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HCLWK3

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1.

The primary input devices are the keyboard, mouse and sometimes a microphone. The keyboard allows text entry for login, note-taking and messaging in discussion forums, while the mouse enables quick navigation through menus and resources. The microphone supports voice input during live sessions, enhancing interactivity. On the output side, the computer screen provides a clear graphical user interface (GUI) where lecture slides, assignments, and feedback are displayed. Speakers or headphones deliver audio output, such as recorded lectures or real-time discussions. From a Human-Computer Interaction (HCI) perspective, these input/output devices directly affect usability. Accurate and responsive input devices reduce user frustration, while high-quality displays and audio outputs improve comprehension and engagement. By aligning interface design with effective device use, the web app enhances user experience, supporting accessibility, efficiency and learning outcomes.

2.

A touchscreen is a hybrid input and output device that plays a vital role in Human-Computer Interaction (HCI). It allows users to interact directly with digital content by touching icons, buttons, or gestures on the display, removing the need for separate input devices like a keyboard or mouse. As an output device, it provides visual feedback instantly, reinforcing user actions such as selections or swipes. Touchscreens improve usability through direct manipulation, making interfaces more intuitive and accessible, especially on mobile devices. Their role in HCI emphasizes natural interaction, efficiency, and accessibility for diverse user groups

3.

In developing a touch-based interface prototype in Figma, I focused on applying usability principles to improve user interaction. The design included large, clearly labeled buttons to make finger-based input accurate and reduce mistakes. Icons and text were kept consistent to help users navigate without confusion. I also added visual feedback, such as color changes when buttons are tapped, to confirm user actions. The layout was designed to be simple,

with minimal scrolling, so users could access features quickly. This practice showed that touch interfaces must emphasize clarity, responsiveness, and accessibility for an effective user experience.

4.

The diagram shows a simple input/output interaction using a computer system. The keyboard is the input device, allowing the user to enter commands, text, or data into the system. These signals are processed by the computer, and the results are displayed on the monitor, which serves as the output device. This interaction highlights the basic Human-Computer Interaction (HCI) cycle, where user input is transformed into system feedback. The clarity and responsiveness of both input and output devices directly affect usability. A reliable keyboard and a high-resolution monitor ensure efficiency, accuracy, and a smoother overall user experience.

KEYBOARD → CPU → MINITOR