-Computer Interaction emerged as a formal discipline, emphasizing the need to design computer systems that were easy and efficient for humans to use.
- Computers began shifting from text-based commands to graphical user interfaces (GUIs).
- GUIs allowed users to interact with computers using icons, windows and a mouse.
- This change made computers more intuitive and accessible to the general public.

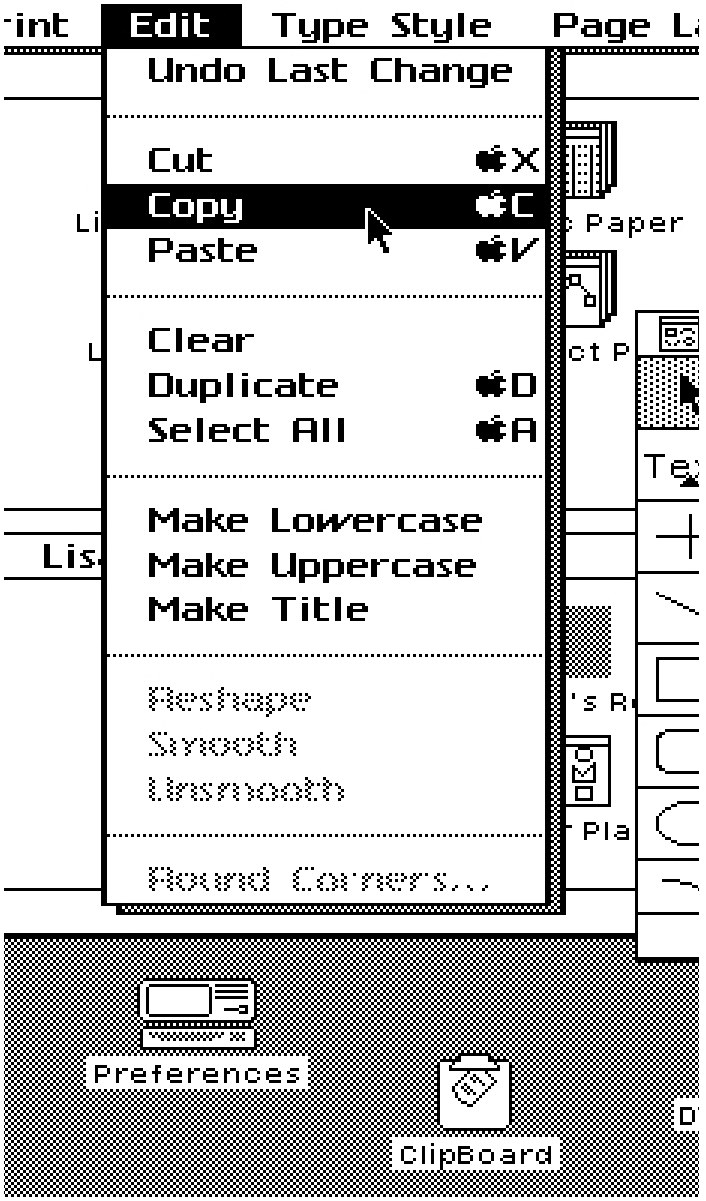
APPLE LISA

- The Apple Lisa, introduced in 1984, was one of the first personal computers to feature a graphical user interface.
- A key feature of the Apple Lisa was its ability to run multiple programs at once, making it one of the first personal computers to support multitasking.

Principles of Design

1. FEEDBACK

- Apple Lisa provided immediate feedback through visual changes.
- For example, highlighting selected icons and options and, sounds (error and successful actions).

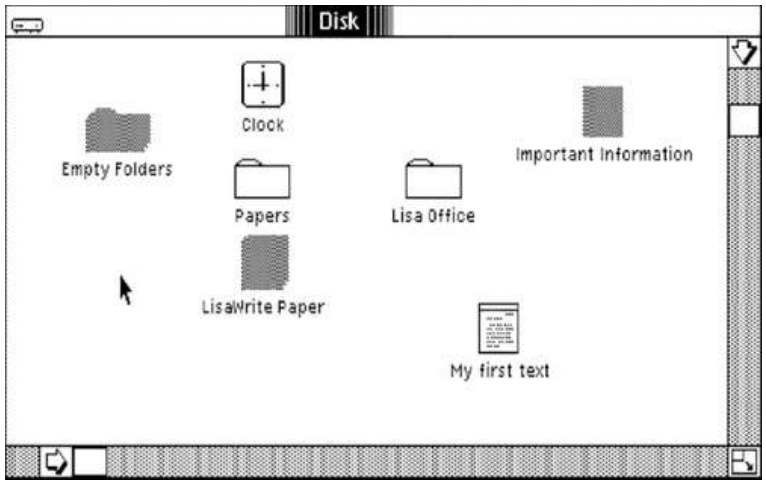


2. AFFORDANCE

- **Icons:** The icons on the Lisa's desktop, such as the trash, file folders, and documents afford actions like deletion, organization and storage.

- **Windows and Menus:** The Lisa's use of windows that could be resized, moved and minimized and, Menu bars dropped down when clicked.

- **Mouse:** The mouse affords being used as a pointing device for navigating the GUI.



3. SIGNIFIER

- Apple Lisa had signifiers like icons and labels.
- These icons and labels guided users on how to navigate the system.

4. MAPPING

- The Apple Lisa employed a direct mapping between the user’s physical actions and the computer's responses.

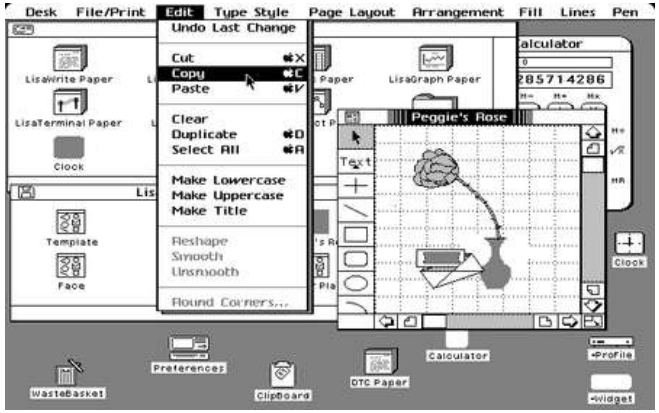
- On the Apple Lisa, moving the mouse controlled the cursor on the screen, and dragging a file icon into a folder worked like putting a document into a physical folder.

Atomic Design Structure of the Apple Lisa

- **Atoms:** Icons, buttons and text fields.
- **Molecules:**

1. Toolbars - Combination of buttons and text fields.
2. Dialogue box - Combination of buttons, text fields and labels.

- **Organisms:** Windows make up organisms which are a combination of buttons, text fields and labels.
- **Templates:** Application Layouts: Standard designs for different apps, like word processors.
- **Pages:** Full Screens which shows complete views of the desktop or application.

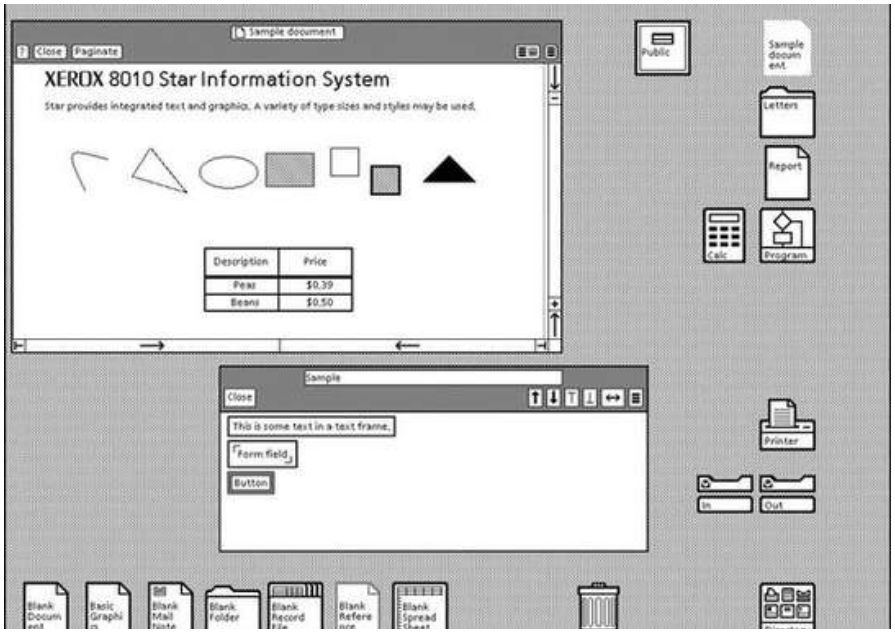


XEROX STAR

- Introduced in 1981 by Xerox Corporation, Xerox Star was one of the first commercial programs to use the WIMP model.

- It was designed to improve the efficiency of the workplace and featured a graphics system that set the standard for future graphics systems.

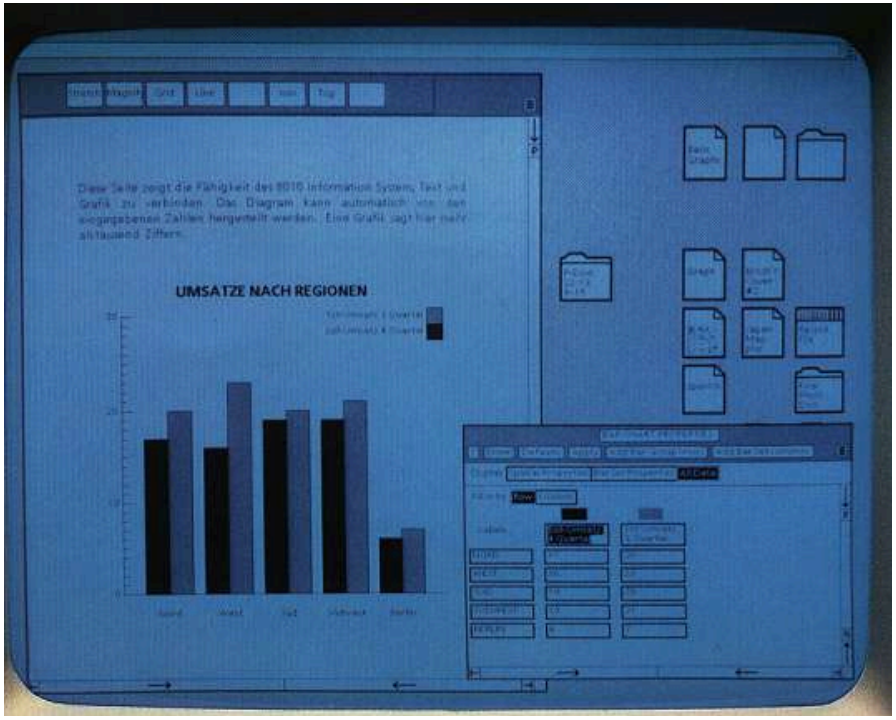
1.FEEDBACK



The interface provided clear visual feedback. When a user opened a file or application, a window would appear showing its contents and status.

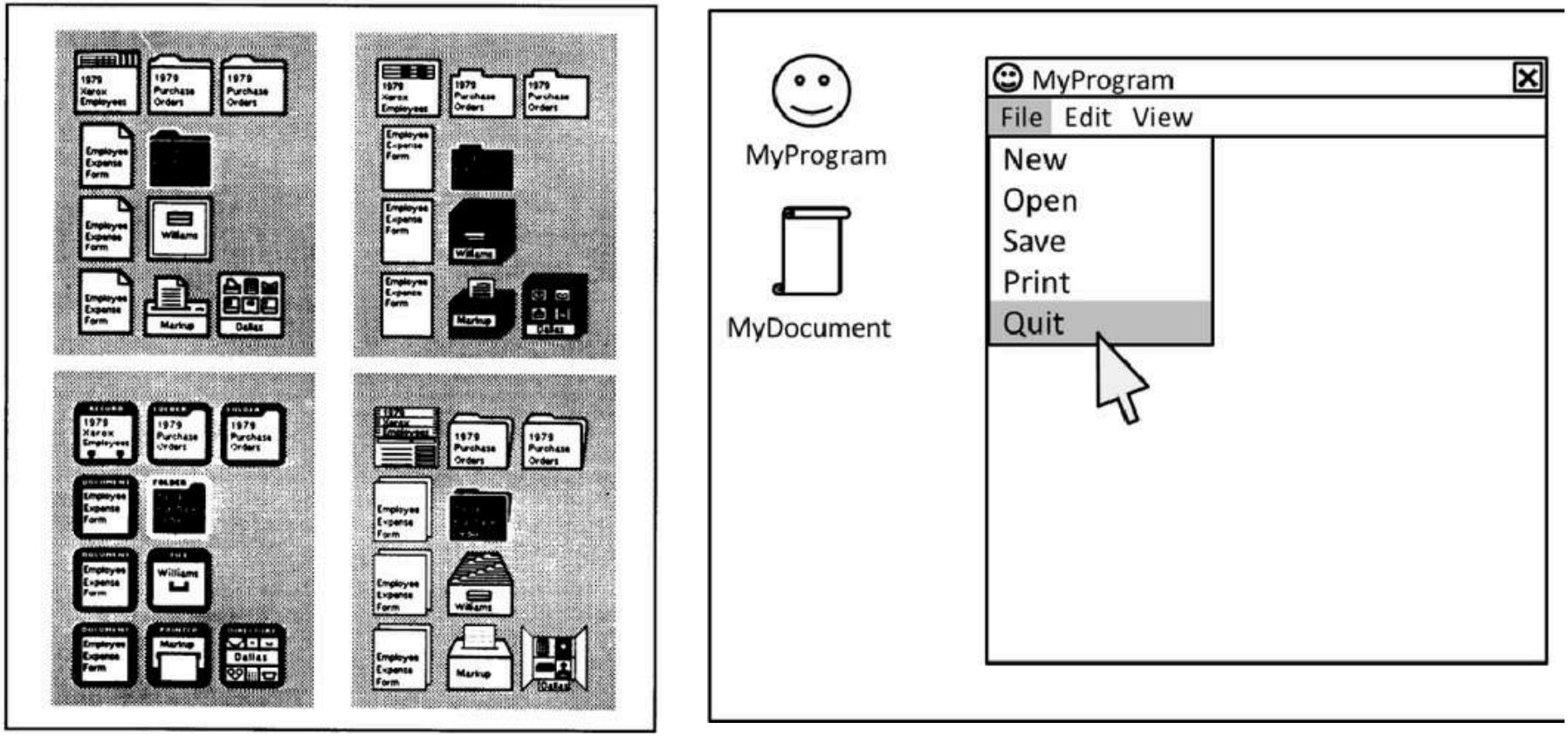
Opening a file: When a user opens a file, it appears in a new window, displaying the contents of the file. This visual information confirms that the file has been opened and identifies its contents.

2. AFFORDANCES



The Xerox stars used visual cues to indicate how the various components works. The icons were designed to clearly represent their programs or files, and help users understand how to interact with them. For example, a folder icon indicated files, which users could open by double-clicking.

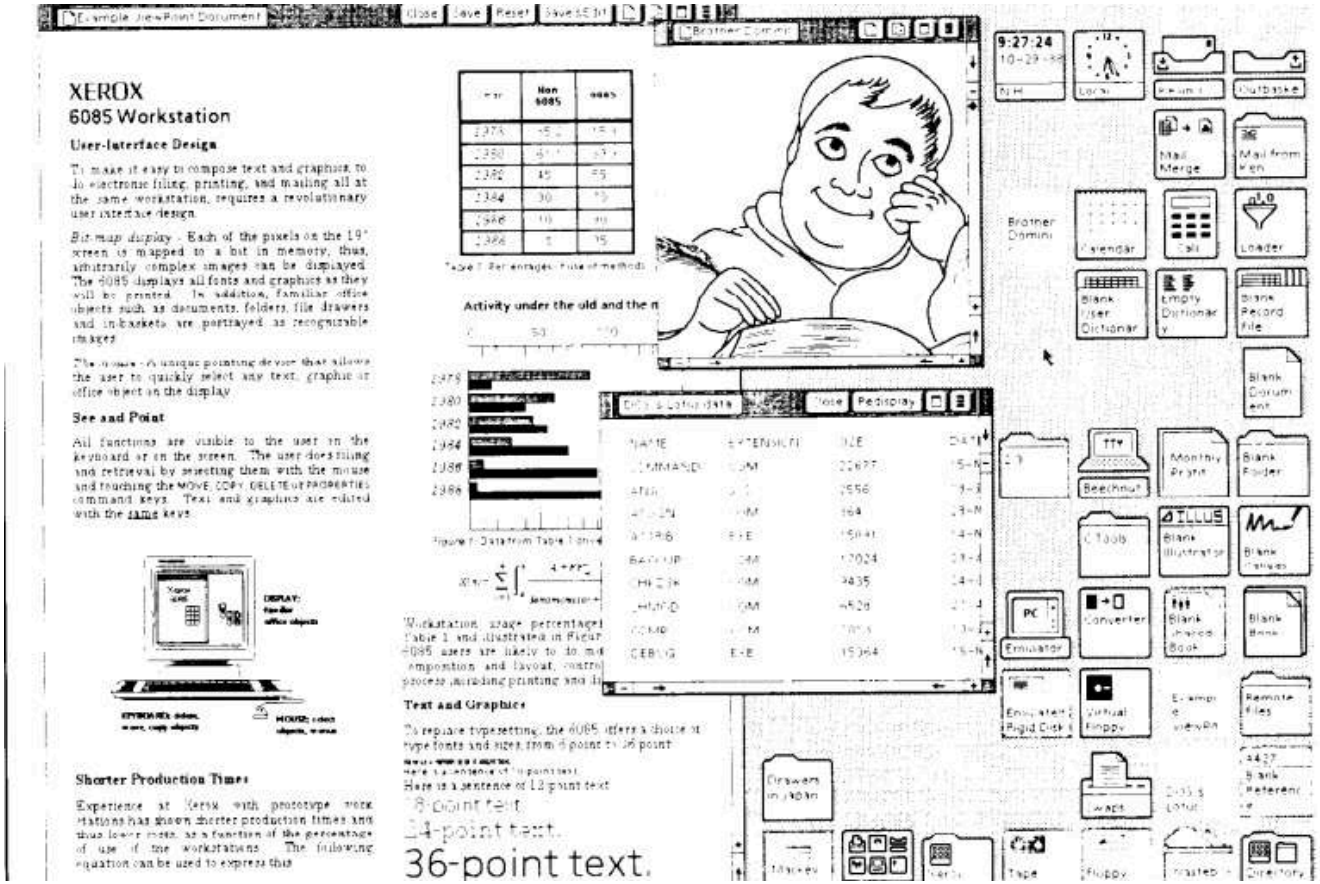
3. SIGNIFIERS



Xerox Star used a consistent design language throughout the interface. For example, the use of icons, menus, and windows followed a standard format. This accuracy helped users easily learn and navigate the system.

XEROX STAR

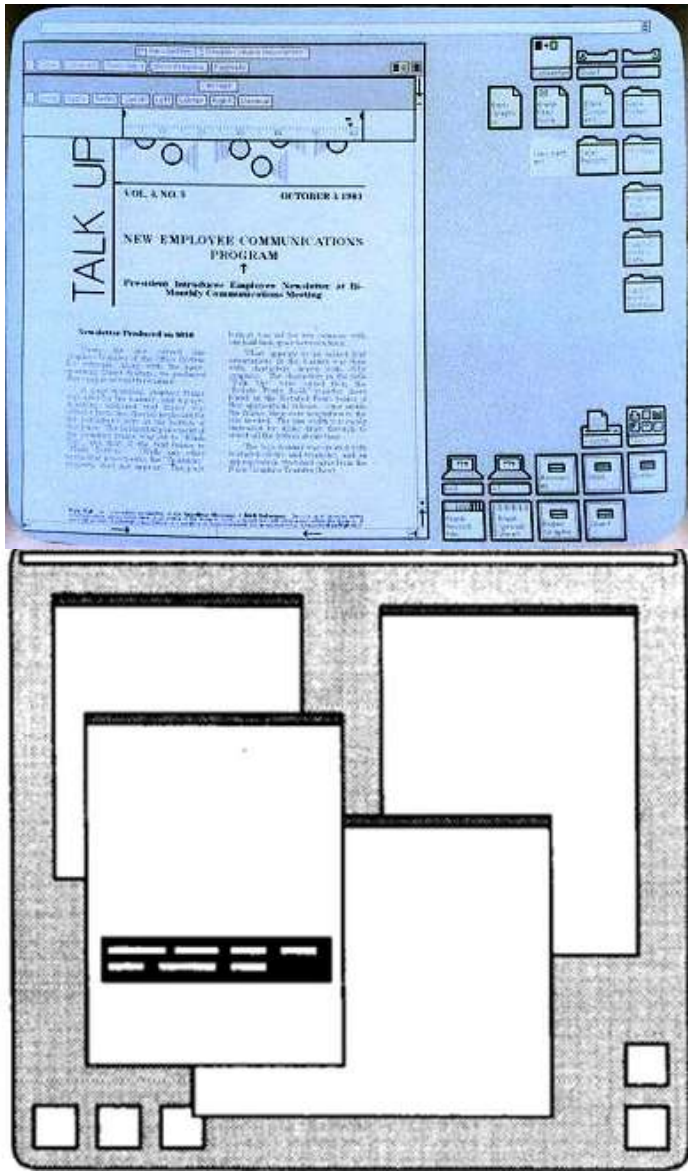
4. MAPPING:



Xerox Star emphasized direct controls, allowing users to interact with the graphic object on the screen. Users could drag and drop files, move windows, and interact directly with icons, making the interface intuitive and user-friendly.

Atomic Design Structure of the XEROX STAR

- **Atom:** icons, buttons, and cursors. These are the little things that do basic jobs.
- **Molecules:** tools or dialoge boxes. For example, a tool with multiple buttons for performing operations (e.g., save, open, print) represents a molecule.
- **Organisms:** window with a title bar, a menu bar and vareity of icons. Together, these elements perform a specific function.
- **Template:** dekstop, windows, menus, icons and represent the page. This is where users interact with systems and perfom tasks.
- **Pages:** The entire user interface including desktop, windows, menus, and icons represents the final page. This is where users interact with the system and perform tasks.



IBM MODEL M KEYBOARD

In the early ’80s, IBM assembled a 10-person task force to build a better keyboard, informed by experts and users.

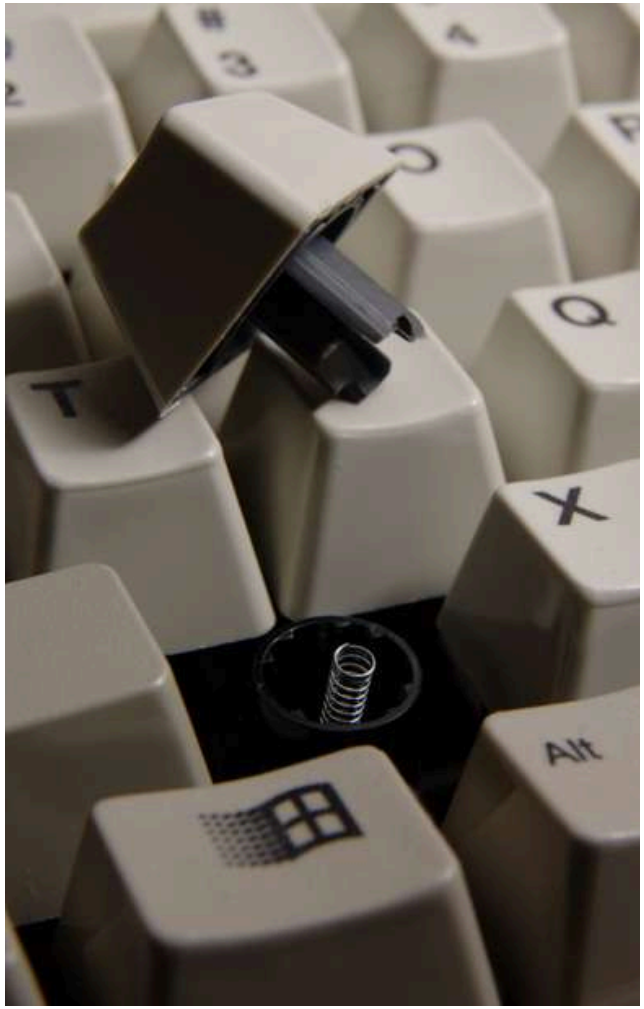
1. Good Mapping

Commonly used keys like Ctrl and Alt were made bigger and duplicated so they could be reached by either hand.

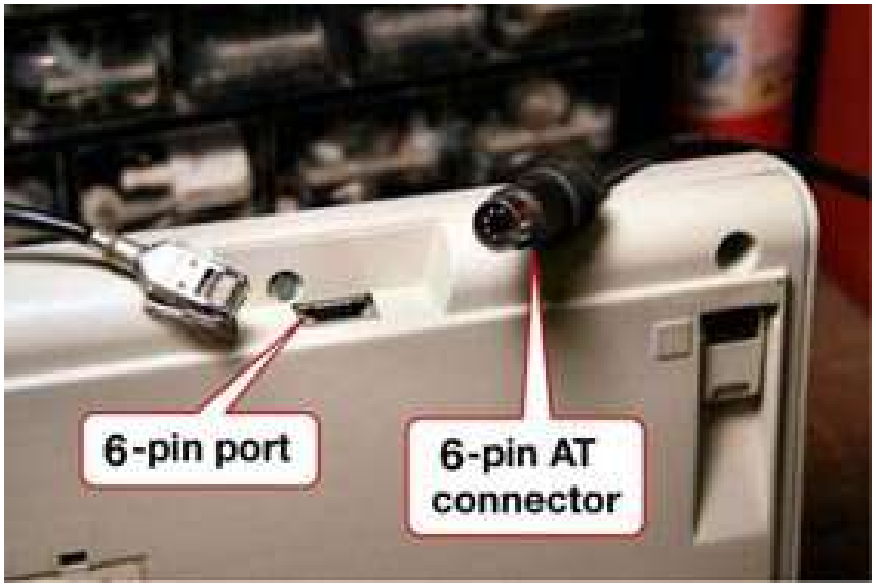
IBM MODEL M KEYBOARD

2. Tactile and Auditory Feedback

The buckling spring mechanism provides a distinct tactile response and sound when a key is pressed, giving users physical feedback that a keystroke has been registered.



3. Affordance through Adaptability



The Model M's design affords compatibility with modern computers through the use of adapters, allowing it to function seamlessly in contemporary computing environments.

The keycaps on the Model M can be easily removed and replaced, allowing users to customize their keyboards with different keycap designs or layouts.

4. Signifier to Orient Fingers

The raised ridges on the 'F' and 'J' keys serve as tactile signifiers that help users orient their fingers on the home row without looking at the keyboard.

Atomic Design Structure of the IBM Model M Keyboard

- **Atoms**: Each keycap forms an indivisible atom of the keyboard.
- **Molecules**: A single key, composed of a keycap and its underlying switch mechanism, is a molecule. It represents a unit of functionality that users engage with to perform actions.
- **Organisms**: Cluster of keys like the alphanumeric keys and keyboard shortcuts together comprise an organism that has specific functions to perform.
- **Templates**: The keyboard design as a whole, including the placement of different key groups (main keys, numeric keypad, function keys), is a template. It provides a consistent layout that users can learn and use effectively.
- **Pages**: The overall experience of using the IBM Model M keyboard, including typing, navigation, and input efficiency, represents the final “page” in Atomic Design. It encompasses how all the atoms, molecules, organisms, and templates come together to create a functional and user-friendly interface.