oops
Error Messages

Pe42

This program has performed an illegal operation and will be shut down.

If the problem persists, contact the program vendor.

PE42 caused a general protection fault in module ATIZDRAA.DRV at 0004:00003a47.

Registers:
RAX=0000018e CS=0347 EIP=00003a47 EFLGS=00010246
RDX=0000f6ca SS=0eaf ESP=d01681a8 EBP=00008244
RCX=0000000b DS=034f ESI=0000fa36 FS=05d7
RDX=0000000b ES=0ff7 EDI=00000000 GS=36cf
Bytes at CS:EIP:
85 89 47 50 66 65 81 3f 50 52 0f 85 33 04 00 00

File Creation Error

e:\linux\inst\fips\restorlb already exists!

Yes Yes to All Rename Cancel
Error Messages III

- Be specific:
  - instead of “Syntax Error” -> “Unmatched left parenthesis”
Error Messages III

- Constructive Guidance, positive tone
Interacting with the user

- User-centered phrasing - user controls the interface
  - offer extended descriptions
  - do not blame the user
- Right format
  - lower and upper case
  - only upper case for brief and urgent messages
Effective error messages

- Increase attention to message design
- Quality control on message
- Guidelines
- Usability Tests
- Record the Frequency of occurrence
Talking computers

- Computers are NOT people
- Creating the impression computer are human can be confusing and misleading
- Important how user is addressed
  - minimize use of pronouns

  - I will begin the lesson when you press RETURN.
  - You can begin the lesson by pressing RETURN.
  - To begin the lesson, press RETURN.
Display design

- Field layout

<table>
<thead>
<tr>
<th>Name</th>
<th>SSN</th>
<th>Spouse</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnson, Anna</td>
<td>034787331</td>
<td>Bert Johnson</td>
<td>Thomas 10-29-1974</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ann 08-21-1977</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alexandra 09-08-1972</td>
</tr>
</tbody>
</table>

**Employee:** Anna Johnson

**SSN:** 034787331

**Spouse:** Bert Johnson

**Children:**

<table>
<thead>
<tr>
<th>Names</th>
<th>Birth-dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomas</td>
<td>10-29-1974</td>
</tr>
<tr>
<td>Ann</td>
<td>08-21-1977</td>
</tr>
<tr>
<td>Alexandra</td>
<td>09-08-1972</td>
</tr>
</tbody>
</table>
Display design

- Huge amounts of data

To: Knoxville, TN
Atlanta, GA  Dp: 9:28a  Ar: 10:10a  Flt: DL 1704  1st: 97.00  Coach: 86.00
Atlanta, GA  Dp: 12:28p  Ar: 1:10p  Flt: DL 152  1st: 97.00  Coach: 86.00
Atlanta, GA  Dp: 4:58p  Ar: 5:40p  Flt: DL 418  1st: 97.00  Coach: 86.00
Atlanta, GA  Dp: 7:41p  Ar: 8:25p  Flt: DL 1126  1st: 97.00  Coach: 86.00
Cincinnati, OH  Dp: 12:05p  Ar: 1:10p  Flt: FW 453  1st: 118.00  Coach: 66.85
Dallas, TX  Dp: 5:55p  Ar: 9:56p  Flt: AL 360  1st: 365.00  Coach: 215.00
Dayton, OH  Dp: 11:20a  Ar: 1:10p  Flt: FW 453  1st: 189.00  Coach: 108.00
Dayton, OH  Dp: 4:40  Ar: 6:30p  Flt: FW 455  1st: 189.00  Coach: 108.00
Detroit, Mich.  Dp: 9:10a  Ar: 1:10p  Flt: FW 453  1st: 183.00  Coach: 106.00
# Display design

- Huge amounts of data

<table>
<thead>
<tr>
<th>To: Atlanta, GA</th>
<th>Depart</th>
<th>Arrives</th>
<th>Flight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asheville, NC</td>
<td>7:20a</td>
<td>8:05a</td>
<td>PI 299</td>
</tr>
<tr>
<td></td>
<td>10:10a</td>
<td>10:55a</td>
<td>PI 203</td>
</tr>
<tr>
<td></td>
<td>4:20p</td>
<td>5:00p</td>
<td>PI 259</td>
</tr>
<tr>
<td>Austin, TX</td>
<td>8:15a</td>
<td>11:15a</td>
<td>EA 530</td>
</tr>
<tr>
<td></td>
<td>8:40a</td>
<td>11:39a</td>
<td>DL 212</td>
</tr>
<tr>
<td></td>
<td>2:00p</td>
<td>5:00p</td>
<td>DL 348</td>
</tr>
<tr>
<td></td>
<td>7:15p</td>
<td>11:26p</td>
<td>DL 1654</td>
</tr>
<tr>
<td>Baltimore, MD</td>
<td>7:00a</td>
<td>8:35a</td>
<td>DL 1767</td>
</tr>
<tr>
<td></td>
<td>7:50a</td>
<td>9:32a</td>
<td>EA 631</td>
</tr>
<tr>
<td></td>
<td>8:45a</td>
<td>10:20a</td>
<td>DL 1610</td>
</tr>
<tr>
<td></td>
<td>11:15a</td>
<td>12:35p</td>
<td>EA 147</td>
</tr>
<tr>
<td></td>
<td>1:35p</td>
<td>3:10p</td>
<td>DL 1731</td>
</tr>
<tr>
<td></td>
<td>2:35p</td>
<td>4:16p</td>
<td>EA 141</td>
</tr>
</tbody>
</table>
Window Design

- Flow
- Multiple windows
Colors

- Use color conservatively
- Limit number of colors
- Color as coding technique
- Color coding to support the task
- Color under user control
- Design for monochrome first
- Color-deficient needs
- Color as formatting help
- Consistency in use of color
- Colors and Cultures
- Color pairings
- Color change -> status change
- Color allows for greater information density
review DTUI 7-11
Chapter 7

- Gestalt Principles
- Menus
  - types
  - broad-shallow over narrow-deep
  - content organization
  - other menus
- Form fill-in
Chapter 8

- Command languages
- Structure
- Names and Abbreviations
- Natural Language
Chapter 9

- Keyboards, keypads
- Pointing devices
- Speech and Auditory interfaces
- Displays
- Printers
Chapter 10

- Goals of collaboration
- Asynchronous distributed
- Synchronous distributed
- Face-to-Face
Chapter 11

- Quality of Service
  - Response Time
  - Expectations
  - User Productivity
  - Variability in Response Time
  - Frustration
Project 2

- completeness [15]
  - no combo box for date of birth [-3]
  - year upper/lower bound not checked [-1/-1]
  - radio button groups [-1]
  - month days on february [-1]
  - no body [-5]
  - no or insufficient feedback on selection [-1]
  - multiple select [-1]
  - only one body part selectable at a time [-1]
Project 2

- coding and style [7]
  - no .swf [-7]
  - no ActionScript [-4]
  - no layer names [-1]
  - no separate layer for AS [-1]
  - no error checking [-2]
- graphic design [4]
  - grouping, alignment, heading [-1/-1/-1]
- aesthetics [4]
Exam 2 focus

- Gestalt Principles
- Menus
- Command languages
- Natural Language as Input
- Collaborative working
- Handling Errors
- User Expectations
- Response Time