Lecture 8
Designing Forms and Reports

Forms and Reports
- Form and report design are key ingredients for successful information systems - especially for users
- Each input data flow to a process will be associated with a form
- Each output data flow from a process will be associated with either a form or a report
- Forms and reports can be paper-based or screen-based

Designing Forms and Reports
- At the end of this lecture you should have some understanding of
  - what are forms and reports
  - what are the design guidelines for forms and reports
  - how to effectively display text, tables, lists and charts
  - how to assess the usability of an interface

Designing Forms and Reports
- FORM is a business document containing some predefined data and also some areas for other data to be filled in
  - typically based on one database record
  - turnaround document is produced by a system and then returned with input data
- REPORT is a business document that contains only predefined data - a passive document for reading
  - typically contains data from many different database records

Designing Forms and Reports
- 1. Collect initial requirements
  - who will use the form or report
  - what is its purpose
  - when is it needed or used
  - where does it need to be delivered
  - how many people need to use it
- 2. Construct initial prototype
- 3. Users review and evaluate prototype
  - Iterate

Design Specifications
- Narrative overview
  - Form name, users, task, system, environment
- Sample design
- Testing and usability assessment
  - user ratings on perceptions of usability dimensions - consistency, sufficiency, accuracy, etc

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Formatting Forms and Reports

- General guidelines:
  - Meaningful titles
    - clear and specific, revision-no, date
  - Meaningful information
    - needed and useable information
  - Balanced layout
    - spacing, margins, balanced and clearly labelled
  - Easy navigation
    - easy forward/backward moves, current position clear

Poor Form Design

- Vague Title
- No use of different intensity, fonts etc.
- No navigation information
- Difficult to read
  - Information packed tightly

Good Form Design

- Clear Title
- Intensity differences, boxing, font sizes
- Clear navigation information
- Easy to read, clear balanced layout

Highlighting Information

- Blinking and audible tones
- Colour, intensity, size and font differences
- Reverse video
- Boxing
- Underlining
- Capital letters
- Offsetting

Colour vs No Colour

- Benefits of colour
  - strikes the eye, draws attention to warnings
  - accents an uninteresting display
  - facilitates discrimination
- Problems with colour
  - colour blindness
  - resolution may degrade
  - printing or conversion to other media may not easily translate

Displaying Text

- Case
  - display text in mixed upper and lower case
- Spacing
  - double spacing if possible, leave line between paragraphs
- Justification
  - left justify with ragged right margin
- Hyphenation
  - do not hyphenate words between lines
- Abbreviations
  - use only when widely understood
HELP SCREEN H2356
ADD A FORM WITHIN A REPORT
IN THE DATABASE WINDOW, CLICK THE FORM THAT IS BOUND TO THE TABLE ON THE MANY SIDE OF THE ONE TO MANY RELATIONSHIP AND HOLD DOWN THE MOUSE BUTTON. DRAG THE FORM INSIDE THE MAIN FORM, AND THEN RELEASE THE MOUSE BUTTON. MICROSOFT ACCESS INSERTS THE SECOND FORM AS A SUBFORM WITHIN THE MAIN FORM.

If you need to, you can press F1 to return to the main menu, F2 to go to the previous card, and F3 to go to the next card.

Designing Tables and Lists

- Use meaningful labels
  - for all rows and columns; relabel after change of page
- Formatting columns, rows and text
  - sort in meaningful order
  - place blank row after every 5 lines in long columns
  - be consistent with typefaces and fonts
- Formatting numeric, textual and alphanumeric data
  - right justify numeric data, left justify textual data

Good Table Design

- Clear separate column labels
- Numeric data right justified
- Clear spacing between sections
- Mixed case
- Single spacing
- Clear title

Formatting Information to Avoid Bias

- Sources of bias to avoid include
  - providing information that does not match the user’s task
  - providing charts with too many items
  - using columns and highlights improperly
  - providing charts that use improper scaling

Bias in Scales of Graphs

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Assessing Usability

- **Usability typically refers to**
  - speed - efficient completion of task
  - accuracy - output provides what is expected
  - satisfaction - output is liked

General Design Guidelines for Usability

- **Consistency** - of operation
- **Efficiency** - related to user task
- **Ease** - output self explanatory
- **Format** - consistent format between entry and display
- **Flexibility** - must be convenient to user

Contextual Issues

- **User**
  - experience, skills, motivation, education, personality
- **Task**
  - time pressures, costs of errors, work duration (fatigue)
- **Systems**
  - platform will influence interaction styles and devices
- **Environment**
  - social issues and role should be considered

Measures of Usability

- **Time to learn**
- **Speed of performance**
- **Rate of errors**
- **Retention over time**
- **Subjective satisfaction**

Collection of Usability data

- **Usability data can be collected by**
  - observation
  - interviews
  - keystroke capturing
  - questionnaires

References
