

- A button inscribed with a minus (-) collapses the outline

4 Write a note of the following

iTrack ball

Several specific tasks are performed using graphical systems.

- To point at an object on the screen.
- To select the object or identify it as the focus of attention.
- To drag an object across the screen.
- To draw something free form on the screen.
- To track or follow a moving object.
- To orient or position an object.
- To enter or manipulate data or information.
- Description:
 - — A spherical object (ball) that rotates freely in all directions in its socket.
 - — Direction and speed is tracked and translated into cursor movement.
 - ■ Advantages: — Direct relationship between hand and pointer movement in terms of direction and speed.
 - — Does not obscure vision of screen.
 - — Does not require additional desk space (if mounted on keyboard).

ii. Joystick

CO3

10

L2

Description:

- A stick or bat-shaped device anchored at the bottom.
- Variable in size, smaller ones being operated by fingers, larger ones requiring the whole hand.
- Variable in cursor direction movement method, force joysticks respond to pressure; movable ones respond to movement.
- Variable in degree of movement allowed, from horizontal-vertical only to continuous.
- Advantages:
 - Direct relationship between hand and pointer movement in terms of direction.
 - Does not obscure vision of screen.
 - Does not require additional desk space (if mounted on keyboard).

5 Illustrate the Heuristic Evaluation Process in detail along with a list of research-based set of heuristics.

CO3

10

L3

Description:

- A detailed evaluation of a system by interface design specialists to identify problems.
- Advantages: — Easy to do.
- Relatively low cost.
- Does not waste user's time.
- Can identify many problems.
- Disadvantages:
 - Evaluators must possess interface design expertise.
 - Evaluators may not possess an adequate understanding of the tasks and user communities.
 - Difficult to identify system wide structural problems.
 - Difficult to uncover missing exits and interface elements.
 - Difficult to identify the most important problems among all problems uncovered.
 - Does not provide any systematic way to generate solutions to the problems uncovered

6 Explain the purpose of prototypes. Discuss any two kinds of prototypes with their importance to the system developers.

CO2

10

L2

Hand Sketches and Scenarios

■ **Description:** — Screen sketches created by hand or a drawing package.

— Focus is on the design, not the interface mechanics.

— A low-fidelity prototype.

■ **Advantages:** — Can be used very early in the development process.

— Suited for use by entire design team.

— No large investment of time and cost.

— No programming skill needed.

— Easily portable

Interactive Paper Prototypes

Description:

— Interface components (menus, windows, and screens) constructed of common paper technologies

(Post-it notes, transparencies, and so on).

— The components are manually manipulated to reflect the dynamics of the software.

— A low-fidelity prototype. ■ **Advantages:**

— More illustrative of program dynamics than sketches.

— Can be used to demonstrate the interaction.

— Otherwise, generally the same as for hand-drawn sketches and scenarios.