

# Stateless Application “Issues” and “Solutions”

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## “Issues”

- Session Identification
- Database concurrency control
- Browser timeouts
- “Back” button navigation
- Multiple HTML form objects
- Debugging

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## Session Identification

- session\_id parameter
  - Login
  - Assign a “session\_id”
  - Pass session\_id to all routines (pages)
  - Check that the session\_id is valid (exists and has not timed out).
  - Or...use cookies
- Examples...

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## Database Concurrency

- optimistic locking
  - Select record from the database
  - Calculate a record checksum
  - Process edit
  - Reselect the record and calculate the checksum
  - If original checksum not equal to the new checksum report that the record has changed and reprocess the edit.
- Examples...

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## Browser Timeouts

- Example of an intermediate page with a redirect
  - Submit
  - Display "working" screen
  - Redirect to processing routine
- Examples...

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## "Back" Button Navigation

- Stateless operation example
  - Pass all data necessary for processing between each routine.
  - Store state data based on the session\_id
- Examples...

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## Multiple HTML Form Objects

- Text fields
- Radio buttons – unique names
- Checkboxes – unique names
- Submit buttons – optional names/required names, values

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## Debugging

- Web Server Errors
  - 500 – check the DAD and SQL\*Net
  - 404 – check the procedure and/or parameters
- Owa\_util.showpage...
- Htp.print...
- /server-status
- SQL Developer

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## PL/SQL Web Toolkit

- Thank you
- Contact:
  - JohnJeunnette@PrairieSystemsGroup.com

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