

Defining and Viewing BLOB Data in Oracle Application Express 3.1

Purpose

This tutorial shows you how to create a report and form that inserts and views BLOB data in the database using Oracle Application Express 3.1.

Time to Complete

Approximately 30 minutes

Topics

This tutorial covers the following topics:

- ☐ [Overview](#)
- ☐ [Prerequisites](#)
- ☐ **Altering the Table to Add BLOB Data**
- ☐ **Creating a Form With a Report**
- ☐ **Viewing BLOB Data in a Form**
- ☐ **Viewing BLOB Data in a Report**
- ☐ [Summary](#)
- ☐ [Related Information](#)

Viewing Screenshots



Place the cursor over this icon to load and view all screenshots for this tutorial. (Caution: This action loads all screenshots simultaneously, so response time may be slow depending on your Internet connection.)

Note: Alternatively, you can place the cursor over an individual icon in the following steps to load and view only the screenshot associated with that step. You can hide an individual screenshot by clicking it.

Overview

Declarative BLOB support enable files to be declaratively uploaded in forms, and downloaded or displayed using reports. BLOB display and download can also be authored procedurally using PL/SQL. For further information, click on help and search on BLOB.

To get more information about the 3.1 New Features, click [here](#).

This tutorial shows you how to add BLOB data to your table and then use it in a report and form.

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Prerequisites

Before you perform this tutorial, you should:

1. Install Oracle Database 9.2 or above.
2. Download and Configure Oracle Application Express 3.1.
3. Download the OEHR Sample Objects Packaged Application [here](#) and import it into your Oracle Application Express 3.1 instance.
4. Download and unzip the [blob.zip](#) file which contains a script to modify the OEHR_EMPLOYEES with BLOB column information.
5. To perform this tutorial, you need to perform the [Building and Customizing an Interactive Report in Oracle Application Express 3.1](#) tutorial. Alternatively, you can import the OBE New Features application as a packaged application in Application Express. Download and unzip the [apexnf.zip](#) file and import the irrobe_packagedapp.sql packaged application file.

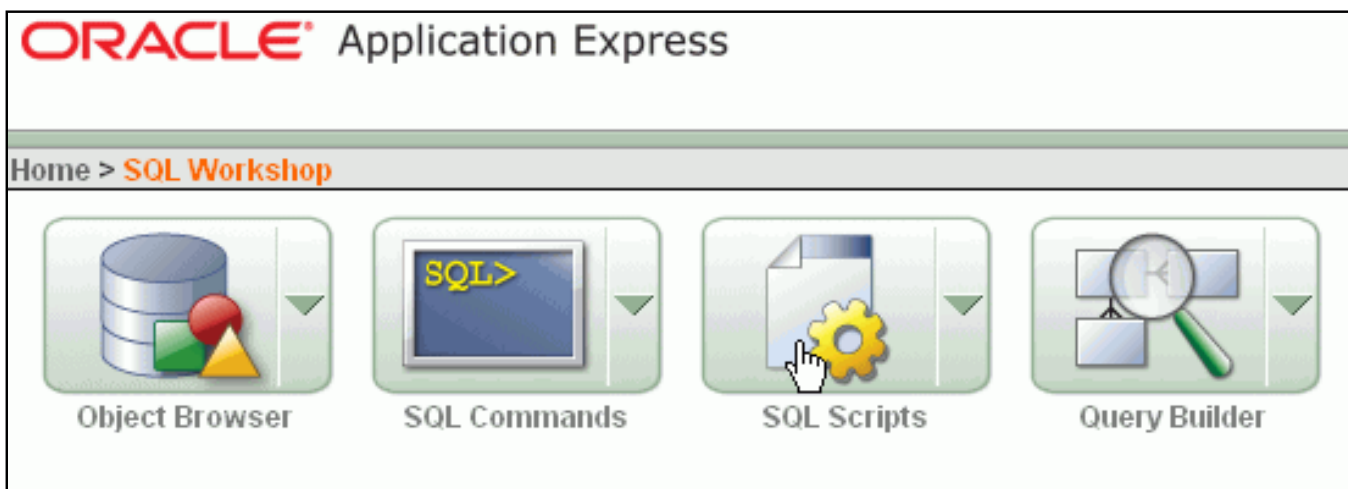
Note: The application numbers and page numbers may differ slightly from the screenshots.

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Altering the Table to Add BLOB Data

You need to add the BLOB column, PHOTO, as well as a column for MIMETYPE, FILENAME and LAST_UPDATE_DATE in the OEHR_EMPLOYEES table. Perform the following steps:

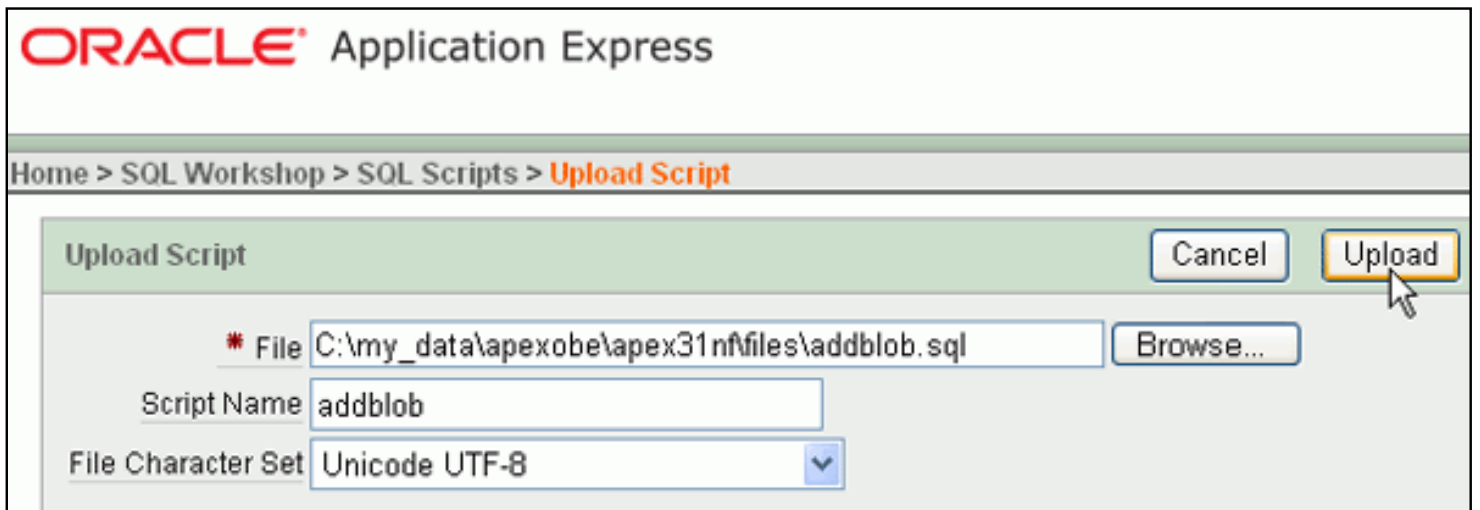
1. You first need to define the BLOB column in your table. In this case, you will add a PHOTO column to the OEHR_EMPLOYEES table. In addition, you will create a MIMETYPE, FILENAME and LAST_UPDATE_DATE column so that you can store specific attributes about the photo and view it in different ways. Navigate to **SQL Workshop > SQL Script**.



2. Click **Upload**.



3. Select the **addblob.sql** file in the directory where you downloaded and unzipped the files from the prerequisites. Enter a name in the name field and click **Upload**.



4. Select the uploaded file.


ORACLE® Application Express

Home > SQL Workshop > SQL Scripts

Script uploaded. You may click on the script to edit or run it.

Script Owner **MARCIE.YOUNG** View **Icons** Display **15** Go **Create**

☐ Show Results


addblob

5. Click **Run**.

ORACLE® Application Express

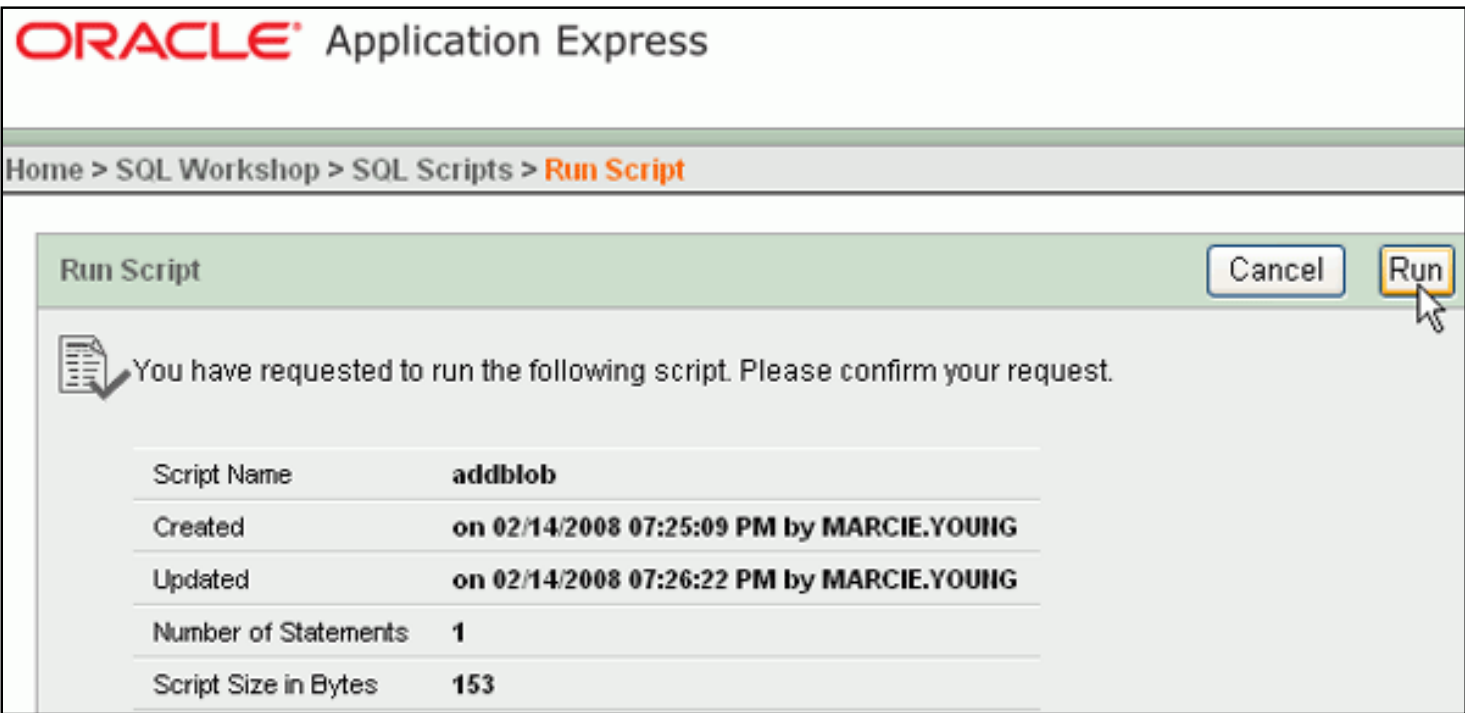
Home > SQL Workshop > SQL Scripts > Script Editor

Script Name **Cancel** **Download** **Delete** **Save** **Run**

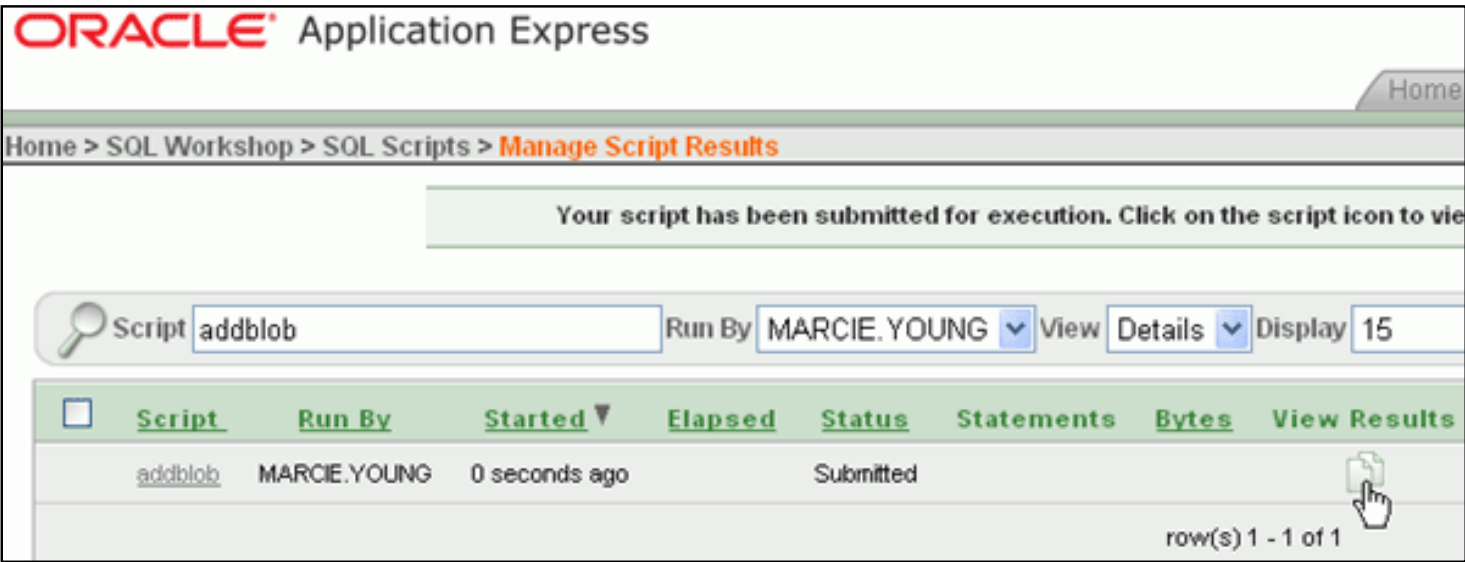
Undo **Redo** **Find**

```
1 alter table "OEHR_EMPLOYEES" add
2 ("PHOTO" BLOB NULL,
3  "FILENAME" VARCHAR2(255) NULL,
4  "MIMETYPE" VARCHAR2(255) NULL,
5  "LAST_UPDATE_DATE" DATE NULL)
6 /
7
```

6. At the confirmation window, click **Run**.



7. Your script was submitted to be executed. Click the **View Results** icon.



8. The table was altered successfully and the PHOTO BLOB column, MIMETYPE, FILENAME and LAST_UPDATE_DATE. Click the **Application Builder** tab.

ORACLE

Application Express

Home

Application Builder

SQ

Home > SQL Workshop > SQL Scripts > Results

Script: addblob

Status: Complete

View:

☐ Detail

☒ Summary Display

15

Go

Edit Script

Number	Elapsed	Statement	Feedback	Rows
1	0.03	alter table "OEHR_EMPLOYEES" add ("PHOTO" BLOB NULL, "FILEN	Table altered.	0

row(s) 1 - 1 of 1

Download

Download

Statements Processed

Successful

With Errors

1

1

0

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Creating a Form with a Report

In order to load and view BLOB data, you need to create a form with a report. Perform the following steps:

1. Navigate to your New Features Application page. Click **Create Page**.

Application: 560 - New Features



Run Application



Supporting Objects



Shared Components



Export / Import

Page View Display Go

Create Page >



1 - Employee
Details



101 - Login

2. Click the **Form** page type.

Create Page Cancel

Application: **534 - New Features**





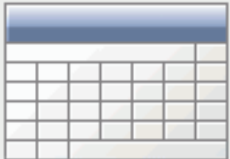


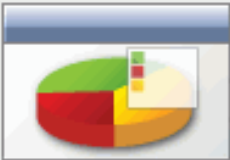
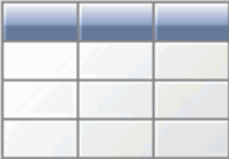
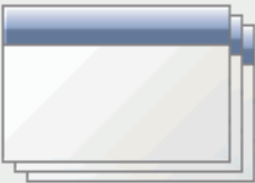

Select a page type:

☐ Blank Page ☐ Multiple Blank Pages ☐ Report

☐ Chart ☒ Form ☐ Wizard

☐ Calendar ☐ Tree ☐ Login Page

☐ Access Control ☐ Page Zero



3. Click **Form on a Table with Report**.

Create Page Cancel < Previous

☐ Form on a Procedure
 ☒ Form on a Table or View
 ☐ Form on a Table with Report

☐ Master Detail Form
 ☐ Tabular Form
 ☐ Form on a SQL Query

☐ Summary Page
 ☐ Form on Web Service
 ☐ Form and Report on Web Service

4. Click **Next**.

Create Form Cancel Next >

This wizard builds a form to update a single row in a database table or view. Select the schema owner of the database table or view.

* Table / View Owner ▼

5. Select or enter the **OEHR_EMPLOYEES** table and click **Next**.

Create Form Cancel < Previous Next >

Owner: **MARCIE**

* Table / View Name ▲

6. Select **Classic** for Implementation and enter Page Name and Region Title **Maintain Employee Information** and click **Next**.

Create Report Page Cancel < Previous **Next >**

The report page is used to select the rows to be edited. It also includes a button to create a new row. If the page you specify does not exist, the page will be created.

Owner: **MARCIE**
Table Name: **OEHR_EMPLOYEES**

Use User Interface Defaults ☒ Yes ☐ No

Implementation Classic

* Page Number 2

* Page Name Maintain Employee Information

* Region Title Maintain Employee Information

* Region Template Reports Region

Report Template template: 20. Standard

Pagination Size 15

Breadcrumb - do not add breadcrumb region to page -

7. Accept the default and Click **Next**.

Create Report Page Cancel < Previous **Next >**

Both report and form pages will use the same tab definition

Page: 2

Tab Options: ☒ Do not use tabs
☐ Use an existing tab set and create a new tab within the existing tab set.
☐ Use an existing tab set and reuse an existing tab within that tab set.

8. For the report, you want to select FIRST_NAME, LAST_NAME, EMAIL and PHOTO from the list of columns and click **Next**.

Create Report Page

Cancel< PreviousNext >

Select the columns to include in the report page. Define an optional WHERE clause to restrict the result set.

Page: 2
Owner: **MARCIE**
Table Name: **OEHR_EMPLOYEES**

* Select Column(s)

3.LAST_NAME (Varchar2)
4.EMAIL (Varchar2)
5.PHONE_NUMBER (Varchar2)
6.HIRE_DATE (Date)
7.JOB_ID (Varchar2)
8.SALARY (Number)
9.COMMISSION_PCT (Number)
10.MANAGER_ID (Number)
11.DEPARTMENT_ID (Number)
12.PHOTO (Blob)

Optional WHERE clause

9. Accept the default and click **Next**.




Create Report Page

Cancel< PreviousNext >

Select an edit link image. This image will function as a link for choosing a row to edit. Use image attributes to define the image height and width. Defining the height and width helps browsers display pages faster.

Report Page: 2
Owner: **MARCIE**
Table Name: **OEHR_EMPLOYEES**

Edit Link Image:

☒ 
☐ 
☐ 
☐ Edit
☐ Other Image

Use Other Image

Image Attributes

10. Enter **Maintain Employee Details** for Page Name and Region Title and click **Next**.

Create Form Page

Cancel< PreviousNext >

Specify page and region information for the Form Page. The Form Page is used to insert, update, and delete rows from the selected table. If the page you specify does not exist, the page will be created.

Owner: **MARCIE**

Table Name: **OEHR_EMPLOYEES**

* Page Number 3

* Page Name Maintain Employee Details

* Region Title Maintain Employee Details

* Region Template Form Region

11. Accept the default and click **Next**.

Create Form Page

Cancel< PreviousNext >

Select the primary key column of the table on which this form is to be based. If the table has two columns that form the primary key, identify the second primary column.

Form Page: 3

Owner: **MARCIE**

Table Name: **OEHR_EMPLOYEES**

* Primary Key EMPLOYEE_ID

Primary Key Column 2 - Select Primary Key 2 -




12. Accept the default and click **Next**.

Create Form Page Cancel < Previous Next >

Form Page: 3
 Owner: **MARCIE**
 Table Name: **OEHR_EMPLOYEES**
 Primary Key Column: **EMPLOYEE_ID**

* Define the source for the primary key columns

☒ Existing trigger ☐ Custom PL/SQL function ☐ Existing sequence

13. Select all the columns except MIMETYPE, FILENAME and LAST_UPDATE_DATE and click **Next**. Note: The columns you did not include will automatically be populated when you add a PHOTO.

Create Form Page Cancel < Previous Next >

Select the columns to include in the form page.

Page: 3
 Owner: **MARCIE**
 Table Name: **OEHR_EMPLOYEES**

* Select Column(s)

FIRST_NAME (Varchar2)
LAST_NAME (Varchar2)
EMAIL (Varchar2)
PHONE_NUMBER (Varchar2)
HIRE_DATE (Date)
JOB_ID (Varchar2)
SALARY (Number)
COMMISSION_PCT (Number)
MANAGER_ID (Number)
DEPARTMENT_ID (Number)
PHOTO (Blob)
FILENAME (Varchar2)
MIMETYPE (Varchar2)
LAST_UPDATE_DATE (Date)

14. Accept the default and click **Next**.

Identify Process Options

Cancel< PreviousNext >

Identify the process options for this form page. For example, to prevent users from deleting from this form page, select **No** for the delete option.

Form Page: 3

Owner: **MARCIE**

Table Name: **OEHR_EMPLOYEES**

Insert Yes ▾


Update Yes ▾

Delete Yes ▾

15. Click **Finish**.

Form and Report Page Confirmation

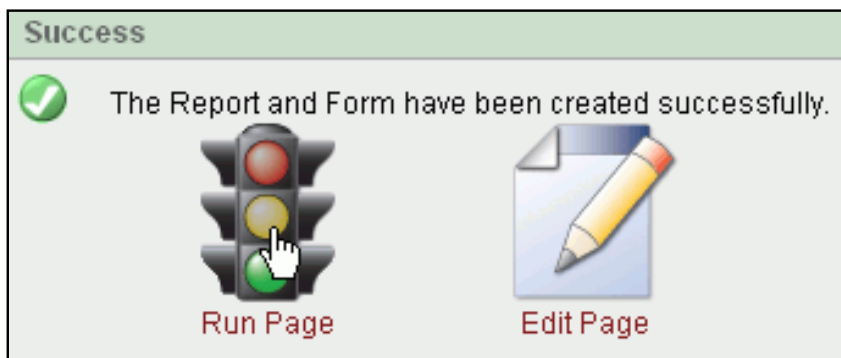
Cancel< PreviousFinish

 You have requested to create form and report pages with the following attributes. Please confirm your selections.

Application	560
Report Page	2
Report Page Name	Maintain Employee Information
Report Implementation	Classic
Form Page	3
Form Page Name	Maintain Employee Details
Tab Set	
Tab Label	
Table / View Owner	MARCIE
Table / View Name	OEHR_EMPLOYEES
Primary Key Column	EMPLOYEE_ID
Updateable Columns	FIRST_NAME LAST_NAME EMAIL PHONE_NUMBER HIRE_DATE JOB_ID SALARY COMMISSION_PCT MANAGER_ID DEPARTMENT_ID PHOTO
Report Columns	FIRST_NAME LAST_NAME EMAIL

	PHOTO
Report Columns	FIRST_NAME LAST_NAME EMAIL PHOTO
Where Clause	
















16. Click **Run Page**.



17. The report is displayed. Currently, there is no data in the Photo column since you haven't uploaded any BLOB files yet. Click on the Edit icon for an employee.

Maintain Employee Information

Create

Edit	First Name	Last Name	Email	Photo
	Steven	King	SKING	
	Neena	Kochhar	NKOCHHAR	
	Lex	De Haan	LDEHAAN	
	Alexander	Hunold	AHUNOLD	
	Bruce	Ernst	BERNST	
	David	Austin	DAUSTIN	
	Valli	Pataballa	VPATABAL	
	Diana	Lorentz	DLORENTZ	
	Nancy	Greenberg	NGREENBE	
	Daniel	Faviet	DFAVIET	
	John	Chen	JCHEN	
	Ismael	Sciarra	ISCIARRA	
	Jose Manuel	Urman	JMURMAN	
	Luis	Popp	LPOPP	
	Den	Raphaely	DRAPHEAL	

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Next >

18. The form is displayed. You can add a photo. Click **Browse...** Select your file, in this case **dog.gif** and click **Open**.

Maintain Employee Details

First Name

Neena

Last Name

Kochhar

Email

NKOCHHAR

Phone Number

515.123.4568

Hire Date

09/21/1989

Job Id

AD_VP

Salary

17000

Commission Pct

Manager Id

108

Department Id

90

Photo

Browse...

19. Click **Apply Changes**.

Maintain Employee Details

Cancel

Delete

Apply Changes

First Name

Neena

Last Name

Kochhar

Email

NKOCHHAR

Phone Number

515.123.4568

Hire Date

09/21/1989

Job Id

AD_VP

Salary

17000

Commission Pct

Manager Id

108

Department Id

90

Photo

C:\my_data\apexobe\apex31nf\files\dog.gif
















Browse...

20. Notice that the Report now has a Download link for the record you added the Photo to. Click the **Download** link.

Action Processed.

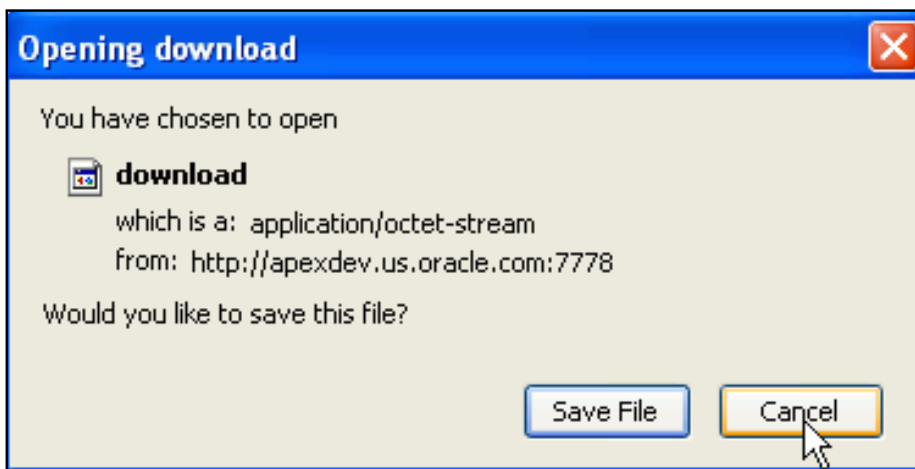
Maintain Employee Information

Create

Edit	First Name	Last Name	Email	Photo
	Steven	King	SKING	
	Neena	Kochhar	NKOCHHAR	Download
	Lex	De Haan	LDEHAAN	
	Alexander	Hunold	AHUNOLD	
	Bruce	Ernst	BERNST	
	David	Austin	DAUSTIN	
	Valli	Pataballa	VPATABAL	
	Diana	Lorentz	DLORENTZ	
	Nancy	Greenberg	NGREENBE	
	Daniel	Faviet	DFAVIET	
	John	Chen	JCHEN	
	Ismael	Sciarra	ISCIARRA	
	Jose Manuel	Urman	JMURMAN	
	Luis	Popp	LPOPP	
	Den	Raphaely	DRAPHEAL	

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21. The download link produces a window that allows you to download a file but it doesn't say the name of the file or where it will be copied to. In the next section, you examine how to specify the parameters associated with the Photo column in a form and report.



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Updating and Viewing BLOB Data in a Form
















You can change the way that the BLOB Data is displayed, either inline or as an attachment. Perform the following steps:

1. Click the View icon for the employee you added the photo previously.

Action Processed.

Maintain Employee Information

Create

Edit	First Name	Last Name	Email	Photo
	Steven	King	SKING	
	Neena	Kochhar	NKOCHHAR	Download
	Lex	De Haan	LDEHAAN	
	Alexander	Hunold	AHUNOLD	
	Bruce	Ernst	BERNST	
	David	Austin	DAUSTIN	
	Valli	Pataballa	VPATABAL	
	Diana	Lorentz	DLORENTZ	
	Nancy	Greenberg	NGREENBE	
	Daniel	Faviet	DFAVIET	
	John	Chen	JCHEN	
	Ismael	Sciarra	ISCIARRA	
	Jose Manuel	Urman	JMURMAN	
	Luis	Popp	LPOPP	
	Den	Raphaely	DRAPHEAL	

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2. Notice that you automatically see a download link. Click the **Edit Page** link in the developer toolbar.

Maintain Employee Details

Cancel

First Name

Neena

Last Name

Kochhar

Email

NKOCHHAR

Phone Number

515.123.4568

Hire Date

09/21/1989

Job Id

AD_VP

Salary

17000

Commission Pct

Manager Id

108

Department Id

90

Photo

Browse...

Download

MARCIE.YOUNG

Home

Application 560

Edit Page 3

Create

Session

Activity

Debug

Show Edi

3. Under Items, select the **P<#>_PHOTO** link.

Page Rendering

Items

Region: Maintain Employee Details

1	<u>P3_EMPLOYEE_ID</u>	Hidden and Protected
2	<u>P3_FIRST_NAME</u>	Text Field
3	<u>P3_LAST_NAME</u>	Text Field
4	<u>P3_EMAIL</u>	Text Field
5	<u>P3_PHONE_NUMBER</u>	Text Field
6	<u>P3_HIRE_DATE</u>	Date Picker (MM/DD/YYYY)
7	<u>P3_JOB_ID</u>	Text Field
8	<u>P3_SALARY</u>	Text Field
9	<u>P3_COMMISSION_PCT</u>	Text Field
10	<u>P3_MANAGER_ID</u>	Text Field
11	<u>P3_DEPARTMENT_ID</u>	Text Field
12	<u>P3_PHOTO</u>	File Browse...
12	Items	

4. Select the **Source** tab.

Page Item: **P3_PHOTO**
Cancel
Delete

Show All	Name	Displayed	Label	Element	Source	Default	LOV	Security	Conditions	Read Only	Help
Name											
Page: 3 Maintain Employee Details											
*	Name	<input type="text" value="P3_PHOTO"/>									
	Display As	<input type="text" value="File Browse..."/>									
		<input type="button" value="[Text]"/> <input type="button" value="[Text Area]"/> <input type="button" value="[Select List]"/> <input type="button" value="[Radio]"/> <input type="button" value="[Popup List of Values]"/> <input type="button" value="[Checkbox]"/> <input type="button" value="[Date]"/>									
		Define List of Values									
Displayed											
*	Sequence	<input type="text" value="12"/>									

5. Click the **BLOB Download Format Mask** link.

Page Item:P3_PHOTO

Cancel

Show All	Name	Displayed	Label	Element	Source	Default	LOV	Security	Condition
----------	------	-----------	-------	---------	--------	---------	-----	----------	-----------

Source

Source Used

Always, replacing any existing value in session s

Source Type

Database Column

[static text] [DB Column] [SQL Query] [PL/SQL expres

Maintain session state

Per session

Source value or expression

PHOTO:::

BLOB Download Format Mask

Post Calculation Computation

6. In order for the information to be read from the database, enter **MIMETYPE** for MIMETYPE, **FILENAME** for FILENAME and **LAST_UPDATE_DATE** for BLOB Last Updated Column. Select **Attachment** for the Content Disposition and leave the default Download Link Text at Download and click **Apply**.

Close

Apply

* BLOB Column

PHOTO

MIME Type Column

MIMETYPE

Filename Column

FILENAME

BLOB Last Updated Column

LAST_UPDATE_DATE

Character Set Column

Content Disposition

Attachment

Download Link Text

Download

Database table and column names are case sensitive

7. Notice how the Source Value or Expression has changed based on the input you just provided. Click **Apply Changes**.

Page Item: P3_PHOTO

Cancel

Delete

Apply Changes

Show All

Name

Displayed

Label

Element

Source

Default

LOV

Security

Conditions

Read Only

Help

Configuration

Comments

Source

Source Used

Always, replacing any existing value in session state

Source Type

Database Column

(static text)

(DB Column)

(SQL Query)

(PL/SQL expression)

(PL/SQL function body)

Maintain session state

Per session

Source value or expression

PHOTO:MIMETYPE:FILENAME:LAST_UPDATE_DATE::attachment:Download

BLOB Download Format Mask

8. Click **Run Page**.

ORACLE Application Express

Home

Application Builder

SQL Worksheet

Home > Application Builder > Application 560 > Page 3

Page 3

Page "3" item "P3_PHOTO" processed.

9. In order for the MIMETYPE, FILENAME and LAST_UPDATE_DATE to be populated in the database, you need to reupload the file. Click **Browse...** select the file, in this case **dog.gif**, and click **Open**.

Maintain Employee Details

Cancel

First Name: Neena

Last Name: Kochhar

Email: NKOCHHAR

Phone Number: 515.123.4568

Hire Date: 09/21/1989

Job Id: AD_VP

Salary: 17000

Commission Pct:

Manager Id: 108

Department Id: 90

Photo: [Browse...](#) [Download](#)

10. Click **Apply Changes**.

Maintain Employee Details

Cancel

Delete

Apply Changes

First Name

Neena

Last Name

Kochhar

Email

NKOCHHAR

Phone Number

515.123.4568

Hire Date

09/21/1989

Job Id

AD_VP

Salary

17000

Commission Pct

Manager Id

108

Department Id

90

Photo

C:\my_data\apexobe\apex31nf\files\dog.gif

Browse...
















Download

11. Select the Edit icon next to row that contains the Download link.

Action Processed.

Maintain Employee Information

Create

Edit	First Name	Last Name	Email	Photo
	Steven	King	SKING	
	Neena	Kochhar	NKOCHHAR	Download
	Lex	De Haan	LDEHAAN	
	Alexander	Hunold	AHUNOLD	
	Bruce	Ernst	BERNST	
	David	Austin	DAUSTIN	
	Valli	Pataballa	VPATABAL	
	Diana	Lorentz	DLORENTZ	
	Nancy	Greenberg	NGREENBE	
	Daniel	Faviet	DFAVIET	
	John	Chen	JCHEN	
	Ismael	Sciarra	ISCIARRA	
	Jose Manuel	Urman	JMURMAN	
	Luis	Popp	LPOPP	
	Den	Raphaely	DRAPHEAL	

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12. Click the **Download** link.

Maintain Employee Details


Cancel Delete Apply Changes

First Name

Last Name

Email

Phone Number

Hire Date 

Job Id


Salary

Commission Pct


Manager Id

Department Id


Photo Browse... Download




13. Notice that the file name is now specified on the dialogue. It also is opening the file as an attachment using a program identified from the MIMETYPE. Click **OK**.

Opening dog.gif 

You have chosen to open

 **dog.gif**
which is a: GIF Image
from: http://apexdev.us.oracle.com:7778


What should Firefox do with this file?

☒ Open with 

☐ Save to Disk

☐ Do this automatically for files like this from now on.

OK Cancel



14. The file is open in a separate window. Close the window.



15. You will change the Content Disposition to see what happens when you select inline instead of attachment. Click **Edit Page**.

Maintain Employee Details

Cancel

Delete

Apply Changes

First Name

Neena

Last Name

Kochhar

Email

NKOCHHAR

Phone Number

515.123.4568

Hire Date

09/21/1989

Job Id

AD_VP

Salary

17000

Commission Pct

Manager Id

108

Department Id

90

Photo

Browse...

Download

MARCIE.YOUNG

Home

Application 560

Edit Page 3

Create

Session

Activity

Debug

Show Edit Links

16. Under Items, click P<#>_PHOTO.

Page Rendering

Items

Region: Maintain Employee Details

1	<u>P3_EMPLOYEE_ID</u>	Hidden and Protected
2	<u>P3_FIRST_NAME</u>	Text Field
3	<u>P3_LAST_NAME</u>	Text Field
4	<u>P3_EMAIL</u>	Text Field
5	<u>P3_PHONE_NUMBER</u>	Text Field
6	<u>P3_HIRE_DATE</u>	Date Picker (MM/DD/YYYY)
7	<u>P3_JOB_ID</u>	Text Field
8	<u>P3_SALARY</u>	Text Field
9	<u>P3_COMMISSION_PCT</u>	Text Field
10	<u>P3_MANAGER_ID</u>	Text Field
11	<u>P3_DEPARTMENT_ID</u>	Text Field
12	<u>P3_PHOTO</u>	File Browse...
12	Items	

17. Under Source, click the **BLOB Download Format Mask** link.

Page Item: P3_PHOTO

Show All	Name	Displayed	Label	Element	Source	Default	LOV	Security	Conditions	Read Only	Help
----------	------	-----------	-------	---------	--------	---------	-----	----------	------------	-----------	------

Source

Source Used:

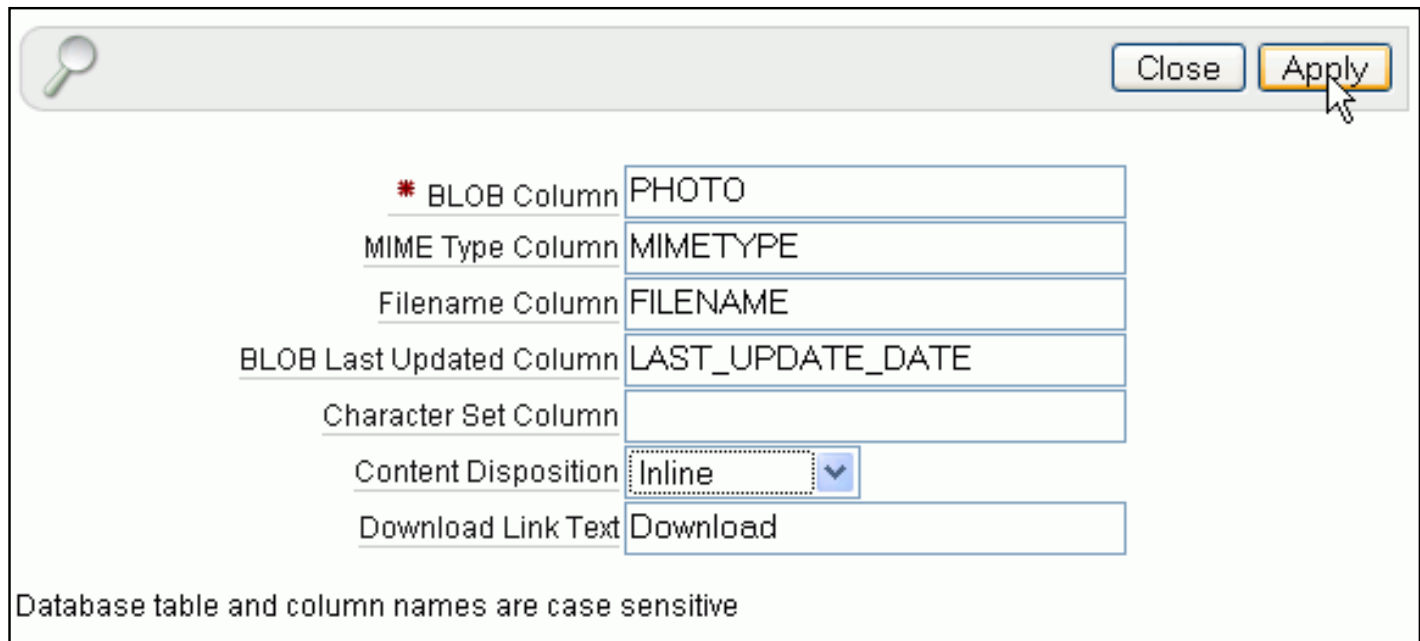
Source Type:

Maintain session state:

Source value or expression:

[BLOB Download Format Mask](#)

18. Change the Content Disposition to **Inline** and click **Apply**.

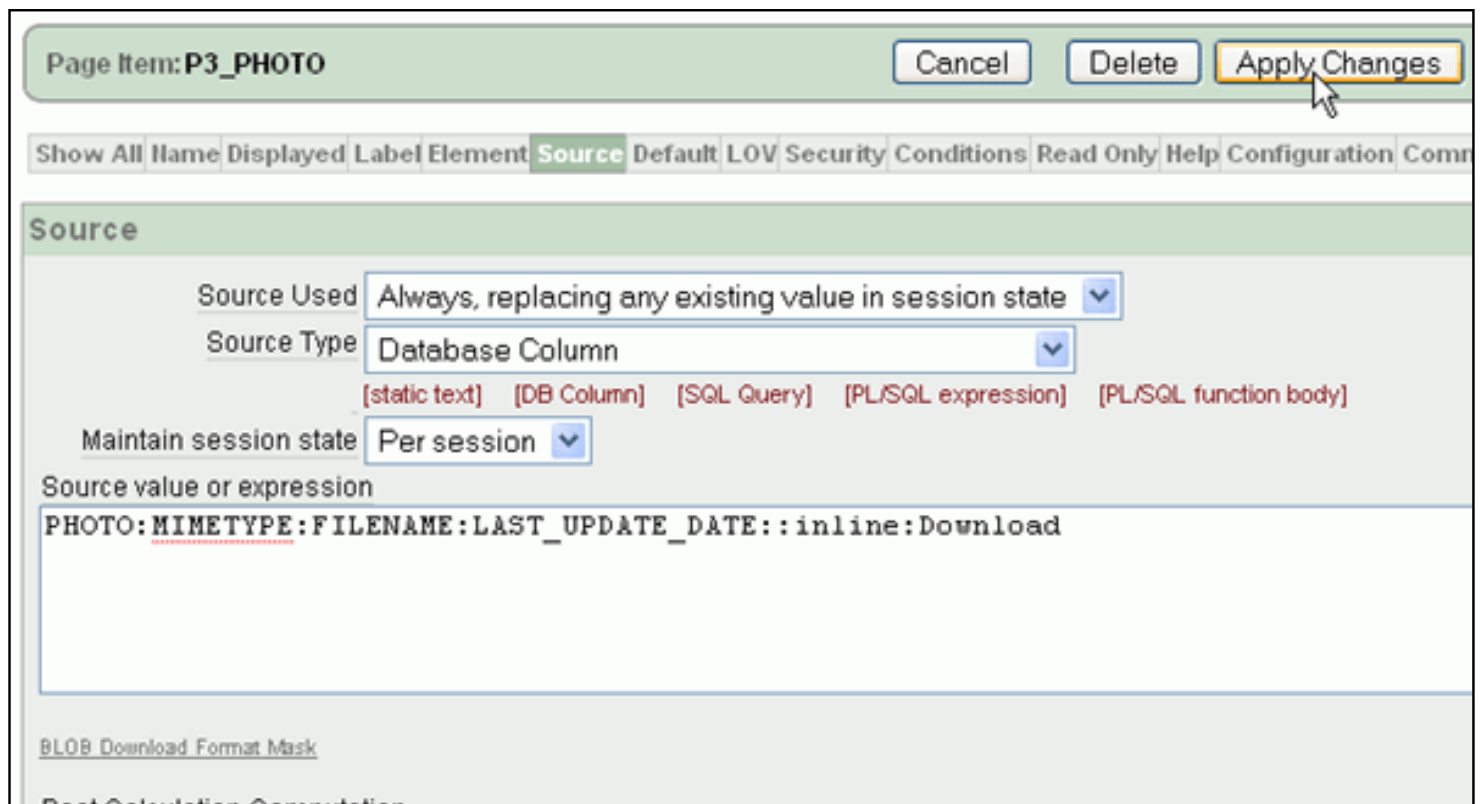


A dialog box for configuring a BLOB column. It has a search icon in the top left and 'Close' and 'Apply' buttons in the top right. The 'Apply' button is highlighted with a mouse cursor. The configuration fields are as follows:

* BLOB Column	PHOTO
MIME Type Column	MIMETYPE
Filename Column	FILENAME
BLOB Last Updated Column	LAST_UPDATE_DATE
Character Set Column	
Content Disposition	Inline
Download Link Text	Download

Database table and column names are case sensitive

19. Click **Apply Changes**.

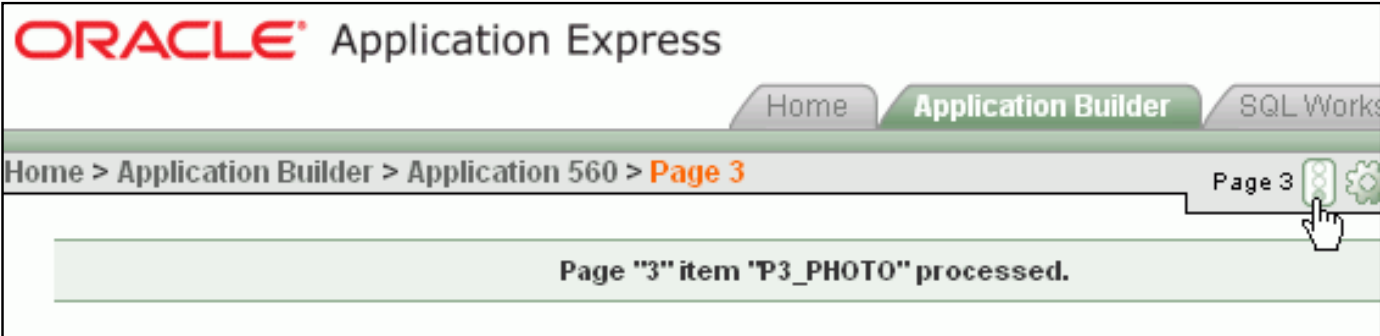


The 'Source' configuration tab for Page Item: P3_PHOTO. It includes 'Cancel', 'Delete', and 'Apply Changes' buttons at the top. The 'Apply Changes' button is highlighted with a mouse cursor. Below the buttons is a tabbed interface with 'Source' selected. The configuration fields are:

Source Used	Always, replacing any existing value in session state
Source Type	Database Column
Maintain session state	Per session
Source value or expression	PHOTO:MIMETYPE:FILENAME:LAST_UPDATE_DATE::inline:Download

Below the expression field, there are links for 'BLOB Download Format Mask' and 'Test Calculation Computation'.

20. Click **Run Page**.



21. Click the **Download** link.

The screenshot shows the 'Maintain Employee Details' form in Oracle Application Express. The form has a title bar 'Maintain Employee Details' and two buttons: 'Cancel' and 'Delete'. The form contains several input fields with labels: 'First Name' (Neena), 'Last Name' (Kochhar), 'Email' (NKOCHHAR), 'Phone Number' (515.123.4568), 'Hire Date' (09/21/1989), 'Job Id' (AD_VP), 'Salary' (17000), 'Commission Pct' (empty), 'Manager Id' (108), 'Department Id' (90), and 'Photo' (empty). There is a 'Browse...' button next to the 'Photo' field. A red 'Download' link is visible at the bottom right of the form, with a mouse cursor pointing at it.

22. Notice now that the image is shown within the browser (inline). To return to the form, click the **Back** button in your browser.



23. In the next section, you make the necessary changes to display the image from within the report. Click **Apply Changes**.

Maintain Employee Details

Cancel

Delete

Apply Changes

First Name

Neena

Last Name

Kochhar

Email

NKOCHHAR

Phone Number

515.123.4568

Hire Date

09/21/1989

Job Id

AD_VP

Salary

17000

Commission Pct

Manager Id

108

Department Id

90

Photo

Browse...

Download

[Back to Topic List](#)

Viewing BLOB Data in a Report














In this section, you make the necessary changes to view a BLOB column in different ways within a report. Perform the following steps:

1. Click the **Edit Page** link in the developer toolbar.

Action Processed.

Maintain Employee Information

Create

Edit	First Name	Last Name	Email	Photo
	Steven	King	SKING	
	Neena	Kochhar	NKOCHHAR	Download
	Lex	De Haan	LDEHAAN	
	Alexander	Hunold	AHUNOLD	
	Bruce	Ernst	BERNST	
	David	Austin	DAUSTIN	
	Valli	Pataballa	VPATABAL	
	Diana	Lorentz	DLORENTZ	
	Nancy	Greenberg	NGREENBE	
	Daniel	Faviet	DFAVIET	
	John	Chen	JCHEN	
	Ismael	Sciarra	ISCIARRA	
	Jose Manuel	Urman	JMURMAN	
	Luis	Popp	LPOPP	
	Den	Raphaely	DRAPHEAL	

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2. Under Regions, select the **Report** link.

Page Rendering

abl

1+1

Page

Page Name: [Maintain Employee Information](#)

Template: [Application default](#)

Title: [Maintain Employee Information](#)

Header Text:

HTML Header:

Footer Text:

HTML Body:

Build Option:

Help Text: [No help is available for this](#)

Authorization: [No](#)

Page Group:

Cached: [No](#)

Regions

Display Point: Page Template Body (3)

10

[Maintain Employee Information](#)

[Report](#)

Buttons

3. Select the Edit icon in front of **PHOTO**.






Region Definition
Report Attributes
Print Attributes


Region Name: **Maintain Employee Information**

Show All
Column Attributes
Layout and Pagination
Sorting
Messages
Report Export
Break For

Column Attributes

Headings Type:
☐ Column Names
☐ Column Names (InitCap)
☒ Custom
☐ PL/SQL
☐ None

	Alias	Link	Edit	Heading	Column Alignment	Heading Alignment	Show
	EMPLOYEE_ID	✓		<input type="text" value="Edit"/>	left <input type="button" value="v"/>	<input type="text" value=""/>	<input checked="" type="checkbox"/>
	FIRST_NAME			<input type="text" value="First Name"/>	left <input type="button" value="v"/>	<input type="text" value=""/>	<input checked="" type="checkbox"/>
	LAST_NAME			<input type="text" value="Last Name"/>	left <input type="button" value="v"/>	<input type="text" value=""/>	<input checked="" type="checkbox"/>
	EMAIL			<input type="text" value="Email"/>	left <input type="button" value="v"/>	<input type="text" value=""/>	<input checked="" type="checkbox"/>
	PHOTO			<input type="text" value="Photo"/>	left <input type="button" value="v"/>	<input type="text" value=""/>	<input checked="" type="checkbox"/>


When moving the last column further down, it will show up as the first column of your report.
When moving the first column up, it will be moved to the end of your report.

- Under Column Formatting, notice that some of the parameters for the BLOB are already displayed. Select the **BLOB Download Format Mask** link.

Report attributes updated.

Column Attributes: PHOTO

Cancel

Apply

Show All

Definition

Formatting

Tabular Form Element

Lists of Values

Link

Authorization

Condition

Column Definition

Column Name **PHOTO**

Column Heading Photo

Show Column Yes

Heading Alignment

left

Compute Sum No

Column Alignment

left

Sortable Column No

Include In Export Yes

Column Formatting

Number / Date Format DOWNLOAD:OEHR_EMPLOYEES:PHOTO:EMPLOYEE_ID


[BLOB Download Format Mask](#)

CSS Class

CSS Style

Highlight Words

5. Enter **MIMETYPE** for MIMETYPE, **FILENAME** for FILENAME and **LAST_UPDATE_DATE** for BLOB Last Updated Column. Notice that Content Disposition is set to **Inline**. Click **Apply**.



Close
Apply

*

Format Mask

DOWNLOAD ▼

*

BLOB Table

OEHR_EMPLOYEES

*

BLOB Column

PHOTO

*

Primary Key Column 1

EMPLOYEE_ID

Primary Key Column 2

MIME Type Column

MIMETYPE

Filename Column

FILENAME

BLOB Last Updated Column

LAST_UPDATE_DATE

Character Set Column

Content Disposition

Inline ▼

Download Link Text

Download

Database table and column names are case sensitive

6. Click **Apply Changes**.

Report attributes updated.
✖

Column Attributes: PHOTO

Cancel
Apply Changes
<

Show All
Definition
Formatting
Tabular Form Element
Lists of Values
Link
Authorization
Conditions
Comments

Column Definition
↑

Column Name

PHOTO

Column Heading

Photo

Show Column

Yes ▼

Heading Alignment

left ▼

Compute Sum

No ▼

Column Alignment

left ▼

Sortable Column

No ▼

Include In Export

Yes ▼

Column Formatting
↑

Number / Date Format

DOWNLOAD:OEHR_EMPLOYEES:PHOTO:EMPLOYEE_ID::MIMETYPE:FILENAME ⌵

BLOB Download Format Mask

CSS Class

CSS Style

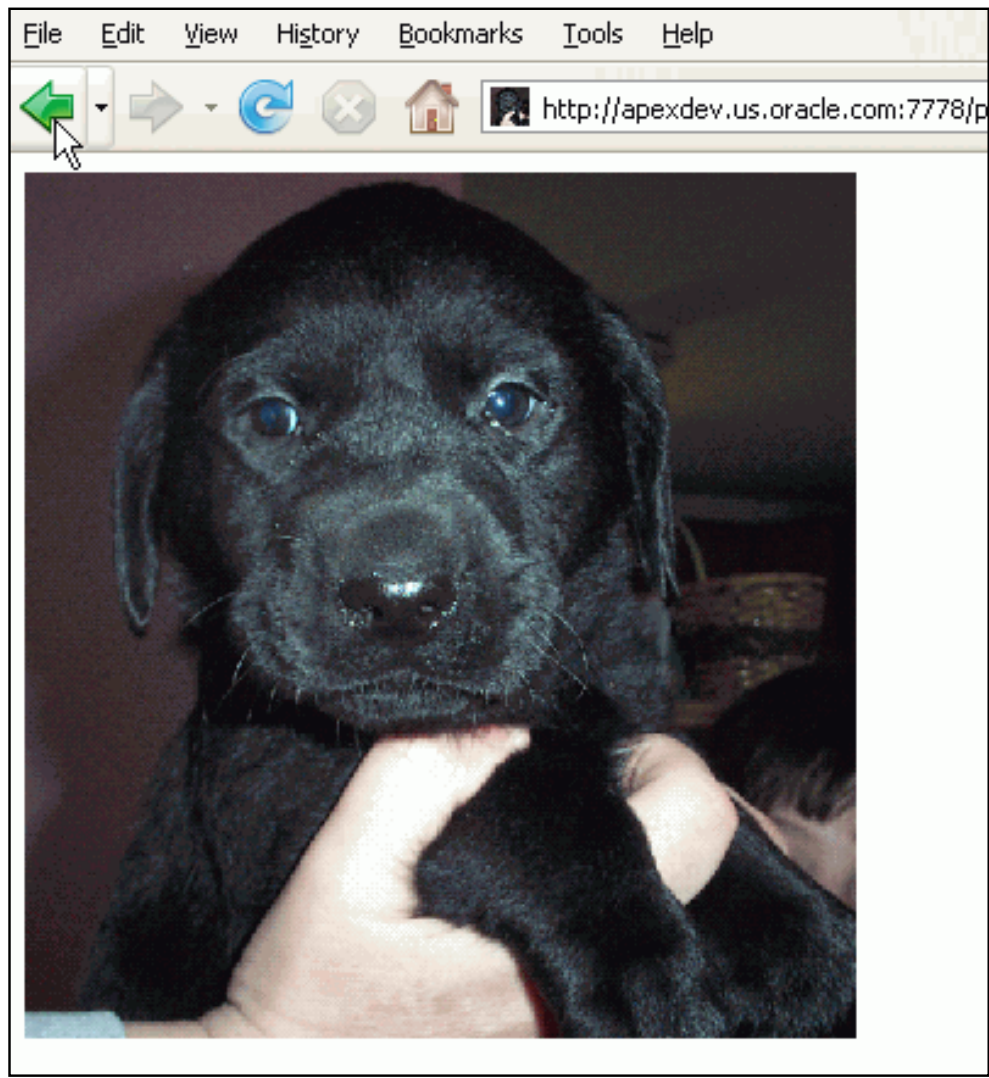
7. Click **Run Page**.



8. Select the **Download** link.

Maintain Employee Information				
				Create
Edit	First Name	Last Name	Email	Photo
	Steven	King	SKING	
	Neena	Kochhar	NKOCHHAR	Download
	Lex	De Haan	LDEHAAN	
	Alexander	Hunold	AHUNOLD	
	Bruce	Ernst	BERNST	
	David	Austin	DAUSTIN	
	Valli	Pataballa	VPATABAL	
	Diana	Lorentz	DLORENTZ	
	Nancy	Greenberg	NGREENBE	
	Daniel	Faviet	DFAVIET	
	John	Chen	JCHEN	
	Ismael	Sciarra	ISCIARRA	
	Jose Manuel	Urman	JMURMAN	
	Luis	Popp	LPOPP	
	Den	Raphaely	DRAPHEAL	
row(s) 1 - 15 of 107 Next >				















9. Notice that the image is displayed inline in the browser. Click the **Back** button in your browser to return to the report. Note that the attachment content disposition works the same as in the form so you will not examine that option again.



10. Click **Edit Page**.

Maintain Employee Information

[Create](#)

Edit	First Name	Last Name	Email	Photo
	Steven	King	SKING	
	Neena	Kochhar	NKOCHHAR	Download
	Lex	De Haan	LDEHAAN	
	Alexander	Hunold	AHUNOLD	
	Bruce	Ernst	BERNST	
	David	Austin	DAUSTIN	
	Valli	Pataballa	VPATABAL	
	Diana	Lorentz	DLORENTZ	
	Nancy	Greenberg	NGREENBE	
	Daniel	Faviet	DFAVIET	
	John	Chen	JCHEN	
	Ismael	Sciarra	ISCIARRA	
	Jose Manuel	Urman	JMURMAN	
	Luis	Popp	LPOPP	
	Den	Raphaely	DRAPHEAL	

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11. Under Regions, select the **Report** link.

Page Rendering

Page

Page Name: Maintain Employee Information
Template: Application default

Title: Maintain Employee Information
Header Text:

HTML Header:
Footer Text:

HTML Body:
Build Option:

Help Text: No help is available for this
Authorization: No

Page Group:
Cached: No

Regions

Display Point: Page Template Body (3)

10 Maintain Employee Information Report

Buttons

12. Select the Edit icon for **PHOTO**.

Region Definition
Report Attributes
Print Attributes

Region Name: **Maintain Employee Information**

Show All
Column Attributes
Layout and Pagination
Sorting
Messages
Report Export

Column Attributes

Headings Type:
☐ Column Names
☐ Column Names (InitCap)
☒ Custom
☐ PL/SQL

	Alias	Link	Edit	Heading	Column Alignment	Heading Alignment
	EMPLOYEE_ID	✓		<input type="text" value="Edit"/>	left <input type="button" value="v"/>	<input type="text"/>
	FIRST_NAME			<input type="text" value="First Name"/>	left <input type="button" value="v"/>	<input type="text"/>
	LAST_NAME			<input type="text" value="Last Name"/>	left <input type="button" value="v"/>	<input type="text"/>
	EMAIL			<input type="text" value="Email"/>	left <input type="button" value="v"/>	<input type="text"/>
	PHOTO			<input type="text" value="Photo"/>	left <input type="button" value="v"/>	left <input type="text" value=""/>

When moving the last column further down, it will show up as the first column of your report.
When moving the first column up, it will be moved to the end of your report.

13. Under Column Formatting, select the **BLOB Download Format Mask** link.

Column Attributes: PHOTO

Cancel

Apply Changes

<

Show All

Definition

Formatting

Tabular Form Element

Lists of Values

Link

Authorization

Conditions

Comments

Column Definition

Column Name **PHOTO**

Column Heading

Show Column Heading Alignment

Compute Sum Column Alignment

Sortable Column

Include In Export

Column Formatting


Number / Date Format

[BLOB Download Format Mask](#)

CSS Class

CSS Style

14. Change the Format Mask to **IMAGE** and click **Apply**.



Close

Apply

* Format Mask	IMAGE
* BLOB Table	OEHR_EMPLOYEES
* BLOB Column	PHOTO
* Primary Key Column 1	EMPLOYEE_ID
Primary Key Column 2	
MIME Type Column	MIMETYPE
Filename Column	FILENAME
BLOB Last Updated Column	LAST_UPDATE_DATE
Character Set Column	
Content Disposition	Inline
Download Link Text	Download

Database table and column names are case sensitive

15. Click **Apply Changes**.

Report attributes updated.

Column Attributes: PHOTO

CancelApply Changes

Show AllDefinitionFormattingTabular Form ElementLists of ValuesLinkAuthorizationConditionsComments

Column Definition

Column NamePHOTOColumn HeadingPhotoShow ColumnYesHeading AlignmentleftCompute SumNoColumn AlignmentleftSortable ColumnNoInclude In ExportYes

Column Formatting

Number / Date FormatIMAGE:OEHR_EMPLOYEES:PHOTO:EMPLOYEE_ID::MIMETYPE:FILENAME:LAST

BLOB Download Format Mask

CSS ClassCSS Style

16. Click **Run Page**.

ORACLE Application Express

HomeApplication BuilderSQL Workshop

Home > Application Builder > Application 560 > Page 2 > Report Attributes







Page 2

Report column attributes updated.

17. Notice this time the image is inserted directly into the report itself.

Maintain Employee Information

Create

Edit	First Name	Last Name	Email	Photo
	Steven	King	SKING	
	Neena	Kochhar	NKOCHHAR	
	Lex	De Haan	LDEHAAN	
	Alexander	Hunold	AHUNOLD	
	Bruce	Ernst	BERNST	

Note: To modify the display attributes of the image (i.e. to make it smaller), you need to use the programmic way of including images. See the documentation at (http://download.oracle.com/docs/cd/E10513_01/doc/appdev.310/e10499/api.htm#CHDICGDA)

[Back to Topic List](#)

Summary

In this tutorial, you learned how to:

- ☒ Alter a table to add BLOB data
- ☒ Create a form with a report that contains the BLOB column

Related Information

To learn more about Application Express, you can review the following:

Related Documentation	Description
Online Help	To access this help, click the Help button displayed in the top right corner of Application Express. Search on topics of interest.
Release Notes	These notes contain important information not included in the Oracle Application Express documentation.
Installation Guide	This guide explains how to install and configure Oracle Application Express.
2 Day + Developer's Guide	This guide shows you how to set up a development environment or access a hosted demonstration environment to use with this guide. It then walks you through building an initial application, modifying it, and previewing it.
User's Guide	This guide describes how to use the Oracle Application Express development environment to build and deploy database-centric Web applications. Oracle Application Express turns a single Oracle database into a shared service by enabling multiple workgroups to build and access applications as if they were running in separate databases.
Advanced Tutorial	Tutorials with step-by-step instructions that explain how to create a variety of application components and entire applications using the Oracle Application Express development environment.

 **Place the cursor over this icon to hide all screenshots.**