

SCREEN – BASED CONTROL

Agenda

- ▶ Mengidentifikasi karakteristik dan kemampuan dari berbagai layar kontrol
- ▶ Memilih kontrol yang tepat bagi pengguna dan tugasnya

Screen Control

- ▶ Sometimes called ‘widgets’
- ▶ Widgets: the elements of a screen that constitute its body.
- ▶ Definition: objek grafis yang mewakili sifat atau operasi dari objek lain
- ▶ Functions:
 - Mengizinkan masuk atau pemilihan nilai tertentu
 - Mengizinkan perubahan atau penyuntingan suatu nilai tertentu
 - Menampilkan hanya bagian tertentu dari teks, nilai, atau grafis
 - Suatu perintah yang harus dilakukan
 - Memiliki jendela pop-up kontekstual

Three Extremely Important Principles

- A control must:
 - Look the way it works
 - Work the way it looks

“Look” → “enter-ability” or “click-ability”
- Used exactly as its design intended
- Presented in a standard manner

Example:

- Windows XP:
 - Raised elements can be pressed
 - Recessed elements can not be pressed
 - Elements on a flat white background can be opened, edited, or moved.

Operable Controls

- ▶ ... are those that permit:
 - Entry
 - Selection
 - Changing
 - Editing
 - Cause a command to be performed
- ▶ Here are the classes... (next slide)

1 – Operable Buttons

▶ Description

- Suatu pengendalian persegi atau berbentuk persegi panjang dengan label di dalam yang menunjukkan tindakan yang harus diselesaikan
- Label dapat terdiri dari teks, grafis, atau keduanya

▶ Purpose

- To start actions
- To change properties
- To display a pop-up menu

▶ There are two kinds:



Command buttons



Toolbar buttons

1 – Operable Buttons

► Keuntungan

- Selalu terlihat, mengingat salah satu pilihan yang tersedia
- Mudah
- Dapat diselenggarakan secara logis dalam pekerjaan daerah
- Dapat memberikan gambaran yang berarti dari tindakan yang akan dilakukan
- ukuran lebih besar biasanya memberikan target seleksi lebih cepat
- Dapat memiliki penampilan 3-D
 - Menambah gaya estetis menyenangkan untuk layar
 - Menyediakan umpan balik visual melalui gerakan tombol bila diaktifkan
- Dapat mengizinkan penggunaan keyboard dan akselerator setara
- Lebih cepat daripada menggunakan menu bar dua langkah / urutan pull-down

• Kekurangan

- Menghabiskan ruang layar
- Ukuran membatasi jumlah yang dapat ditampilkan
- Membutuhkan berpaling dari wilayah kerja utama untuk mengaktifkan
- Membutuhkan memindahkan pointer untuk memilih

1 – Operable Buttons

- ▶ To a window:
 - To cause something to happen immediately
 - To display another window
 - To display a menu of options
 - To set a mode or property value
- ▶ In a web
 - Use links to show information
- Things to consider:
 - Usage
 - Structure
 - Labels
 - Size
 - Number
 - Location & layout
 - Organization
 - Intent indicators
 - Expansion buttons
 - Default
 - Keyboard equivalent / accelerators
 - Button activation

2 – Text Entry / Read only controls

- Usually referred as “*field*” or “*text-box*”
 - *Unprotected*: a text box into which information can be keyed
 - *Protected*: A text box used for display purposes only
- Description
 - Usually rectangular in shape
 - Usually possesses a caption or label describing the kind of information contained within it
 - Two types exist
 - Single-line
 - Multiple-line
 - When first displayed, the box may be blank or contain an initial value
- Purpose
 - To permit the display, entering, or editing of textual information
 - To display read-only information

2 – Text Entry / Read only controls

- Advantages
 - Very flexible
 - Familiar
 - Consumes little screen space
- Disadvantages
 - Requires use of typewriter keyboard.
 - Requires user to remember what must be keyed
- Proper usage
 - Most useful for data that is
 - Unlimited in scope
 - Difficult to categorize
 - Of a variety of different lengths
 - When using a selection list is not possible

2 – Text Entry / Read only controls

Single occurrence

Composition:

Or

Composition:

Multiple occurrence

Offices:

Read-only / display

Location:

Alice Springs
Kakadu National Park
Traralgon
Wagga Wagga
Whyalla

If alphanumeric then
left justify

Balances:

12,642,123.05
53.98
355,125.44
199.13
612.01

If numeric then right
justify

Segmentation

Date:

Telephone:

Or

Date: / /

Telephone: () -

3 – Selection Controls

- ▶ Presents on the screen all the possible alternatives, conditions, or choices that may exist for an entity, property, or value
- ▶ Types
 - Radio button
 - Check box
 - Palette
 - List box
 - List view control
 - Drop-down / Pop-up list box

The diagram shows two examples of selection controls. On the left, a vertical list of four radio buttons is enclosed in a box, with labels 'Red', 'Yellow', 'Green', and 'Blue' next to each. To the right of this box is the word 'Or'. To the right of 'Or' is a horizontal list of four radio buttons enclosed in a box, with labels 'Green', 'Blue', 'Yellow', and 'Red' next to each.

3 – Selection Controls: Radio button

“Only one selection permitted”

Poor Plan Choice: ☐ Limited ☐ Basic ☐ Superior ☐ Premium

Poor Plan Choice: Limited Basic Superior Premium
 ☐ ☐ ☐ ☐

Poor Plan Choice: ☐ Limited ☐ Basic ☐ Superior ☐ Premium

Poor Plan Choice: Limited ☐ Basic ☐ Superior ☐ Premium ☐

Better

Plan Choice: ☐ Limited ☐ Basic ☐ Superior ☐ Premium

3 – Selection Controls: Radio button

Still better

Plan Choice: ☐ Limited
☐ Basic
☐ Superior
☐ Premium

Plan Choice: ☐ Limited
☐ Basic
☐ Superior
☐ Premium

Plan Choice: ☐ Limited ☐ Basic ☐ Superior ☐ Premium

Best !

Plan Choice: ☐ Limited
☐ Basic
☐ Superior
☐ Premium

Plan Choice: ☐ Limited
☐ Basic
☐ Superior
☐ Premium

Color: ☐ Green ☐ Blue ☐ Yellow ☒ Red

3 – Selection Controls: Check box

“Use for multiple selection”

- ☒ Bold
- ☐ Italic
- ☐ Subscript
- ☒ Underline

- ☒ Bold
- ☐ Italic
- ☐ Underline

- ☐ Always Create Backup Copy
- ☒ Allow Fast Saves
- ☐ Prompt for Document Properties
- ☐ Prompt to Save Normal Template
- ☐ Save Native Picture Formats Only
- ☐ Embed TrueType Fonts
- ☐ Save Data Only for Forms
- ☒ Automatic Save Every:

Earnings:

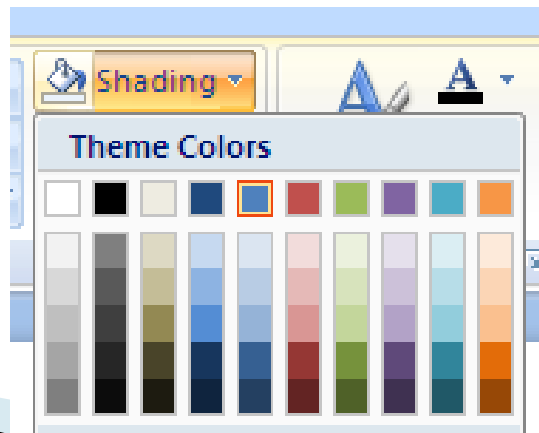
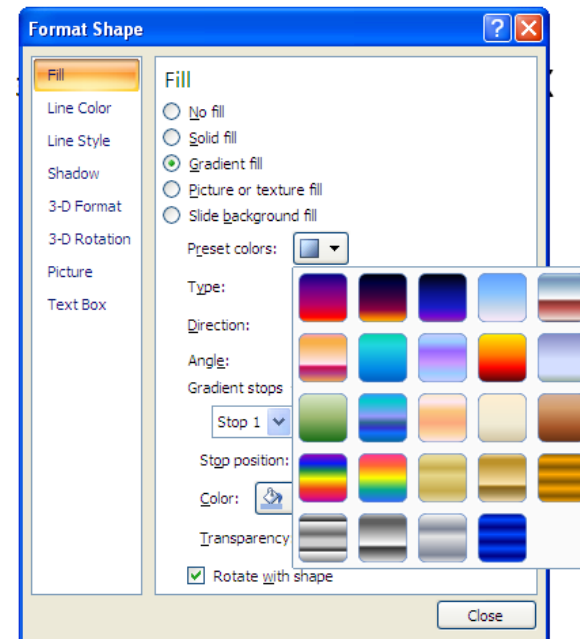
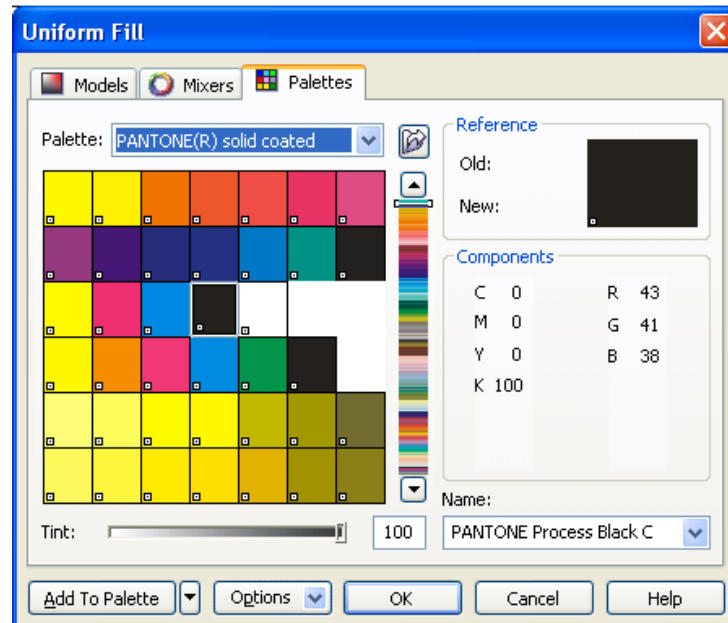
- ☐ Annual
- ☐ Quarterly
- ☐ Monthly
- ☐ Weekly

Earnings

- ☐ Annual
- ☐ Quarterly
- ☐ Monthly
- ☐ Weekly

Best !

3 – Selection Controls: Palette



3 – Selection Controls: List box

Events:

- Asterisk
- Chat Incoming Ring
- Chat Outgoing Ring
- Critical Stop
- Default Beep
- Exclamation
- Money Transaction Entry
- Question

Files:

- <none>
- chimes.wav
- chord.wav
- cointabl.wav
- ding.wav
- kerchunk.wav
- ringin.wav
- ringout.wav

List box with multiple selection

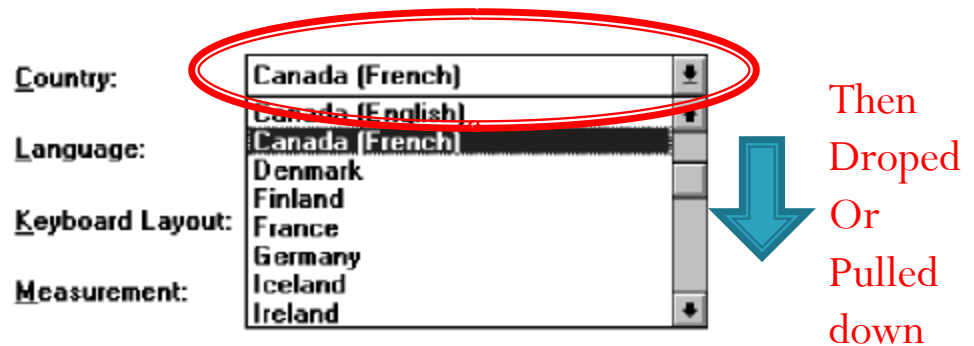
Groceries:

4

selected

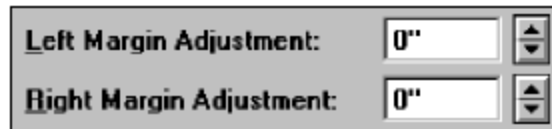
- ☒ Bread
- ☐ Cereal
- ☒ Dairy Foods
- ☐ Desserts
- ☐ Drinks
- ☐ Fruit
- ☒ Meat, Fish and Poultry
- ☐ Vegetables

3 – Selection Controls: Drop Down/Pull-down



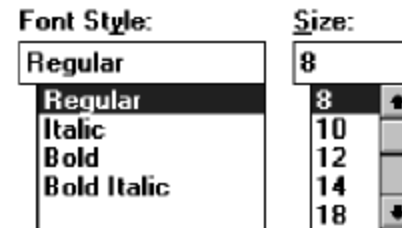
Combination Entry/Selection Controls

Spin boxes



Left Margin Adjustment: 0" [up/down arrows]
Right Margin Adjustment: 0" [up/down arrows]

Combo boxes



Font Style: Regular
Size: 8

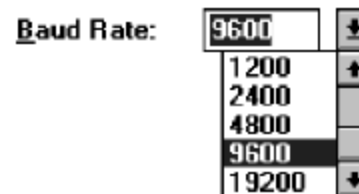
Regular	8
Italic	10
Bold	12
Bold Italic	14
	18

Combo box - Closed



Baud Rate: 9600 [up/down arrows]

Combo box - Opened

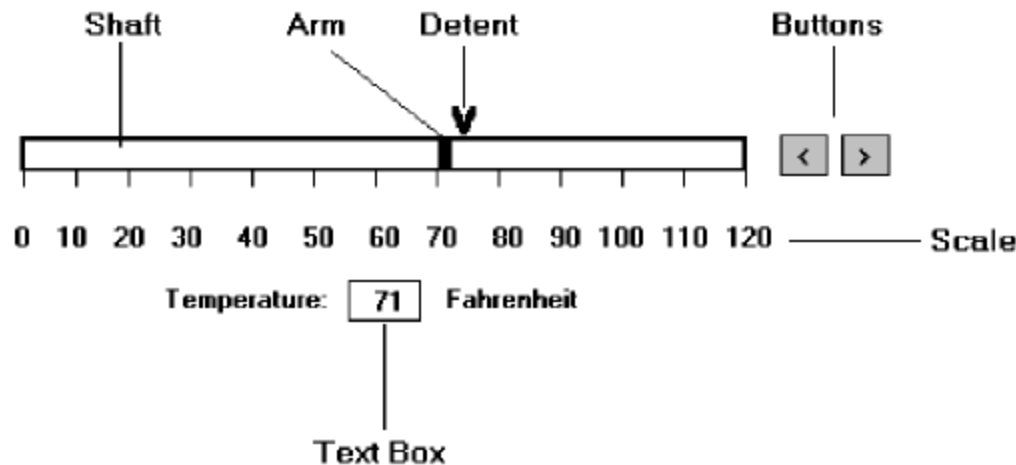


Baud Rate: 9600 [up/down arrows]

1200
2400
4800
9600
19200

Other Operable Controls

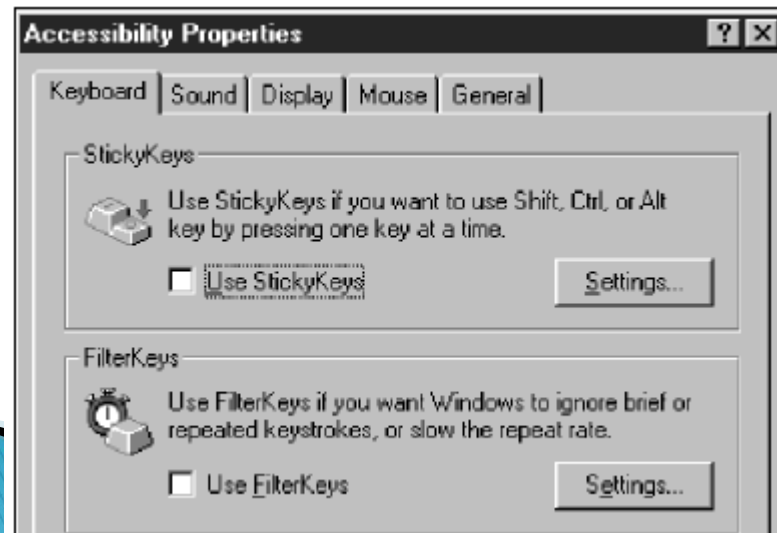
Slider



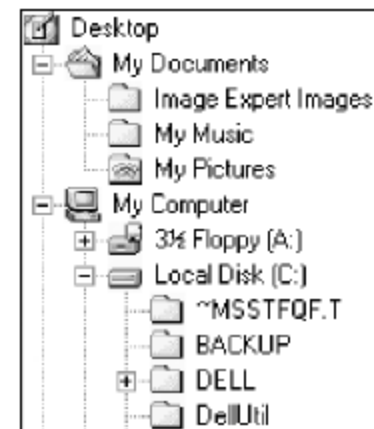
Date picker



Tabs

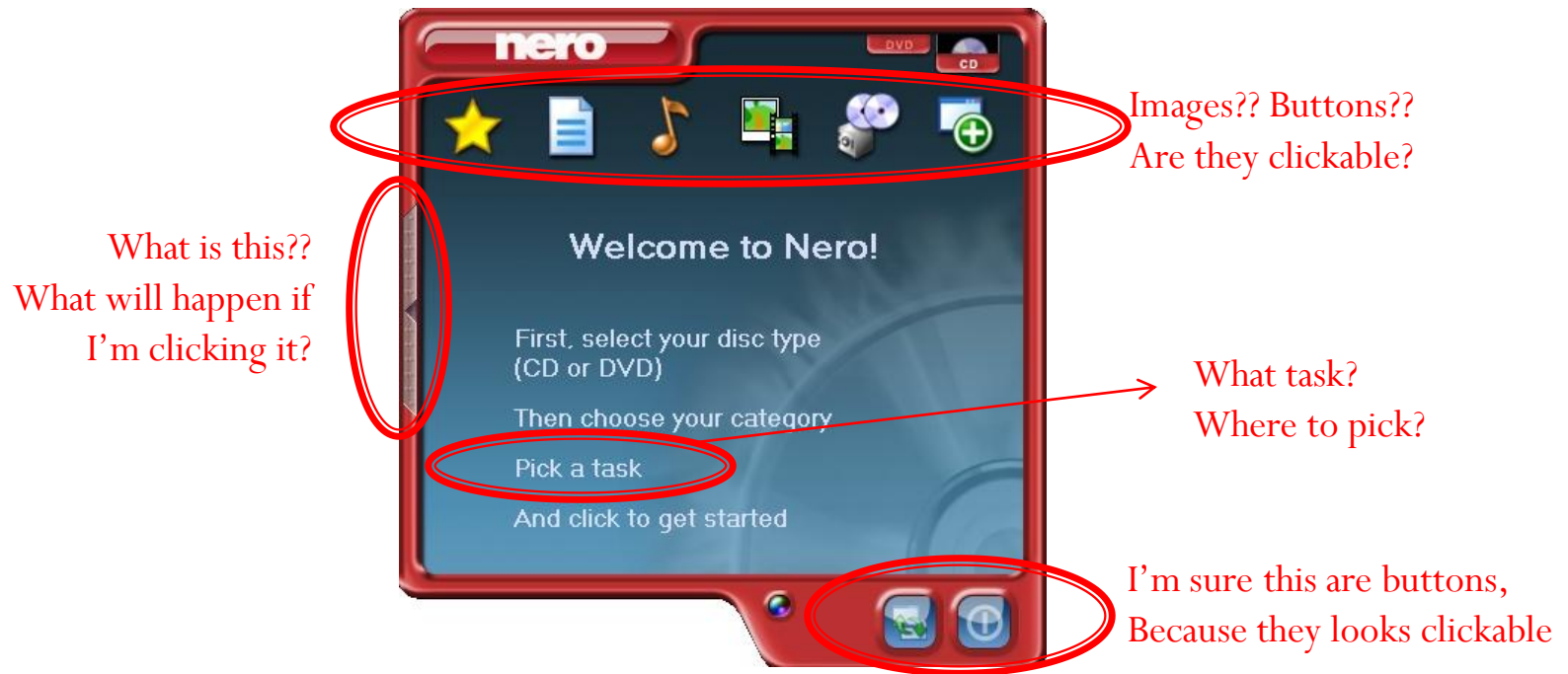


Tree view



Custom Controls

- ▶ Implement custom controls with caution
- ▶ The addition of custom controls adds to this learning and increases system complexity



Presentation Controls

- ▶ Teks statis bidang: informasi read-only tekstual
- ▶ kotak Group: bingkai persegi panjang yang mengelilingi kontrol atau kelompok kontrol; keterangan opsional dapat disertakan.
- ▶ Kolom judul: informasi tekstual read-only yang berfungsi sebagai judul di atas kolom teks atau angka
- ▶ Alat ujung / balon tip: jendela pop-up kecil yang berisi informasi; bisa ditempatkan di balon

Static text

Caption:





HEADING

This message is very important!

Optional caption

Group Box

Column heading

Name	Size	Type	Modified
 11-12.bmp	233 KB	Bitmap Image	1/23/95 3:00 PM
 11-13.bmp	470 KB	Bitmap Image	1/23/95 3:01 PM
 11-14.bmp	151 KB	Bitmap Image	1/17/95 5:05 PM
 11-15.bmp	151 KB	Bitmap Image	1/17/95 5:06 PM

Column part

Tool tip / balloon tip



Time

78

You have entered an invalid character.
Valid characters are 0 thru 9, *, and #.

Progress indicators

Updating...

80% Complete



Stop

Selecting the Proper Controls

- Choose familiar controls
- Consider the task
- Reduce the number of “clicks”
- Display as many control choices as possible
- When to permit text entry?
 - Permit text entry if any of the following questions can be answered “Yes”
 - Is the data unlimited in size and scope?
 - Is the data familiar?
 - Is the data not conducive to typing errors?
 - Will typing be faster than choice selection?
 - Is the user an experienced typist?

Selecting the Proper Controls

- ▶ Buttons or Menus for commands?
 - Consider the following:
 - Whether or not the command is part of a standard tool set.
 - The total number of commands in the application.
 - The complexity of the commands.
 - The frequency with which commands are used.
 - Whether or not the command is used in association with another control.