

Advanced PL/SQL Web Toolkit Topics

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Learning Objectives

- Understand image/document processing
- Understand Excel document download
- Understand integration with web services
- Demonstrate Javascript integration
- Discuss topics for research

Image/document processing

- DAD
 - PlsqlDocumentPath
 - PlsqlDocumentProcedure
 - PlsqlDocumentTablename

Image/document Processing

Document table:

- NAME VARCHAR2(256) NOT NULL
- MIME_TYPE VARCHAR2(128)
- DOC_SIZE NUMBER
- DAD_CHARSET VARCHAR2(128)
- LAST_UPDATED DATE
- CONTENT_TYPE VARCHAR2(128)
- CONTENT LONG RAW
- BLOB_CONTENT BLOB
- (application specific ID) INTEGER
- (other application specific fields)

Image/document Processing

```
Download procedure:
--
-- orb_download_object.sql
--
-- set scan off
--
-----
CREATE OR REPLACE PROCEDURE orb_download_object
/*
 * PL/SQL Gateway document download procedure. Referenced in the DAD
 * as "Document Access Procedure".
 *
 * Input: none
 *
 * Output: an object from the orb_objects table.
 */
IS
--
object_name orb_objects.name%type := null;
--
```

Image/document Processing

```
Download procedure:
FUNCTION getfilepath return varchar2
/*
 * Function to support the download_object procedure.
 *
 * Input: (none)
 *
 * Output: the filename part of the URL string.
 */
IS
--
script_name varchar2(255) default owa_util.get_cgi_env('SCRIPT_NAME');
path_info varchar2(255) default owa_util.get_cgi_env('PATH_INFO');
pos number;
--
BEGIN
script_name := script_name || path_info;
pos := instr(script_name, 'orb_images');
--
-- 'orb_images' is 10 character long...
script_name := substr(script_name, pos+11, (length(script_name)-pos-10));
return script_name;
END;
```

Image/document Processing

```
Download procedure:
BEGIN
--
object_name => getfilepath;
--
for object_record in
(select name, mime_type, doc_size, blob_content,
to_char(last_updated,'Dy DD Mon YYYY HH:MM:SS') last_updated
from orb_objects
where upper(name) = upper(object_name))
loop
owa_util.mime_header(object_record.mime_type, false);
owa_util.mime_header(download_file, false);
http.print('Content-Length: ' || object_record.doc_size);
http.print('Content-Disposition: attachment; filename="' || object_record.name);
http.print('Last-Modified: ' || object_record.last_updated || ' GMT');
owa_util.http_header_close;
--
wpg_dload.download_file(object_record.blob_content);
end loop;
--
EXCEPTION
when others then
orb_utility.report_error('orb_download_object', 'procedure');
--
END orb_download_object;
/
show errors
```

Image/document Processing

- Document upload:
 - Orb_objects_upd.sql

Excel Document Processing

- Document download:
 - Owa_util.mime_header('application/vnd.ms-excel', FALSE);
 - Examples

Integration with web services

```
• Credit card authorization
  odtug_authorize.sql
  *
  * odtug_authorize.sql
  *
  * odtug_authorize database procedure definition script
  *
  */
set scan off
--
CREATE OR REPLACE PROCEDURE odtug_authorize
( card_type          in varchar2,
  card_number        in varchar2,
  card_first_name    in varchar2,
  card_last_name     in varchar2,
  card_address       in varchar2,
  card_city          in varchar2,
  card_state         in varchar2,
  card_postal_code   in varchar2,
  card_phone         in varchar2,
  card_expiration    in varchar2,
  charge_amount      in number,
  charge_description in varchar2,
  authorization_code  in out varchar2,
  authorization_sub_code  in out varchar2,
  authorization_reason_code  in out varchar2,
  authorization_reason_text in out varchar2,
  authorization_approval_code in out varchar2,
  authorization_address_code in out varchar2,
  authorization_transaction_id in out varchar2,
  authorization_message  in out varchar2,
  test_mode           in boolean default FALSE )
*
* Procedure: odtug_authorize
```

Javascript/AJAX

- Examples
 - Application Definition Tool (ADT).

PL/SQL Web Toolkit

- Thank you
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