MODULE 5 QB

-PP

1) What are operable controls? Explain Usage of buttons along with their advantages and disadvantages.

Ans) Operable controls are those that permit the entry, selection, changing or editing of a particular value, or cause a command to be performed.

Proper usage of Buttons:

Use for frequently used actions that are specific to a window:

- To start actions.
- To change properties.
- To display a pop-up menu.
- To cause something to happen immediately.
- To display another window.
- To display a menu of options.
- To set a mode or property value.

Advantages:

- Always visible, reminding one of the choices available.
- Easy to use and can be logically organized in the work area.
- Can provide meaningful descriptions of the actions that will be performed.
- Selection is faster if size is large.
- Can possess 3-D appearance(pleasing style to the screen).
- May permit use of keyboard equivalents and accelerators.
- Faster than using a two-step menu bar/pull-down sequence.

Disadvantages:

- Consumes screen space.
- Size limits the number that may be displayed.
- Requires looking away from main working area to activate.
- Requires moving the pointer to select.

2) Explain the following controls with an example for each:

a. Radio buttons

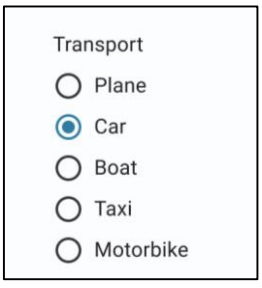
Ans)

Description:

- Radio box permits selection of only one option.

A two-part control consisting of the following:

- Small circles, diamonds, or rectangles.
- Choice descriptions



When a choice is selected:

- The option is highlighted.
- Rest other choices are unhighlighted and deselected.

Advantages:

- They provide Easy-to-access choices and Easy-to-compare choices.
- They are preferred by users.

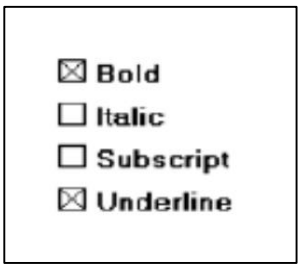
Disadvantages:

- Consume screen space
- Limited number of choices.

b. Check Boxes

Ans)

Description:



- Check box permits selection of more than one option.
- Each box can be:
  - Switched on or off independently.
  - Used alone or grouped in sets.

Advantages:

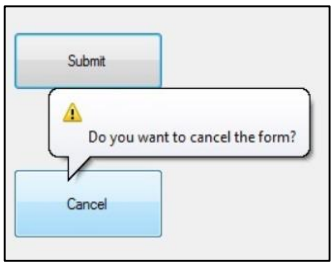
- They provide Easy-to-access choices and Easy-to-compare choices.
- They are preferred by users.

Disadvantages:

- Consume screen space.
- Provide limited number of choices.
- Single check boxes are difficult to align with other screen controls.

c. Tool tips

Ans) Tooltips are short information messages that become visible when users hover over a particular screen element.



Advantages:

- Provides information for unlabeled icons.
- It explains complex features.

Disadvantages:

- It may be redundant and distracting.

d. Progress indicators

Ans)

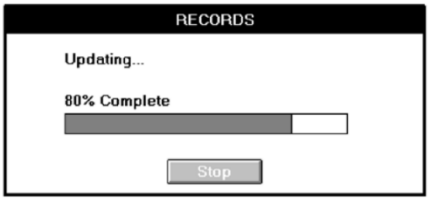
Description:

- A rectangular bar that indicating the percentage of the process that has been completed.

Purpose:

- To provide feedback concerning the completion of a lengthy operation.

Guidelines:



- Fill it with a color or a shade of gray.
- Place text outside of the control.

e. Sample boxes

Ans)

Description:

- A box illustrating what will show up on the screen based upon the parameter or parameters selected.
- May include text, graphics, or both.

Purpose:

- To provide a representation of actual screen content based upon the parameter or parameters selected.

Guidelines:

- Include a brief label.
- Locate it adjacent to the controls upon which it is dependent.

3) Write a note on think-Aloud-Evaluations and Usability test.

Ans)

Think-Aloud Evaluations:

Description:

- Users perform specific tasks while thinking out load.
- Comments are recorded and analyzed.

Advantages:

- Makes use of actual representative tasks.
- Provides better understanding for the user's reasoning.

Disadvantages:

- May be difficult to get users to think out loud.

Guidelines:

- Develop:
  - Several core or representative tasks.
  - Tasks of particular concern.
- Limit session to 60 to 90 minutes.

Usability Test:

Description:

- An interface evaluation under real-world or controlled conditions.
- Measures of performance are derived for specific tasks.
- Problems are identified.

Advantages:

- Utilizes an actual work environment.
- Identifies serious or recurring problems.

Disadvantages:

- Facilities are expensive.
- Requires a test conductor with user interface expertise.
- Poorly suited for detecting inconsistency problems.

4) Explain Cognitive Walkthroughs and Heuristic Evaluation tests conducted in user interface design.

Ans)

Cognitive Walkthroughs:

Description:

- Takes the reviews of the interface in which the users perform.
- The user's goals and assumptions must also be clearly defined before the walkthrough is performed.

Advantages:

- Allow a clear evaluation of the task flow early in the design process.
- Do not require a functioning prototype.
- Low cost.
- Can be used to evaluate alternate solutions and can be performed by developers.
- More structured than a heuristic evaluation.

Disadvantages:

- Slow performance.
- May miss inconsistencies and general and recurring problems.

Guidelines:

- Start with simple tasks.
- Don't get stuck while finding solutions.
- Limit session to 60 to 90 minutes.

Heuristic Evaluation test process:

Preparing the session:

- Select evaluators and prepare a project overview and a checklist of heuristics.
- Provide briefing to evaluators to:
  - Review the purpose of the evaluation session and preview the evaluation process.
  - Present the project overview and heuristics.
  - Answer any evaluator questions and provide any special evaluator training that may be necessary.

Conducting the session

- Have each evaluator to review the system alone.
- The evaluator should:
  - Establish own process or method of reviewing the system.
  - Provide usage scenarios, if necessary.
  - Identify any other relevant problems or issues.
  - Make at least two passes through the system.

- Detected problems should be related to the specific heuristics they violate.
- Comments are recorded either by the evaluator or an observer.
- The observer may answer questions and provide hints.
- Restrict the length of the session to not more than 2 hours.

After the session:

- This session includes observers and design team members where:
  - Each evaluator presents problems detected and the heuristic it violated.
  - Design suggestions for improving those problems that are discussed.

After the debriefing session:

- Here, ratings are given to the composite list of violation.
- Request evaluators to assign their ratings to each violation.
- Analyze results and establish a program to correct these violations and deficiencies.

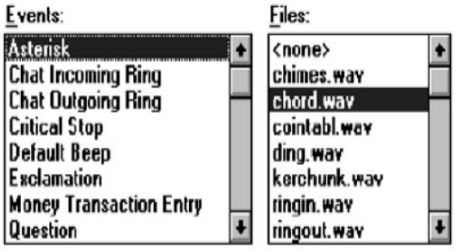
5) Define selection control. Briefly explain List Boxes and List view controls.

Ans) A selection control provides all the possible alternatives, conditions or choices that may exist for an entity, property or value, on the screen.

List Boxes:

Description:

- A permanently displayed box-shaped control containing a list of attributes or objects from which a single or multiple selections can be made.
- The choice may be text, pictorial representations or graphics.
- Selections are made by using a mouse to point and click.
- Capable of being scrolled to view large lists of choices.
- No text entry field exists here.



Advantages:

- They can provide unlimited number of choices.
- They remind users of available options.
- They are always visible.

Disadvantages:

- They consume screen space.
- They often need to be scrolled to see all list choices.
- The list may be ordered in an unpredictable way, making it hard to find items.

List View Controls:

Description

- A special extended-selection list box that displays a collection of items, consisting of an icon and a label.

- The contents can be displayed in four different views:
  - **Large Icon:** Items appear as a full-sized icon with a label below.
  - **Small Icon:** Items appear as a small icon with label to the right.
  - **List:** Items appear as a small icon with label to the right. Arrayed in a columnar, sorted layout.
  - **Report:** Items appear as a line in a multicolumn format.

Purpose and usage:

- Where the representation of objects as icons is appropriate.
- To represent items with multiple columns of information.

6) List all and explain any three presentation controls.

Ans)

1) Static Text Fields

2) Group Boxes

3) Column Headings

4) ToolTips

5) Balloon Tips

6) Progress Indicators

7) Sample Box

8) Scrolling Tickers

ToolTips:

Description:

A small pop-up window providing an additional descriptive or status information that appears when a pointer is moved over a control or element.

Purpose: To provide descriptive information about a control or screen element.

Advantages:

- Identifies an unidentified control/element.
- Enables control size to be reduced.

Disadvantages:

- Not obvious, must be discovered.
- Unnecessary appearance can be distracting.

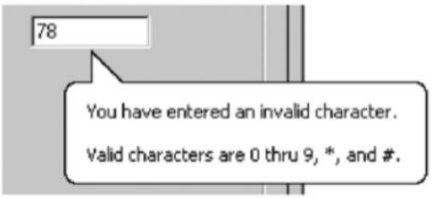
Proper usage:

- To identify a control that has no caption.
- To provide additional descriptive or status information about a screen element.

Balloon Tips:

Description:

- A small pop-up window that contains information in a word balloon.
- Components can include - Title, Body text and Message Icons.
- Appear adjacent to the item to which they apply, generally above or to left.
- Tips are removed after a specified time period.



Purpose: To provide additional descriptive or status information about a screen element.

Advantage:

- Provides useful reminder and status information.

Disadvantages:

- If overused they lose their attention-getting value.
- If overused in situations the user considers not very important.

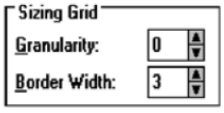
Group Boxes:

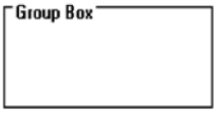
Description:

- A rectangular frame that surrounds a control or group of controls.
- An optional caption may be included in the frame's upper-left corner.

Purpose:

- To visually relate the elements of a control.
- To visually relate a group of related controls.





Proper usage:

- To provide a border around radio button or check box controls.
- To provide a border around two or more functionally related controls.

Guidelines:

Label or heading:

- Typically, use a noun or noun phrase for the label or heading.
- Let heading be of one or two words.
- Relate label or heading's content to the group box's content.
- Capitalize the first letter of each significant word.
- Do not include a colon (:) at the end.

7) Explain the purpose of prototypes. Discuss any two types of prototypes with their importance to system developers.

Ans)

- A prototype is primarily a vehicle for exploration, communication and evaluation.
- Its purpose is to obtain user input in design and to provide feedback to designers.
- A prototype is a simulation of an actual system that can be quickly created.

- A prototype may be a rough approximation, such as a simple hand-drawn sketch or it may be interactive.
- A prototype may include as many features as possible to present concepts and overall organization.
- Some of the types of prototypes are:
  1) Hand Sketches and Scenarios
  2) Interactive Paper Prototypes
  3) Programmed Facades
  4) Prototype-Oriented Languages

Hand Sketches and Scenarios:

Description:

- Screen sketches created by hand.
- Focus is on the design, not the interface mechanics.
- A low-fidelity prototype.

Advantages:

- Can be used very early in the development process.
- No large investment of time and cost.
- No programming skill needed.
- Easily portable.
- Fast to modify and iterate.
- Can be used to define requirements.

Disadvantages:

- Only a rough approximation.
- Limited in providing an understanding of navigation and flow.
- A demonstration, not an exercise.
- Limited usefulness for a usability test.
- A poor detailed specification for writing the code.
- Driven by a facilitator, not the user.
- Usually restricted to most common tasks.

Interactive Paper Prototypes

Description:

- Interface components (menus, windows and screens) constructed of common paper technologies.
- 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.
- Generally, same as for hand-drawn sketches and scenarios.

Disadvantages:

- Only a rough approximation.
- A demonstration, not an exercise.
- Driven by a facilitator, not the user.
- Limited usefulness for usability testing

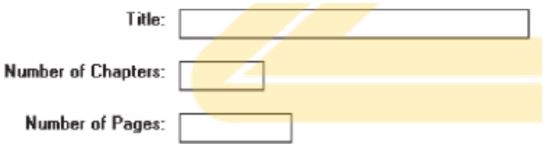
8) Explain the following.
i) Text-box

Ans)

- A control, usually rectangular in shape, in which:
  - Text may be entered or edited. It may also be referred to as an edit control.
  - Text may be displayed for read-only purposes. It is also referred to as an display field.
- Two types of text boxes exist, Single-Line and Multiple-Line Text Boxes.

Purpose:

- To permit the display, entering, or editing of textual information.
- To display read-only information.



Advantages:

- They are very flexible.
- They are much familiar.
- They consume little screen space.

Disadvantages:

- They require the use of typewriter keyboard.
- They require user to remember what must be keyed.

ii) Caption

Ans)
Structure and size:

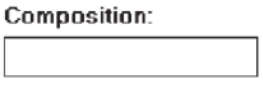
- Provide a descriptive caption to identify the kind of information to be typed within the text box.
- Use a mixed-case font.
- Display the caption in normal intensity or in a color of moderate brightness.

Formatting:

Single fields:

- Position the field caption to the left of the text box.
  - Place a colon (:) immediately following the caption.
  - Separate the colon from the text box by one space.

- Alternately, the caption may be placed above the text box.
  - Place a colon (:) immediately following the caption.
  - Position above the upper-left corner of the box.



Multiple occurrence fields:

- For entry/modification text boxes.
- Position the caption left-justified one line above the column of entry fields.