

INTERACTION DESIGN

2000s INTERFACES

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IPHONE (1ST GENERATION) 2007



The first-generation iPhone, released by Apple in **2007**, marked a significant milestone in the evolution of mobile technology. Combining a **phone**, an **iPod**, and an **internet communication device** into one compact and sleek package, the iPhone revolutionised the way people interacted with their devices. It introduced a **multi-touch capacitive screen** that replaced the traditional physical keyboard, allowing users to navigate through the interface using intuitive gestures like **tapping, swiping, and pinching**. The minimalist design, featuring just a **single home button**, emphasised simplicity and ease of use. With its groundbreaking approach to interface design, the iPhone 1st generation set the standard for modern smartphones and laid the foundation for the mobile computing era.

WINDOWS XP
2001



Windows XP, released in **2001**, was one of the most popular operating systems that introduced a more colourful and user-friendly interface. It introduced many features that improved accessibility and made tasks simpler for users. Instead of being business-like and intimidating, the interface was welcoming and easy to navigate. Its blend of appealing visuals, solid performance, and ease of use helped make Windows XP one of the most beloved versions of Windows. Even after official support ended in 2014, Windows XP continued to be used by many due to its reliability and ease of use. Its influence is still evident in modern operating systems today.

PRINCIPLES OF INTERACTION

FEEDBACK

The "**Slide to Unlock**" feature on the first iPhone exemplified the principle of feedback by providing immediate visual and tactile responses to user interaction. As users slid their finger across the screen, the slider moved smoothly, and the "Slide to Unlock" text faded, signalling that the action was recognised. Upon completion, the screen would instantly unlock, confirming the successful input with a seamless transition to the home screen. This clear and responsive feedback made the unlocking process intuitive and satisfying.

The iPhone used subtle **sound effects** to reinforce actions. For instance, the "**click**" sound when typing on the on-screen keyboard or the "**swoosh**" when **sending an email** provided auditory confirmation that the action was completed.



Slide to unlock

AFFORDANCE

The **touchscreen** itself was a major affordance, clearly indicating that the screen was **meant to be touched**. The lack of physical buttons (aside from the home button) made it evident that users would interact primarily through touch.

The physical **home button** at the bottom of the iPhone clearly afforded pressing, signalling to users that it was the main control to return to the home screen or exit an app.



Home button

SIGNIFIER

Small **red badges with numbers** appeared on app icons, such as the Messages app, indicating unread messages. These signifiers drew attention to the app, prompting the user to tap and check their notifications.

The design of **app icons on the home screen** served as clear signifiers, indicating which apps were **available to be opened with a tap**. The icons were distinct and often featured **visual cues** related to the app's function (e.g., a camera icon for the Camera app).



Red badges with notifications

MAPPING

The placement of the **volume buttons on the side of the device mapped logically to increasing or decreasing the audio level**. Pressing the upper button raised the volume, while pressing the lower button lowered it, mimicking the natural association of "up" and "down" with "increase" and "decrease."

The **positioning of frequently used app icons** (Phone, Mail, Safari, iPod) in the dock at the bottom of the home screen mapped to easy access. Their central location, **always visible** no matter which home screen page the user was on, mapped these apps as the **primary tools for the user**.

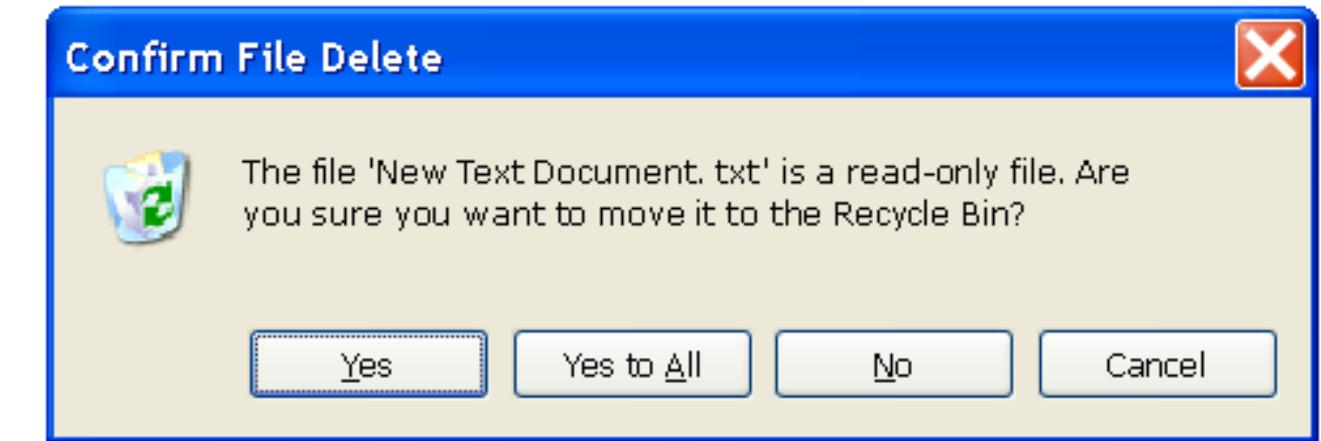


Frequently used applications
permanently stays on the dock

FEEDBACK

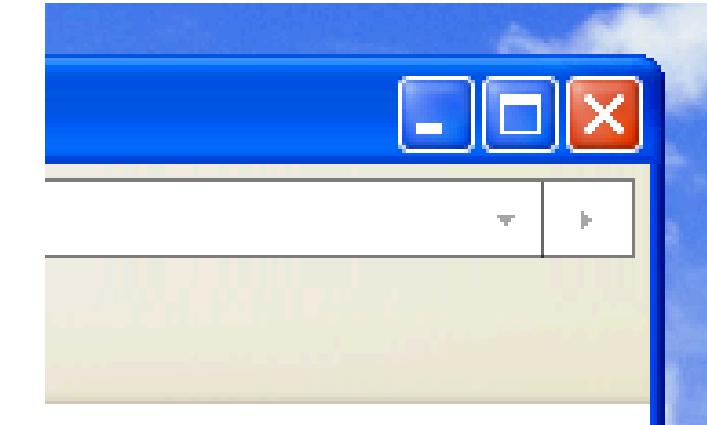
Before performing potentially destructive actions, such as deleting files or formatting a drive, Windows XP employed confirmation dialogs as a form of feedback. These dialogs were a critical safety mechanism, ensuring that users fully understood the consequences of their actions before proceeding.

When errors occurred in Windows XP, the system provided immediate feedback in the form of error messages. These error messages were designed to do more than just alert the user to a problem; they often included specific information about the nature of the error, such as the cause or the file involved.

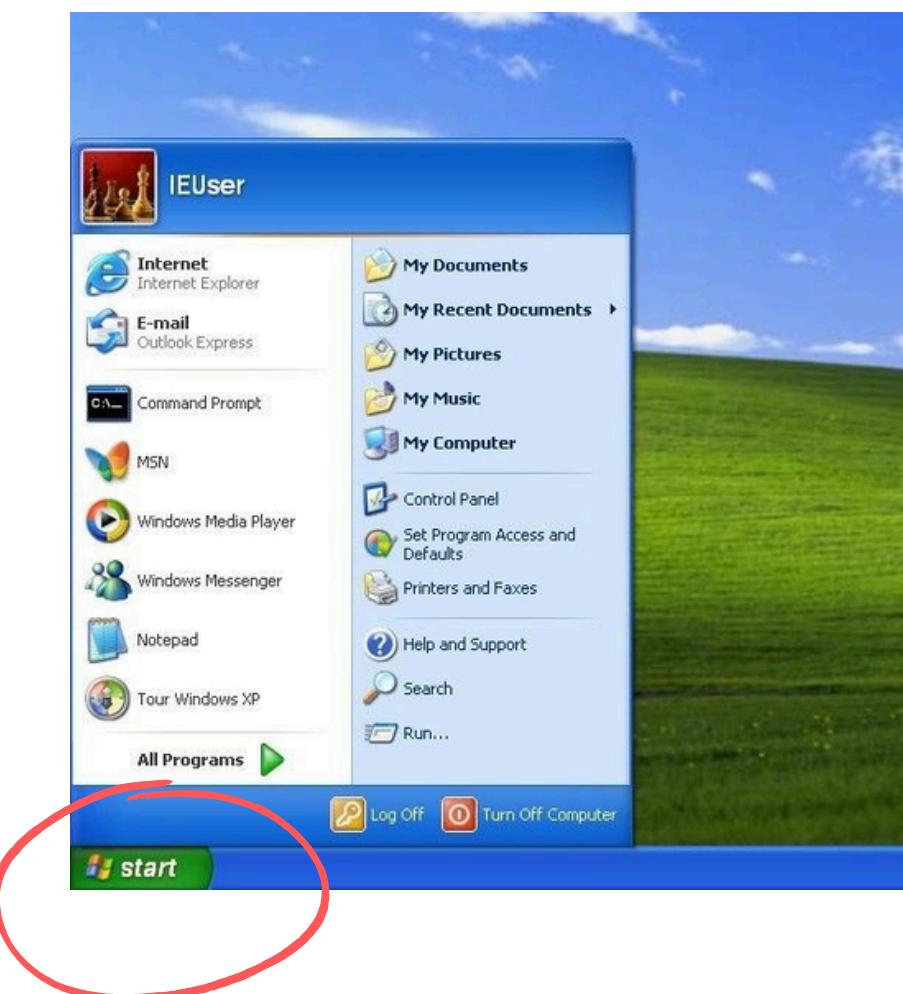


MAPPING

The consistent placement of window controls (minimize, maximize, close buttons) ensured predictable mapping, helping users intuitively know where to find controls.



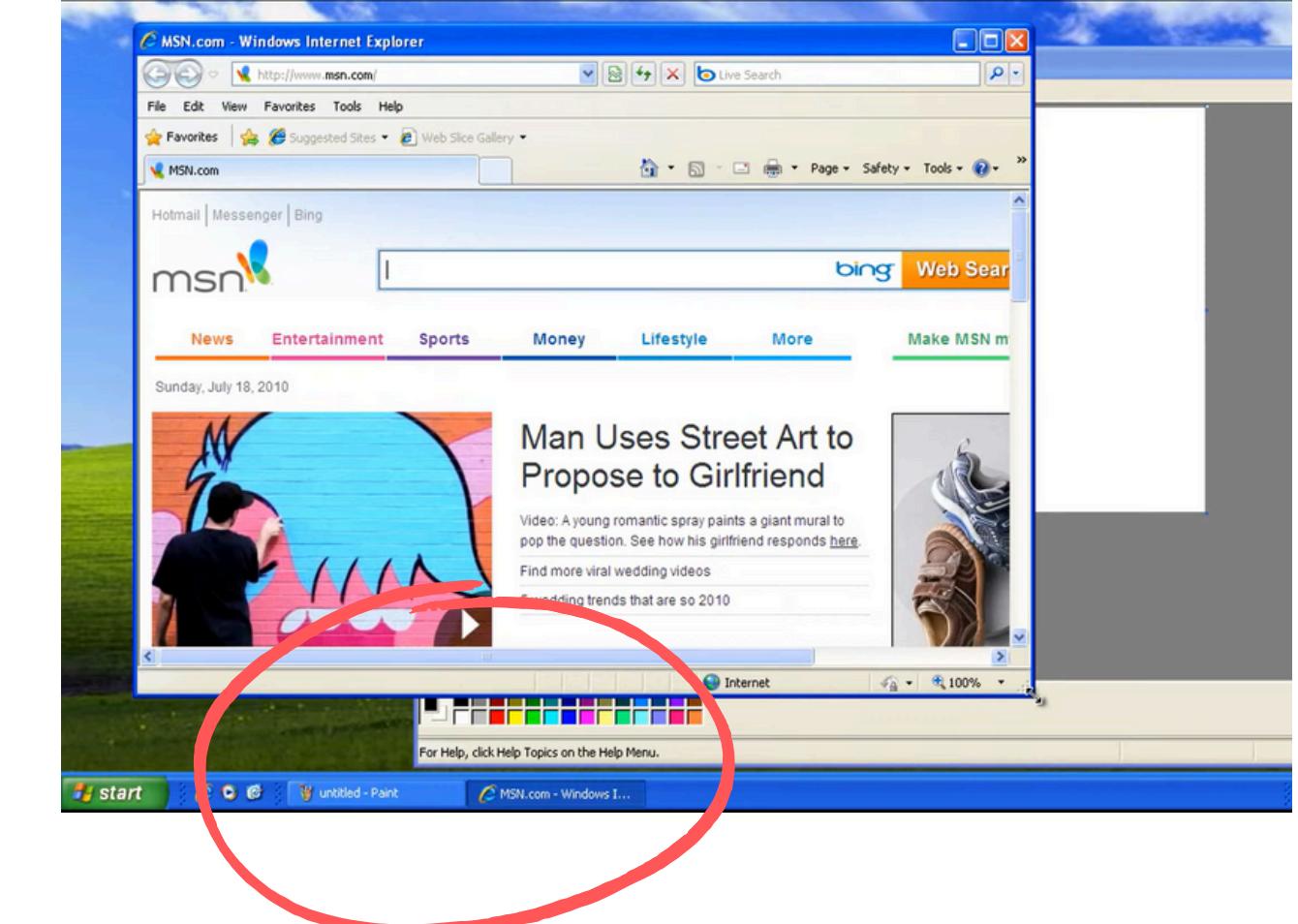
The Start Menu was divided into two columns: the left column for frequently used applications and recently accessed items, and the right column for system functions (like Control Panel, My Documents, and My Computer). This mapping helped users quickly locate commonly used items while keeping system tools easily accessible but separate from everyday applications.



AFFORDANCES

The tool tip acts as an affordance allowing users to know what the function of an application is or what the contents of a file or tab may be. By doing so those who were not as familiar with working with digital interfaces could feel informed and educated about the different options and contents of things.

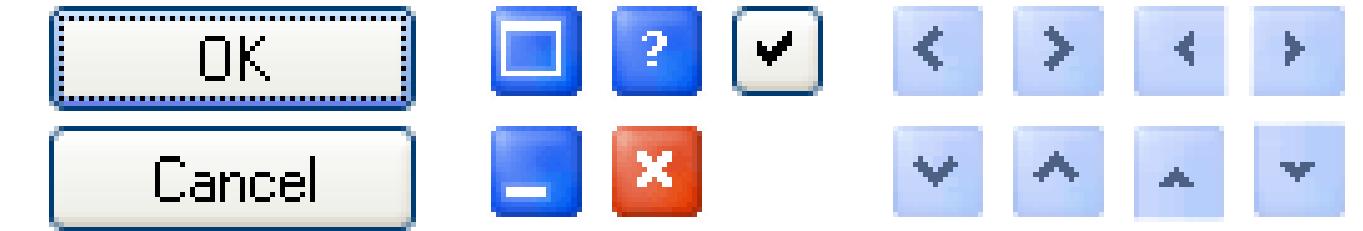
The taskbar displayed a button for each open application, representing the running programs in a minimized form. When a user clicked on a taskbar button, the corresponding application window would either be brought to the foreground (if it was minimized or in the background) or minimized (if it was already in the foreground). This afforded easy switching between tasks without needing to move or search for windows on the desktop.



SIGNIFIERS

The various different icons in windows xp such as start button, close or minimize button are all beveled and decorated with a gradient. Each button also has an outline. All of these features suggest and signify to the users that they can be clicked. During the 2000s these interfaces were brand new and not many were too familiar or comfortable using them. By adding such graphic elements the interface became more user friendly.

When an application requires attention (e.g., an incoming message in a chat application), its taskbar button would flash, signifying that the user should switch focus to that application.



DESIGN SYSTEMS/ ATOMIC DESIGN

ATOMS

Icons- Basic UI elements like the app icons (Phone, Mail, Safari, iPod) on the home screen.

Text Labels- Labels for buttons and menu items, such as "Call" or "Messages."

Buttons- Simple elements like the on-screen keyboard keys, or the physical home button.

Input Fields- The text input fields used in applications like Messages or Safari.

Indicators- Visual indicators like the battery icon, Wi-Fi signal bars, or the time display.



Icons

MOLECULES

App Icon + Text Label- Each app icon combined with its text label forms a molecule, providing users with both a visual symbol and a text descriptor.

Call Button + Text Field- In the Phone app, the number keypad and the "Call" button together form a molecule that allows users to input a number and initiate a call.

Search Bar- In Safari, the search bar molecule combines the text input field with the search icon/button, allowing users to enter and submit a query.

Notification Badges- The combination of an app icon with a notification badge indicating unread messages or updates.



App icon along with text label

ORGANISMS

Home Screen- The collection of app icon molecules arranged in a grid on the home screen, including the Dock at the bottom that houses frequently used apps.

Phone Dialer- The organism that includes the number keypad (a group of button molecules), the input field displaying the typed number, and the "Call" button.

Lock Screen- The lock screen organism includes elements like the "Slide to Unlock" bar, the time display, and notifications, providing the user with essential information and controls at a glance.

Safari Browser Window- The Safari window organism includes the address bar, search field, navigation buttons, and the content display area, all working together to provide web browsing functionality.



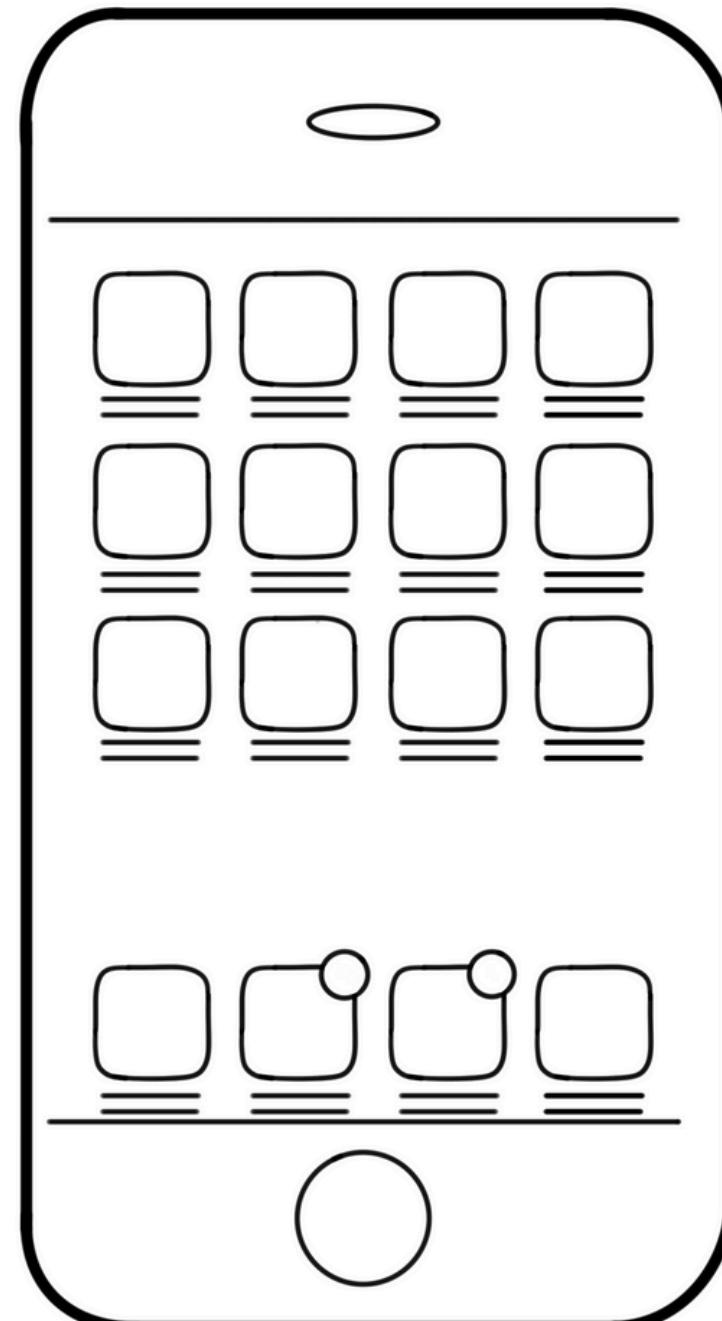
Dock with apps and text

TEMPLATE

App Layout Template- A template for individual apps like Messages or Phone, where standard UI components like navigation bars, input fields, and buttons are arranged consistently across different apps.

Home Screen Layout- The template for the home screen, defining the grid layout of app icons and the placement of the Dock at the bottom. This template ensures that additional app pages follow the same structure.

Settings Page Template- A template used for various settings screens, with a consistent layout of toggles, sliders, and list items that make up the settings menu.



Home screen layout

PAGES

Home Screen with Apps- The fully realised home screen showing real app icons, including user-installed apps and notifications. It's the interface users see when they unlock their phone.

Phone Call Screen- The actual Phone app screen in use, displaying a dialed number and the active call status, along with options like mute, speaker, and add call.

Messaging App Interface- The Messages app displaying real conversations, including text bubbles, timestamps, and the text input field at the bottom of the screen.

Safari Web Page- A Safari browser page displaying a loaded website, complete with the address bar filled with the URL, a visible navigation bar, and the web content below.



Home screen with apps

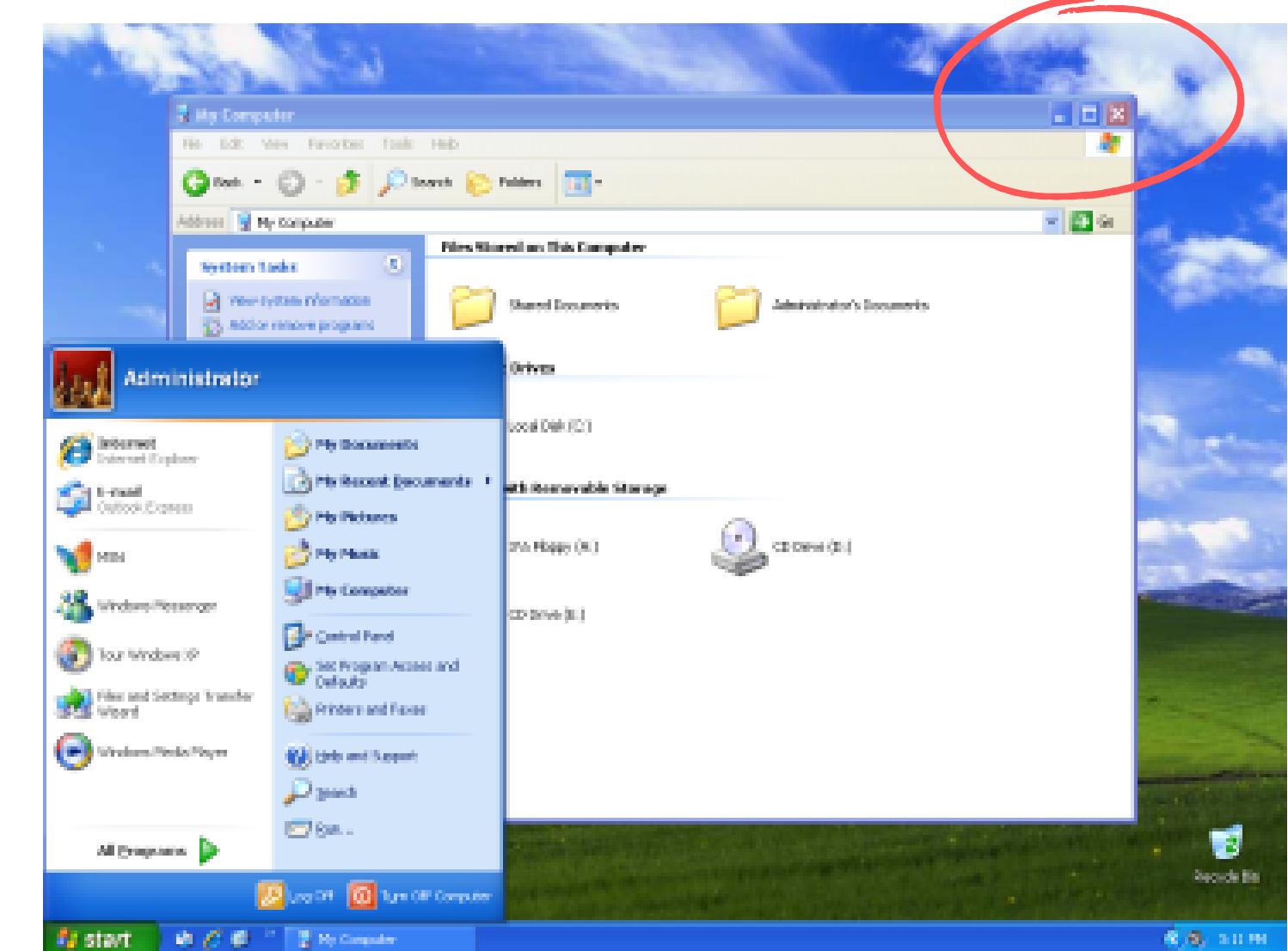
ATOMS

Buttons- Standard buttons (e.g., OK, Cancel, Apply) are fundamental atomic elements in Windows. These buttons were consistent across the system, with clear labels and visual affordances.

Cursor- The cursor (pointer) is a fundamental atom, used for selecting, clicking, and interacting with elements on the screen.

Scroll Bars- The vertical and horizontal scroll bars in windows are basic atoms that allow users to navigate content that extends beyond the visible area.

Typeface and colour- Windows used a consistent typeface and color scheme to ensure readability and coherence across the interface. The blue and green hues for example are atomic level design choices.

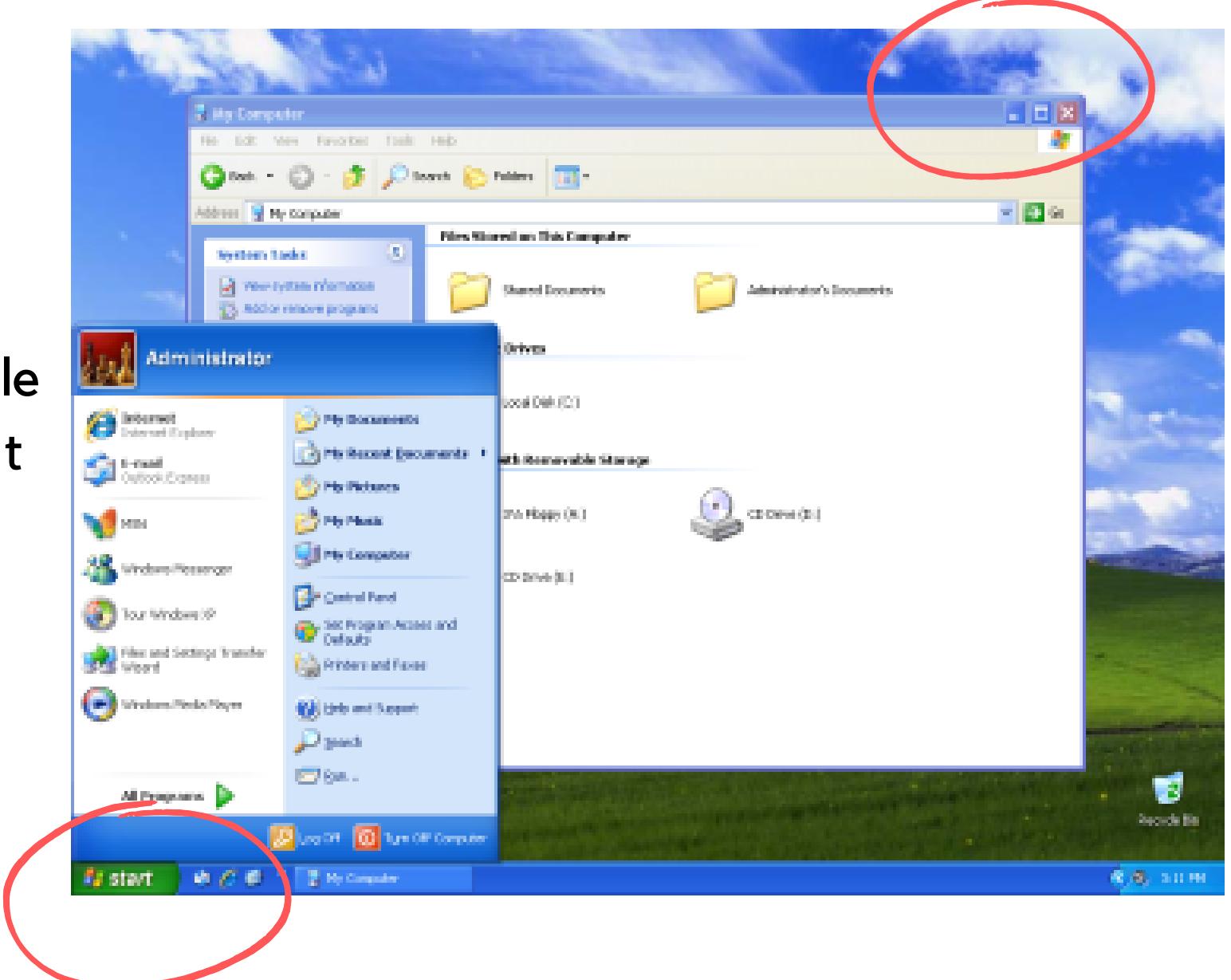


MOLECULES

Start menu items- Each element in the start menu is a molecule as it is a combination of an icon(atom) and a label(atom).

Window title bar- The title bar, containing the window's title (text), close, minimize, and maximize buttons, is a molecule. It combined multiple atoms (text and buttons) to create a functional unit.

Search bar- This bar consists of a magnifying glass button and a text input field atom.

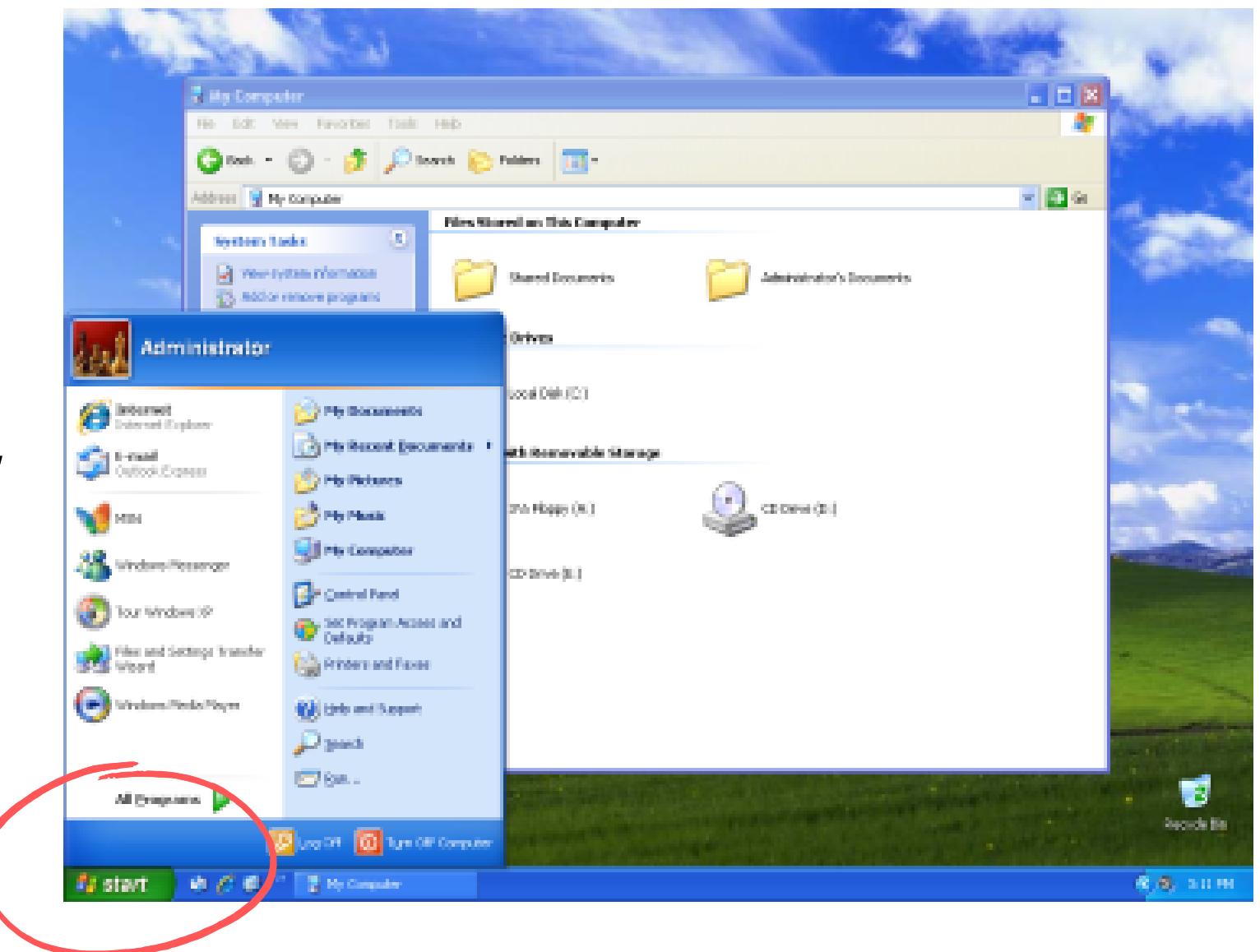


ORGANISMS

Taskbar: The taskbar in Windows is an organism that includes various molecules such as the Start button, quick launch icons, system tray, and open application previews.

Start Menu: The Start Menu itself is an organism, combining different molecules like user profile info, pinned applications, recent files, and navigation links.

Display properties panel: This panel consists of various molecules such as themes, desktop, screen saver, appearance and settings within which there are further atoms allowing for further functions.



TEMPLATES

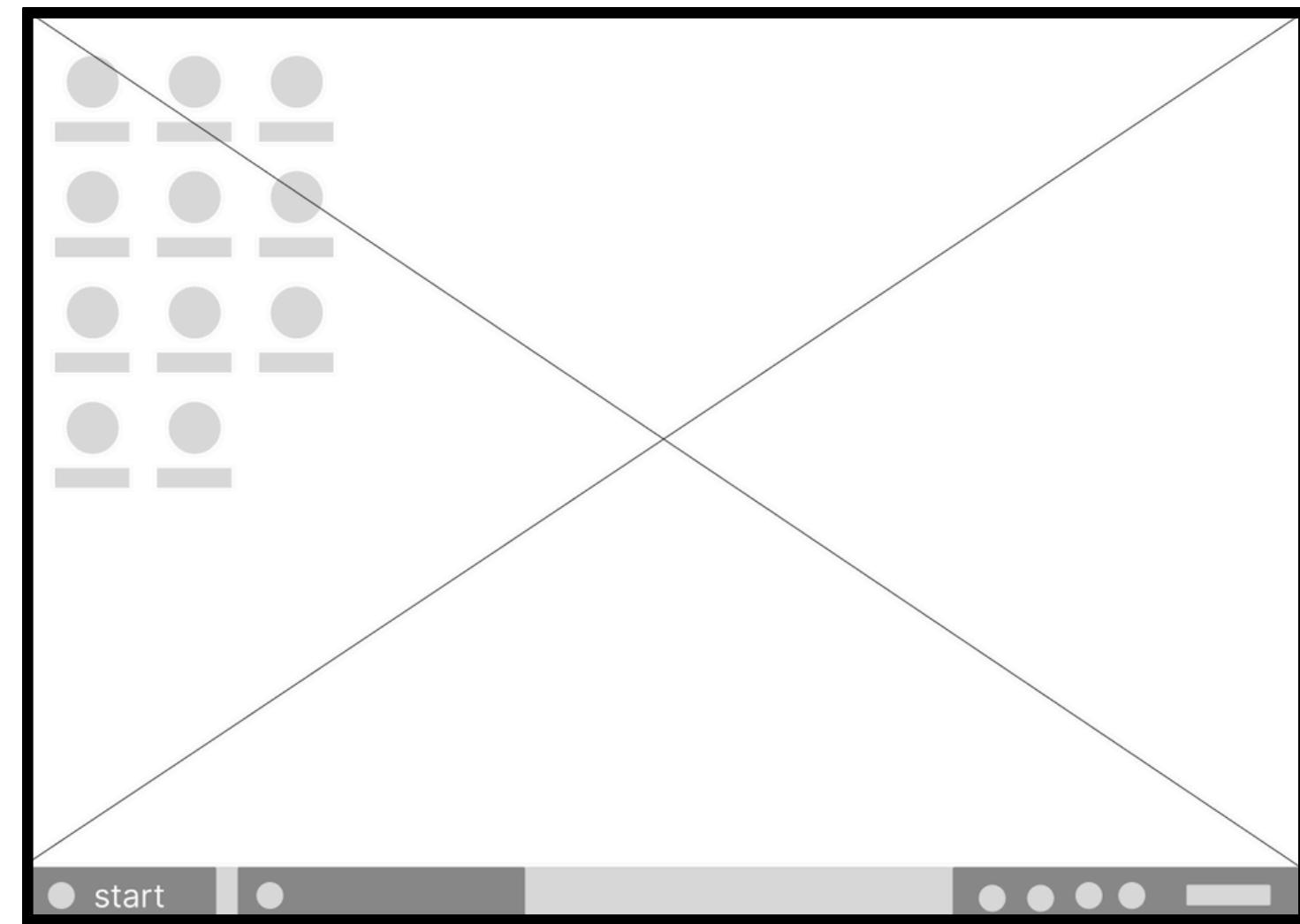
Desktop Layout- The desktop layout acts as a template in terms of planning where the start button, taskbar and desktop icons are placed. This wireframe remains consistent for users to comfortably interact with the system.

User Account Login Screen:

The login screen is another template. It structures elements like the user icon, password input field, and "Log In" button in a predictable way, ensuring a smooth and consistent experience each time a user logs in.

Settings Windows:

Templates for settings windows, such as the display settings or network settings windows, define the structure of tabs at the top, options in the center, and buttons like "Apply" and "Cancel" at the bottom. These templates create a familiar layout, making it easier for users to configure system settings across different tools.

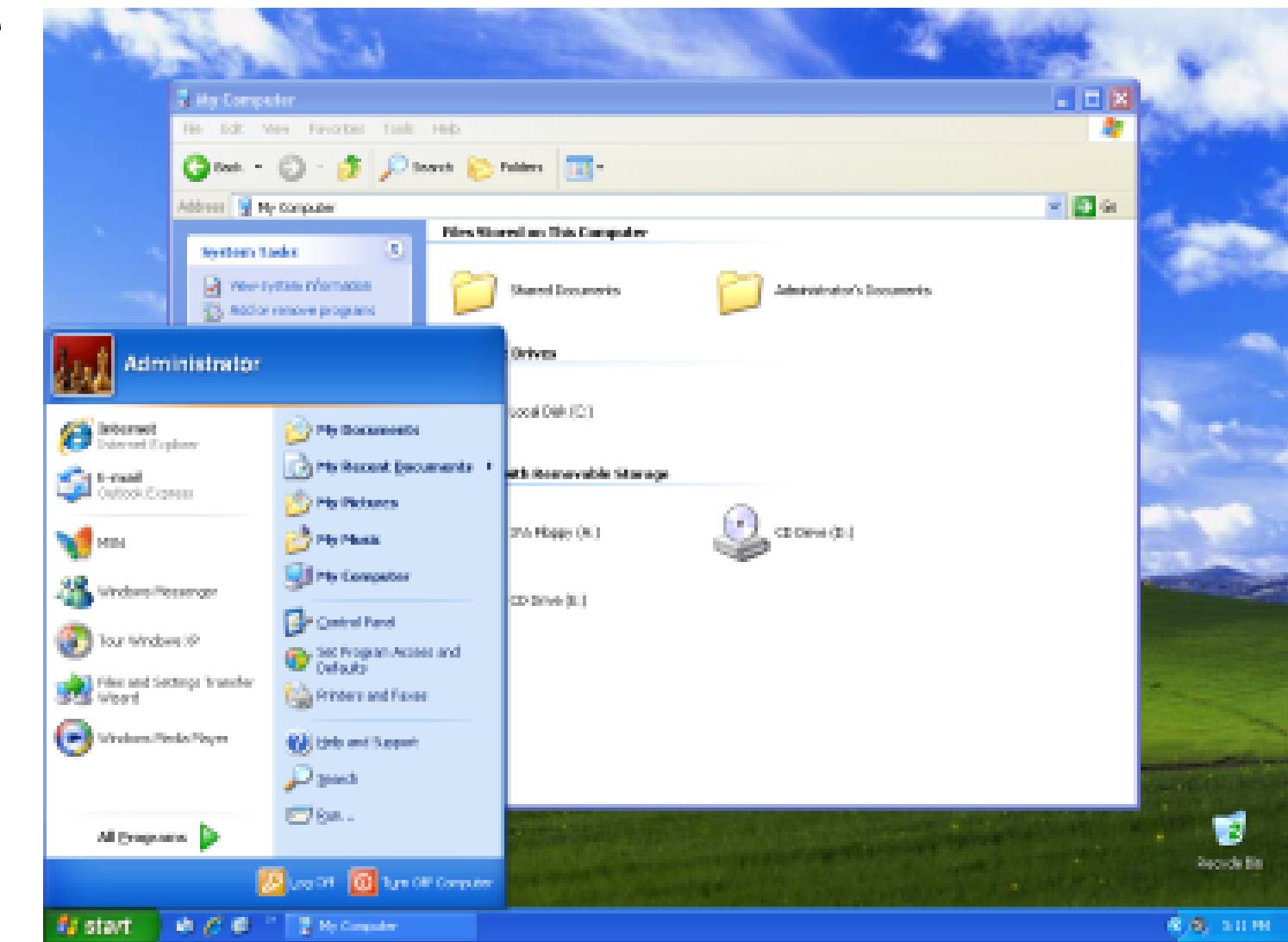


PAGES

Desktop/start up screen- The final desktop layout with all its different icons, text and specific content in place would be a page. This is the final stage in the design hierarchy. This is the interface users interact with and see all of their personal downloads or data.

Windows Explorer with Multiple Folders- A fully populated Windows Explorer window, with multiple folders open and files being moved or copied, represents a page. This page provides the user with a comprehensive view of their file system, along with the tools necessary to manage it.

Login Page- A functional login page where in the users enter in their name and other necessary information.



CONCEPTS OF INTERFACE DESIGN

CONSISTENCY

The home screen of the first-generation iPhone featured a consistent layout where **all app icons were uniform in style and size**.

This consistency made it easy for users to recognise and access their apps, regardless of which page they were on.

The uniformity of icon design and placement helped create a predictable and reliable interface, making navigation intuitive and reducing the learning curve.



All app icons were uniform
in style and size

HIERARCHY

On the iPhone's Settings page, the most important settings like **Wi-Fi, Bluetooth, and Airplane Mode were placed at the top, reflecting their priority.**

This hierarchy guided users to the most **critical controls first**, making it easier to navigate through the settings and quickly adjust essential functions.

By organising options according to their importance, the interface ensured that users could efficiently manage their device settings.



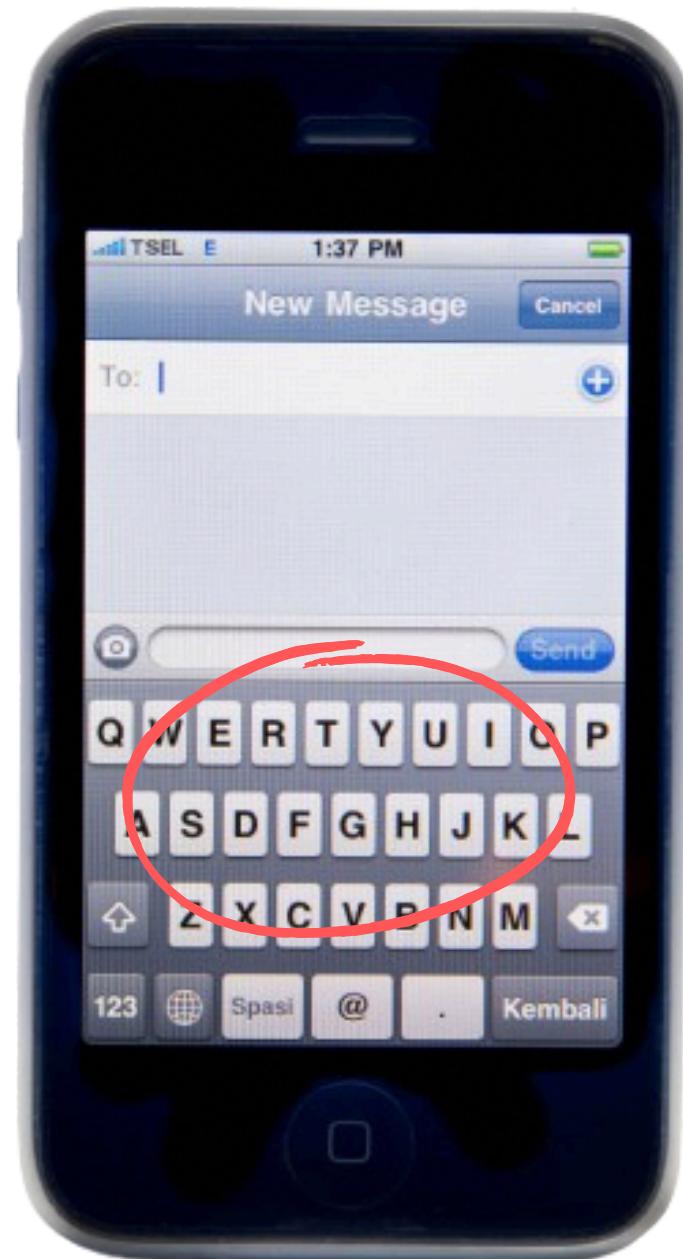
Important settings are on
the top

ACCESSIBILITY AND USABILITY

The first-generation iPhone's virtual keyboard featured large, well-spaced keys, making typing easy and accurate.

With **intelligent auto-correction and predictive text**, it helped users **type faster with fewer errors**.

The touch interface's tactile feedback and simple design made the keyboard accessible and user-friendly, enhancing overall usability.



Intelligent auto-correction
and predictive text

SIMPLICITY

Simplicity was key to the first-generation iPhone's design, making it user-friendly and accessible.

Apple removed unnecessary complexity, creating a clean, easy-to-navigate interface. The home screen featured a simple grid of icons, and the "**Slide to Unlock**" gesture streamlined unlocking. **Phone would be unlocked with just one swipe.**

Minimal steps within apps ensured tasks were easy to complete, allowing users to focus on their goals without being overwhelmed.

This focus on simplicity set a new standard for mobile device design and made technology more accessible to a wider audience.



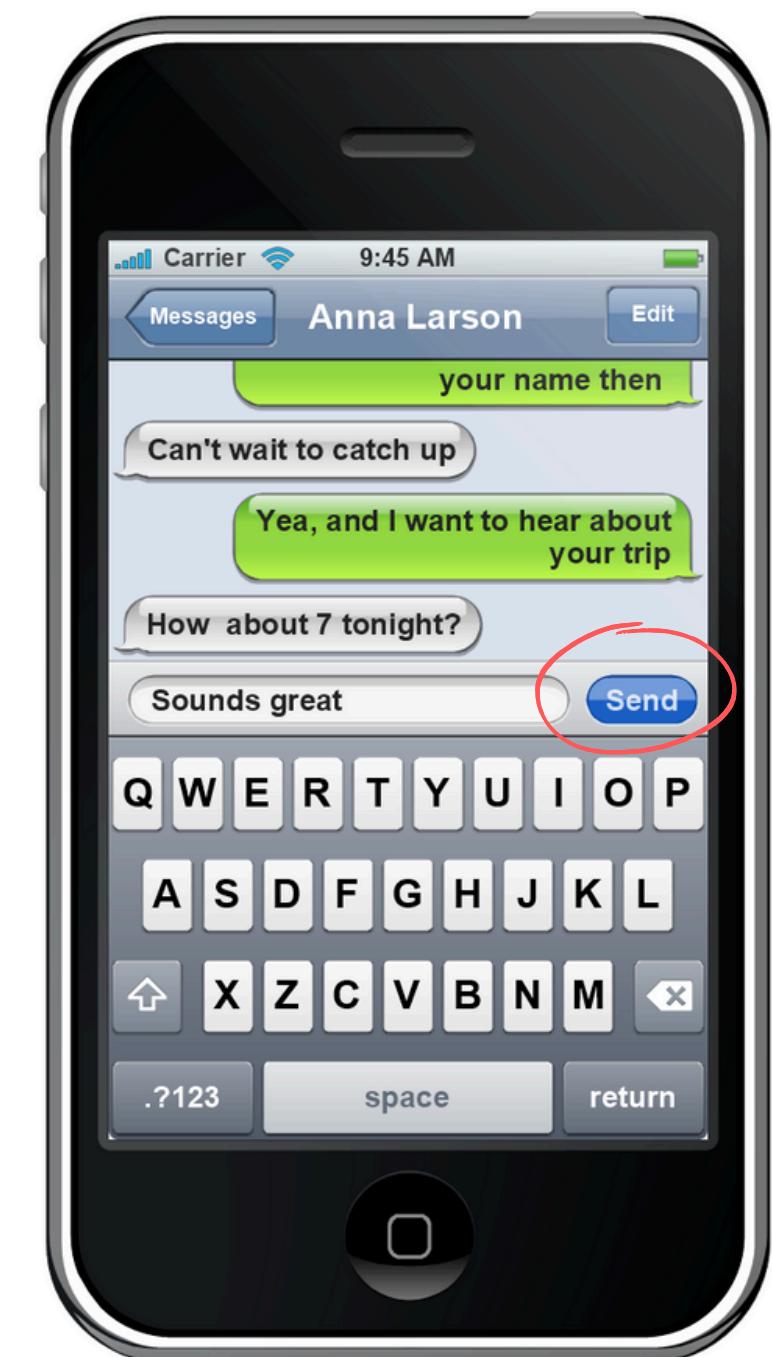
Unlocked with just one
swipe

PROXIMITY

In the Messages app, the **"Send" button is positioned directly next to the text input field.**

This close proximity allowed users to **easily send a message right after typing it**, without having to search for the send option elsewhere on the screen.

This design choice made the messaging process more efficient and user-friendly.



Send button is right next to the text

CONTRAST

The app icons placed in the **Dock at the bottom of the home screen** were given extra **visual emphasis** through **contrast**.

The Dock had a **semi-transparent, reflective background** that contrasted with the solid black background of the rest of the home screen.

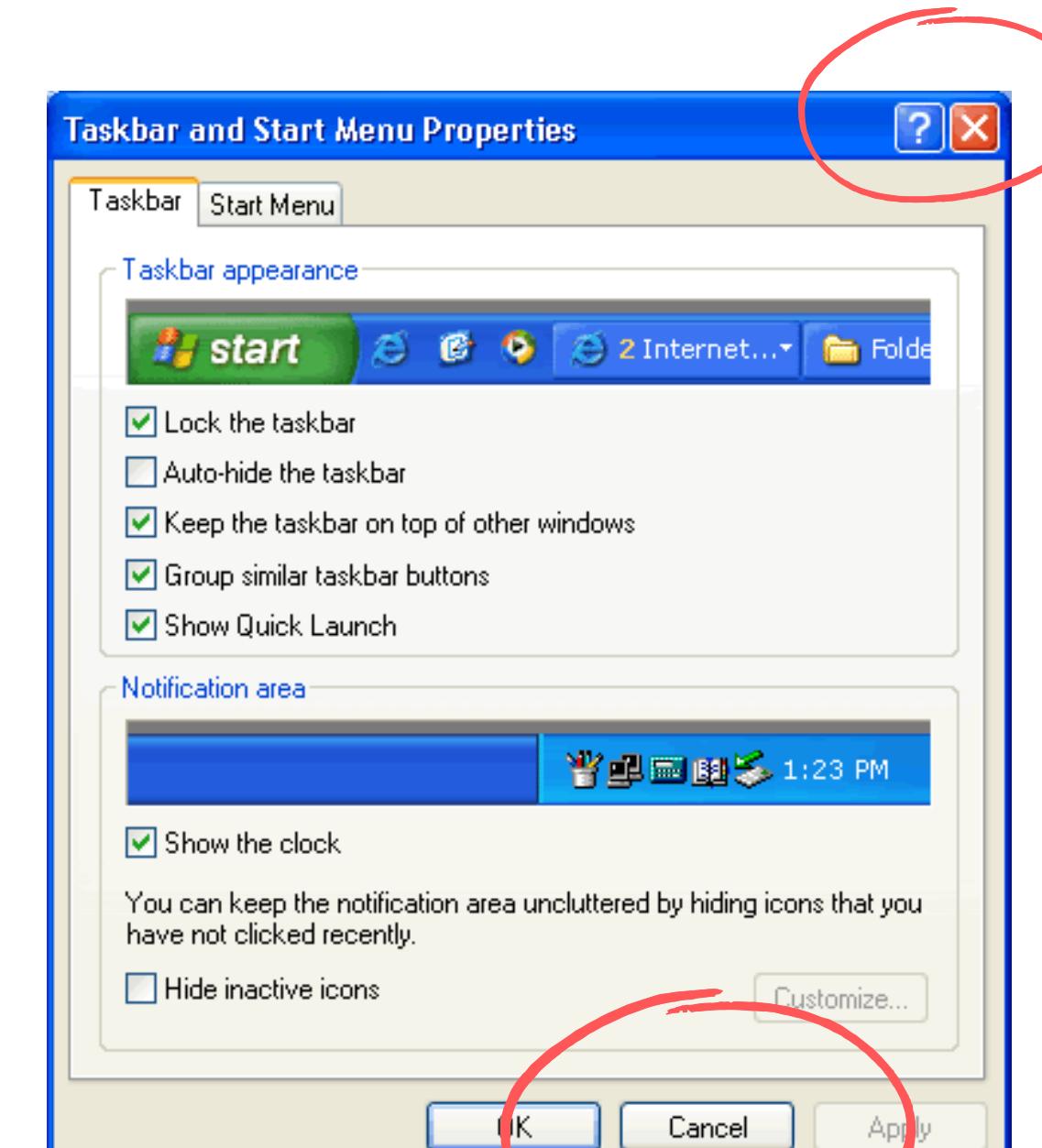
This made the Docked apps more prominent and easily accessible, reinforcing their importance as frequently used applications.



The dock has extra visual emphasis through contrast

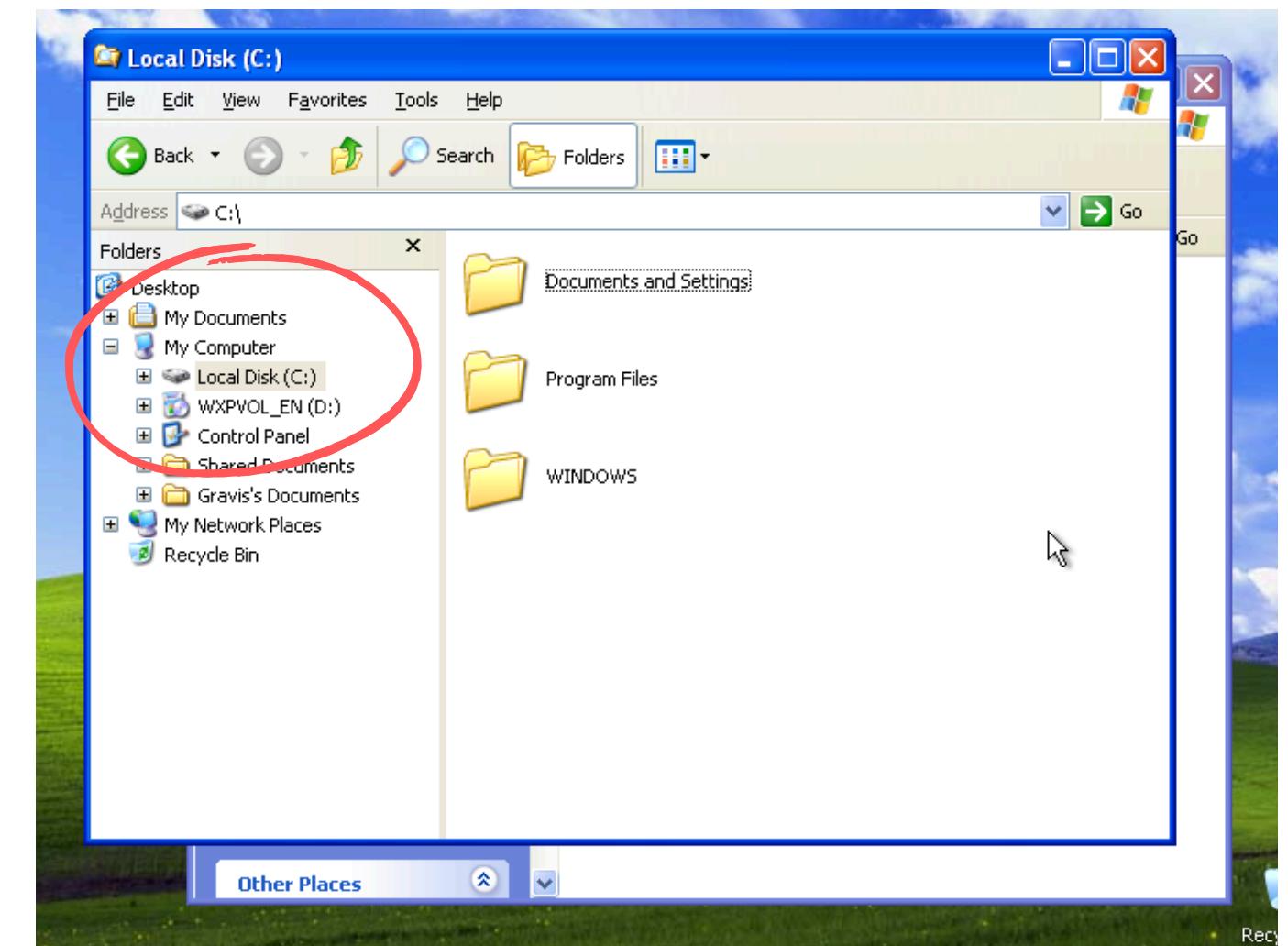
CONSISTENCY

Windows XP kept a consistent layout, making it easy for users to find what they needed. For example, the taskbar stayed in the same spot, and personal downloads were always easy to locate. In different settings menus, like display or network settings, the “cancel” and “apply” buttons, as well as the window controls, were always in the same place. This design allowed users to quickly learn and remember how to navigate the system, making it intuitive and reliable. The interface was created such that its layout would continue to function over time.



HIERARCHY

In file management, Windows Explorer used a hierarchical structure to display folders and files. The left-hand pane showed top-level folders like My Documents and My Computer at the top. This allowed users to easily navigate through their files, starting from broader categories and drilling down into more specific folders.



ACCESSIBILITY AND USABILITY

Skeuomorphism made Windows XP more accessible by using icons and visuals that closely resembled real-world objects. For example, the "Recycle Bin" icon looked like a trash can, which made it immediately recognizable and intuitive for users to understand its function. This visual similarity helped users, especially those less familiar with computers, easily grasp the purpose of different elements on the screen. This also enhanced usability by making interface elements behave as users would expect. For example, the volume control icon resembled a speaker, and adjusting the volume slider felt like physically moving a control on a real speaker.

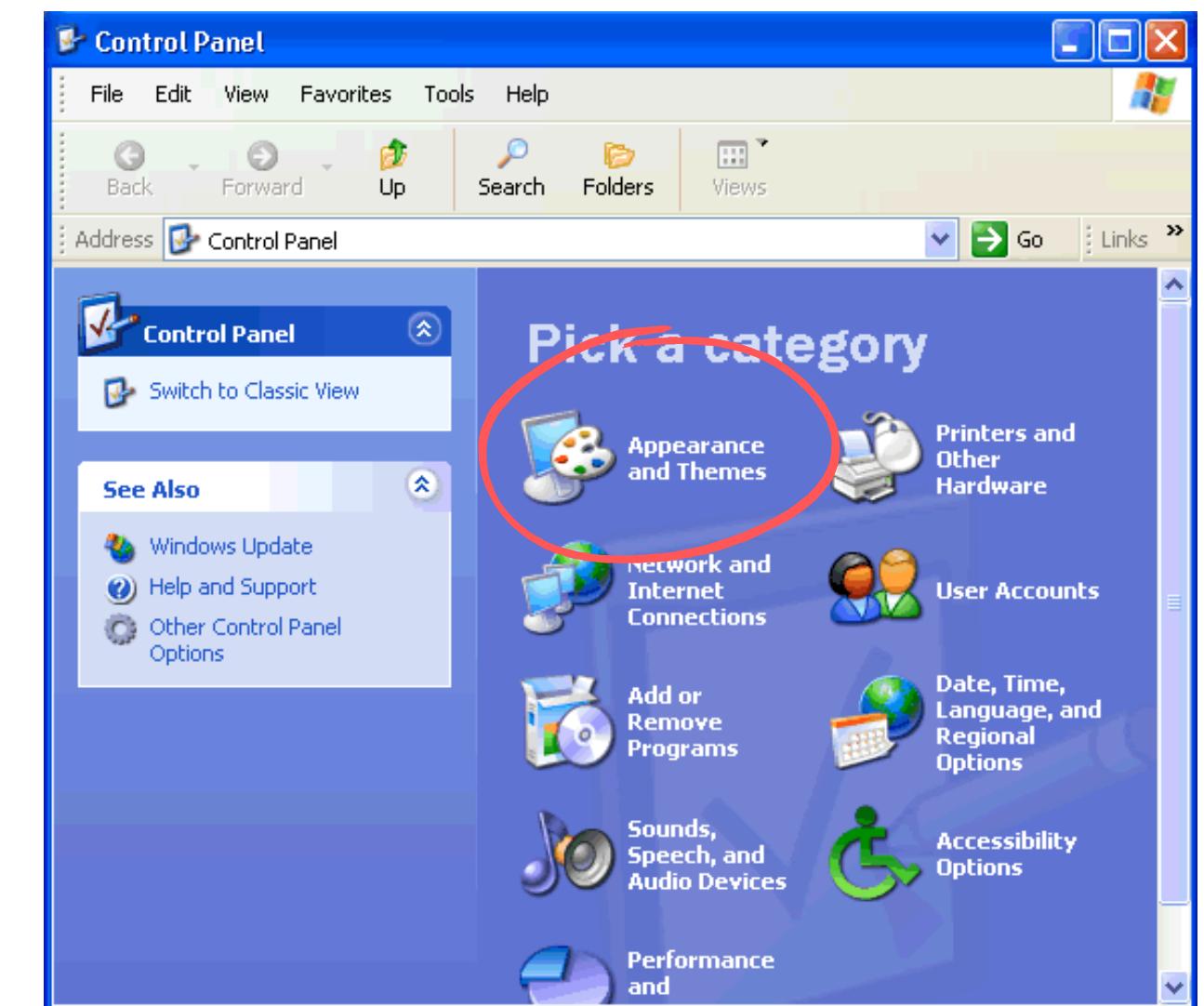
It also transitioned from an all gray OS to one that is vibrant, inviting users to use it and making the experience more pleasurable rather than business-like and intimidating.

When users encountered more complex tasks, Windows XP often provided wizards that guided them through the process step by step.



SIMPLICITY

Windows XP (2001) applied the principle of simplicity by designing interfaces that were straightforward and easy to understand. For example, the Control Panel in Windows XP introduced a category view, grouping related settings together under easy-to-understand headings like "Appearance and Themes" and "Network and Internet Connections." This organization reduced the complexity of navigating system settings, helping users find what they needed without getting overwhelmed by too many options at once.



PROXIMITY

The taskbar in Windows XP grouped open applications as buttons, keeping them close to one another for easy switching between tasks. The system tray, located on the right side of the taskbar, grouped system icons like volume control, network status, and time together. This proximity made it convenient for users to monitor system status and manage settings without navigating through multiple screens.

Left side of task bar



Right side of task bar



CONTRAST

The Luna theme in Windows XP featured bright, vibrant colors that contrasted with each other to create a visually distinct interface. For example, the taskbar was a deep blue, while the Start button was a bright green. This made the Start button stand out, drawing users' attention to it as the primary way to access programs and files.

Windows XP used contrast to differentiate active windows from inactive ones. The title bar of the active window was a deep blue, while inactive windows had a light blue title bar. This contrast made it easy for users to identify which window they were currently working in, reducing confusion when multiple windows were open.

