

ORACLE APEX

IZGRADNJA POSLOVNIH APLIKACIJA

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AGENDA

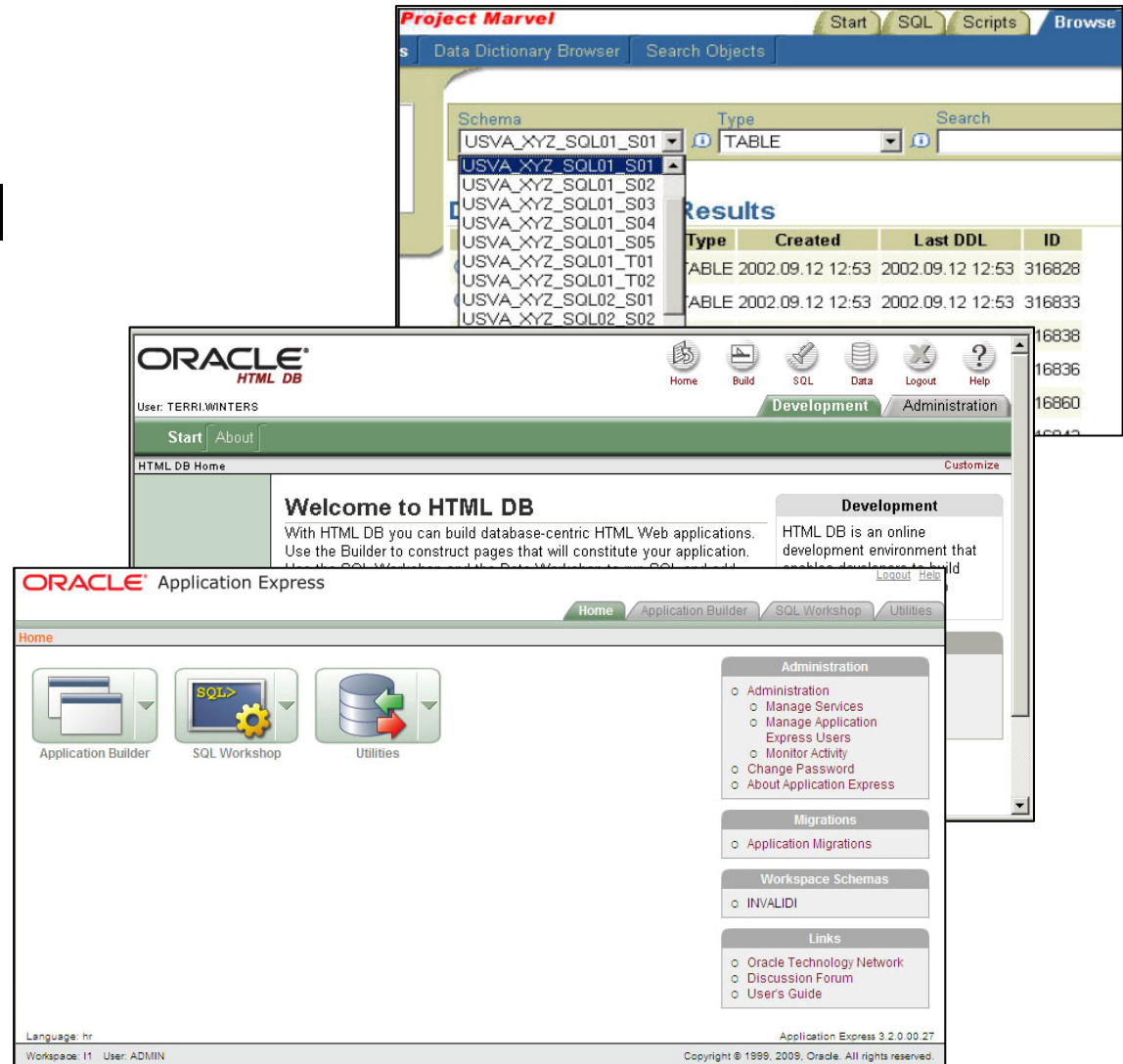


- Povijest
- Arhitektura
- Apex komponente
- Migracija
- JavaScript&AJAX
- Izvješćivanje
- APEX Security
- Lokalizacija

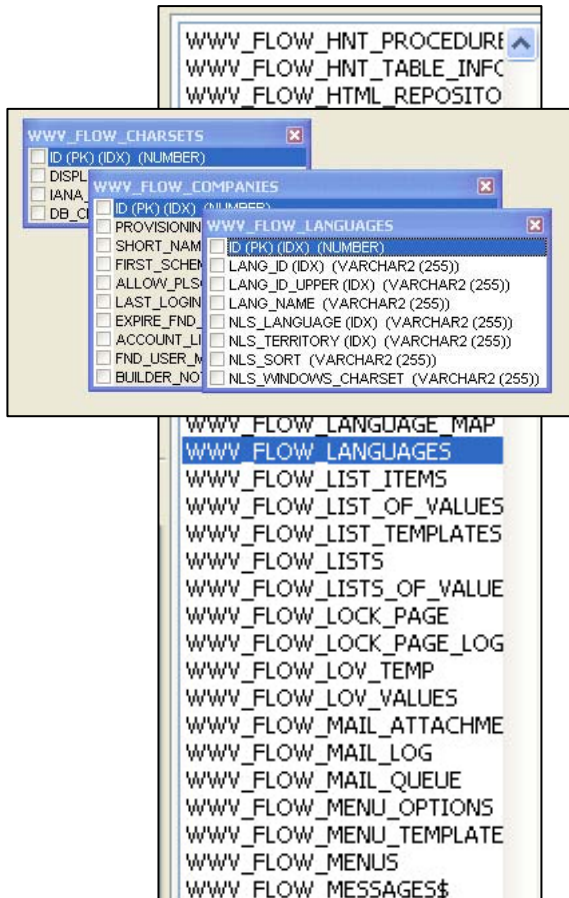
ORACLE® Application Express

POVIJEST

- Project Marvel
- HTML DB 1.5
(2004.)
- APEX
(2006.)
- APEX 3.2.
- APEX 3.2.1.



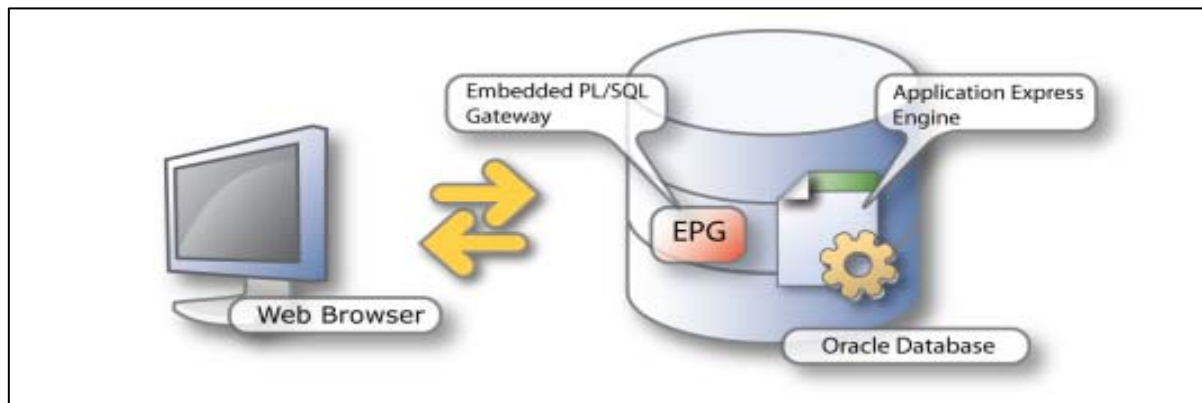
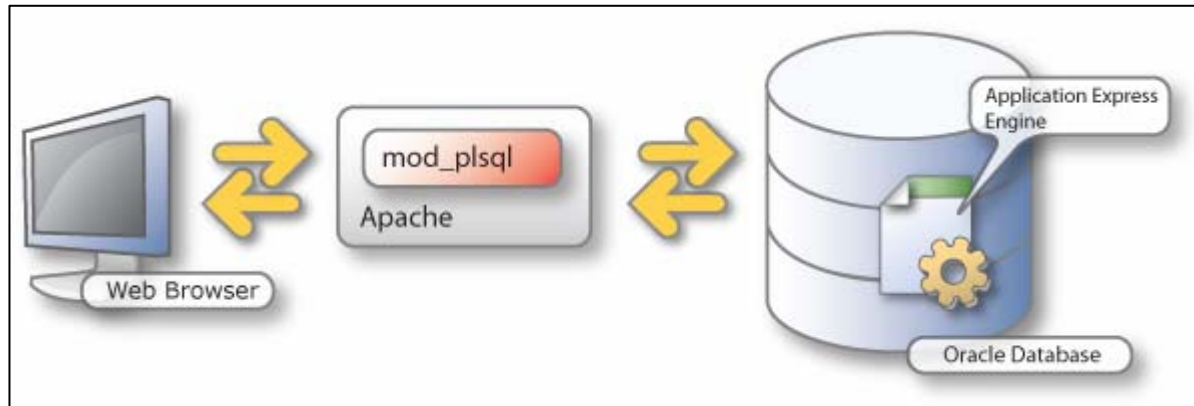
ARHITEKTURA



HP-UX



ARHITEKTURA



PLATFORMA

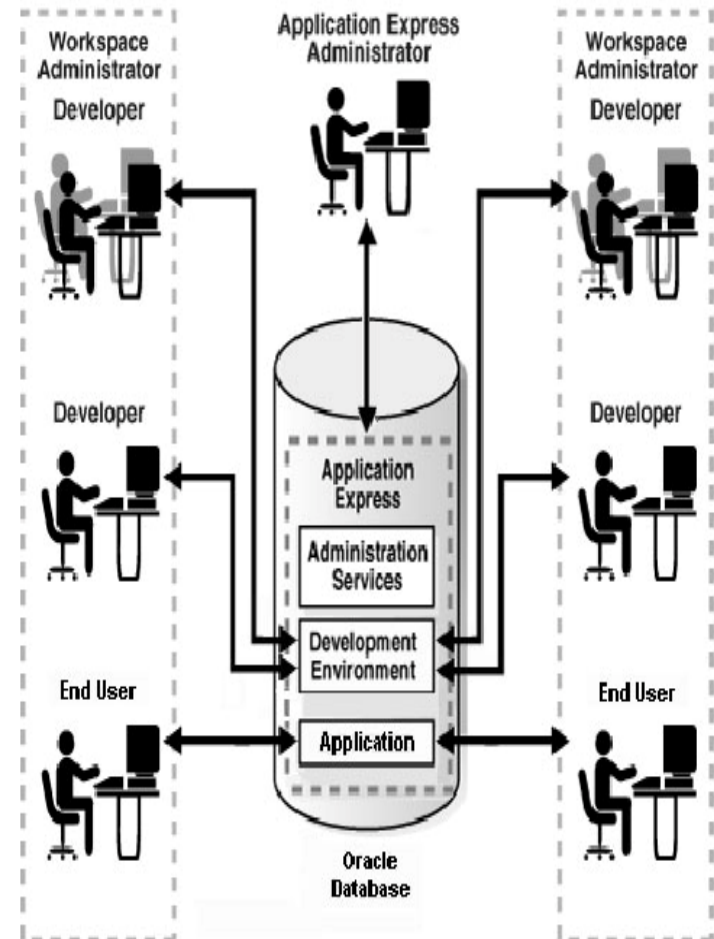


- Oracle XE
- Oracle 10g
- Oracle 11g



KORISNICI

- APEX Instance Admin
- Workspace Admin
- Application Developer
- Application User



WORKSPACE



- Skladište za APEX aplikacije
- Omogućava rad više developera na više projekata
- Omogućava prenošenje APEX aplikacija sa svim definicijama na drugu instancu

ORACLE Application Express

The screenshot shows the 'Create Workspace' wizard in Oracle Application Express. The breadcrumb trail is 'Home > Manage Workspaces > Create Workspace'. On the left, there is a vertical navigation pane with buttons: 'Identify Workspace', 'Identify Schema' (which is highlighted), 'Identify Administrator', and 'Confirm Request'. The main content area is titled 'Create Workspace' and contains the following text: 'Select whether or not the schema already exists. If the schema exists, select the schema from the list. If the schema does not exist, enter a name and password and choose the size of the associated tablespace to be created.' Below this text are three fields: 'Re-use existing schema?' with a dropdown menu set to 'No', '* Schema Name' with a text input field containing 'ISMS', and '* Schema Password' with a masked password field. At the bottom, there is a '* Space Quota (MB)' field with a dropdown menu set to '250'. Navigation buttons 'Cancel', '< Previous', and 'Next >' are located at the top right of the main content area.

TRI SLOJA

- APEX aplikacija
- Statične datoteke (slike, CSS...)
- Objekti baze i podaci spremljeni u shemama

STATIČNE DATOTEKE



- CSS datoteke
- JavaScript biblioteke
- Slike (JPEG, GIF, BMP, PNG...)
- Flash datoteke

- Smještaj na datotečnom sustavu, pristup preko OHS (Oracle HTTP Server)
- Upload u bazu preko Application Builder-a

KOMPONENTE



Application Builder



SQL Workshop

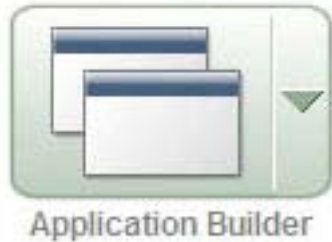


Utilities

Application Builder SQL Workshop Utilities



KOMPONENTE



ORACLE® Application Express

Home Application Builder SQL Workshop Utilities

Home > Application Builder > Application 122

Page 1

Application: 122 - ADMIN 01

Run Application Supporting Objects Shared Components Export / Import

Page | View Icons Display 15 Go Create Page >

1 - Serveri	2 - Podaci o serverima	3 - Serveri	4 - Podaci o serverima	5 - Diskovi
6 - Sifarnici	7 - SIF APLI	8 - SIF BAZA	9 - PEC	10 - SIF OS
11 - SIF LOKACIJA	12 - SIF NAMJENA	13 - SIF PEC	14 - SIF MJERA	15 - SIF BAZA

1-15 16-30 31-31

ADMIN 01

Application Express 3.2.0.00.27

Workspace: SRV User: ADMIN Language: hr Copyright © 1999, 2009, Oracle. All rights reserved.

Tasks

- Delete this Application
- Copy this Application
- Page Groups
- Page Locks
- User Interface Defaults
- Export Repository
- Application Reports

Recent

- 6. Sifarnici
- 33. SIF_PEC
- 32. SIF_OS
- 31. SIF_NAMJENA
- 30. SIF_MJERA
- 29. SIF_LOKACIJA
- 8. SIF_BAZA
- 7. SIF_APLI

KOMPONENTE





SQL Workshop

ORACLE Application Express [Logout](#) [Help](#)

Home Application Builder **SQL Workshop** Utilities

Home > SQL Workshop > **SQL Commands** Schema **SRV** Component **SQL Commands**

Autocommit Display **10**   **Save** **Run**

```
select 'PRIMJER' from dual;
```

Results Explain Describe Saved SQL History

'PRIMJER'
PRIMJER

1 rows returned in 0.00 seconds [Download](#)

KOMPONENTE



ORACLE[®] Application Express Logout Help

Home Application Builder SQL Workshop Utilities

Home > Application Builder > Application 122 > Shared Components Page 10

Application

- Definition
- Comments

Logic

- Application Items
- Application Processes
- Application Computations
- Web Service References
- Build Options

Security

- Authentication Schemes
- Authorization Schemes
- Session State Protection
- Edit Security Attributes

Globalization

- Translate Application
- Text Messages
- Edit Attributes

Navigation

- Navigation Bar
- Navigation Bar Entries
- Tabs
- Lists
- Breadcrumbs
- Trees

User Interface

- Themes
- Templates
- User Interface Defaults
- Lists of Values
- Shortcuts

Reports

- Report Queries
- Report Layouts

Files

- Cascading Style Sheets
- Images
- Static Files

Shared Components

You can use shared components on any page in an application. This page provides a list of available shared components.

Tasks

- Export Application Components
- Manage Supporting Objects

MIGRACIJA



MS ACCESS



MS EXCEL



ORACLE FORMS&REPORTS

MIGRACIJA



Microsoft Excel - report_1

Datoteka Uređivanje Pogled Umetanje Oblikovanje Alati Podaci Prozor Pomoć

K1 =

	A	B	C	D	E	F	G	H	I	J
1	ID	Ime servera	IP Adresa	Part no.	Serijski broj	Inventurni broj	Model	Lokacija	OS	Namjena
2	1	DOT	10.11.65.53	124345	6789	12345	ProLiant DL380 GL	TSR1 - server sala	MS WIN (32bit)	nepoznato
3	2	PARSON	10.11.20.154	213	22	6789	BL460c G1	KOD MENE DOMA	MS WIN (32bit)	aplikacijski server
4	3	CORGI	10.11.23.234	321	43	56743	RX860	Nepoznato	HP-UX	nepoznato
5										

ORACLE® Application Express

Home Application Builder SQL Workshop Utilities


Home > Create Application

Method
Define Application
Confirm

Create Application [Cancel] [Next >]

An application is a collection of pages linked together using tabs, buttons, or hypertext links. The pages in an application share a common session state definition and authentication method.

Create Application Create from Spreadsheet Demonstration Application



Create Application
Create an application by defining pages, selecting an authentication scheme, and specifying a user interface. Pages may be based on tables, queries, or drill-down queries.

From a Spreadsheet:
Create an application based on spreadsheet data. Upload or paste spreadsheet data to create a table. The application will feature query, insert, update, and analysis capabilities on the newly created table.

Demonstration Application:
Install or uninstall demonstration applications. Use these applications to learn how to build applications.

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ORACLE® Application Express Logout Help

Home Application Builder SQL Workshop Utilities

Home > Create Application

Method
▼
Load Method
▼
Data
▼
Table Properties
▼
User Interface Defaults
▼
Summary Page
▼
Application Options
▼
User Interface Theme
▼
Confirm

Cancel < Previous Next >

Create Application

This page previews how your table will look. You can modify the suggested table name, change the column names or datatypes, or specify which columns to include.

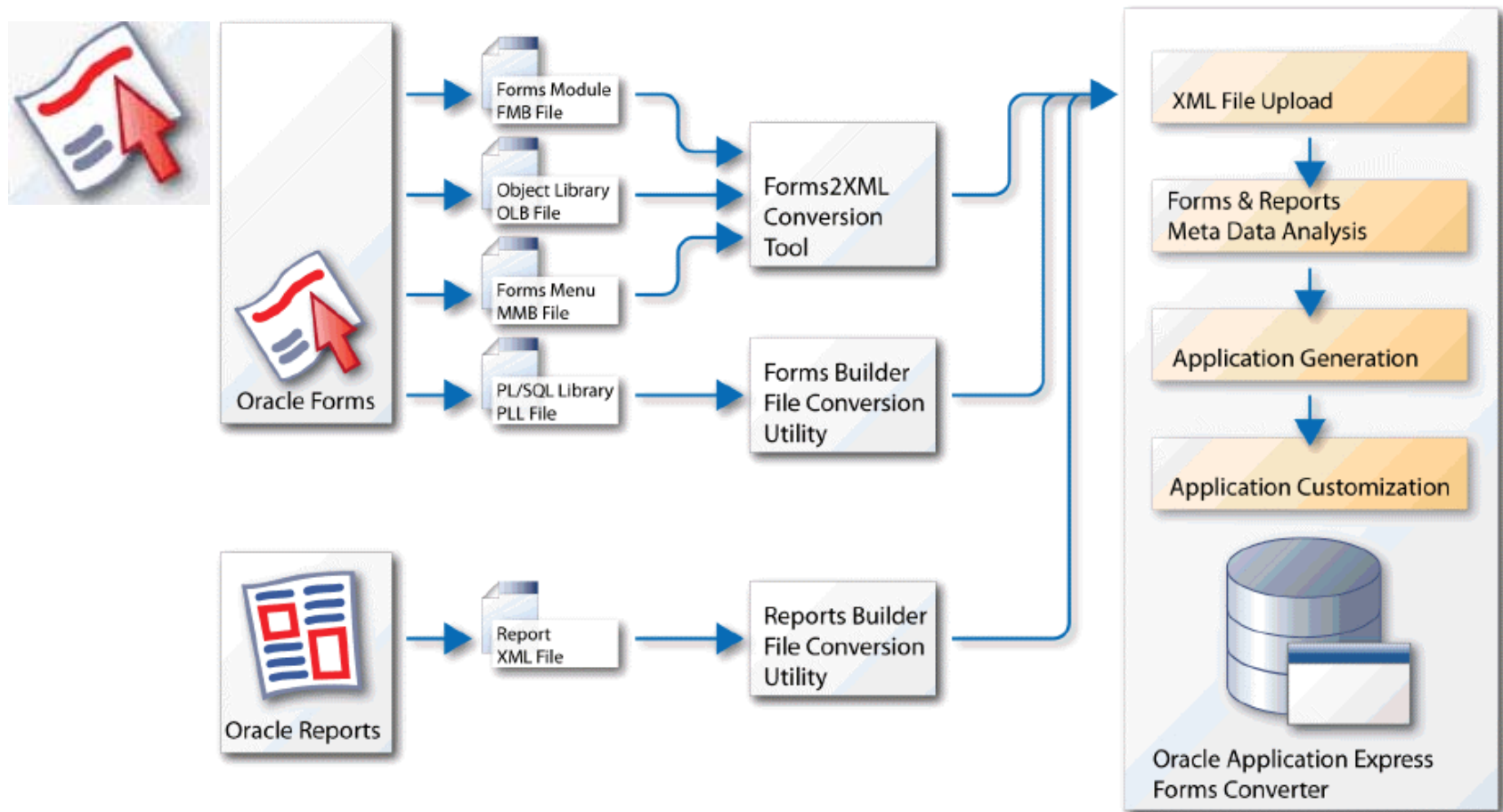
* Schema ▼

* Table Name Preserve Case

Set Table Properties

Column Names	<input type="text" value="ID"/>	<input type="text" value="Ime_servera"/>	<input type="text" value="IP_Adresa"/>	<input type="text" value="Part_no"/>	<input type="text" value="Serijski_broj"/>
Data Type	<input type="text" value="NUMBER"/> ▼	<input type="text" value="VARCHAR2"/> ▼	<input type="text" value="VARCHAR2"/> ▼	<input type="text" value="NUMBER"/> ▼	<input type="text" value="NUMBER"/> ▼
Format	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Column Length	<input type="text" value="1"/>	<input type="text" value="30"/>	<input type="text" value="30"/>	<input type="text" value="30"/>	<input type="text" value="30"/>
Upload	<input type="text" value="Yes"/> ▼	<input type="text" value="Yes"/> ▼	<input type="text" value="Yes"/> ▼	<input type="text" value="Yes"/> ▼	<input type="text" value="Yes"/> ▼
Row 1	1	DOT	10.11.65.53	124345	6789
Row 2	2	PARSON	10.11.20.154	213	22
Row 3	3	CORGI	10.11.23.234	321	43

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ORACLE Application Express Logout Help

Home Application Builder SQL Workshop Utilities

Home > Application Migrations > Create Migration Project

Project Details

Confirm

Create Migration Project

Cancel Next >

* Project Name

* Type
 - Select Type -
 Access
 Forms

* Schema
 Locate the Forms Module XML file generated by the Forms2XML conversion tool. [Click here](#) for information on how to generate a Forms Module XML file.

* Forms Module XML File

Tasks

- [Download Exporter for Microsoft Access](#)
- [How to Migrate Microsoft Access Applications](#)
- [How to Convert Oracle Forms Applications](#)
- [Sample Files](#)

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ORACLE Application Express [Logout](#) [Help](#)

[Home](#) [Application Builder](#) [SQL Workshop](#) [Utilities](#)

Home > Application Migrations > Project: ORCLForms

Project created. X

Search: Rows: 15

Edit	Type	File Name	Blocks	DB Blocks	Items	Triggers	Record Groups	Lists of Values	Alerts	Program Units	Component Count	Completed Components	Percent Complete
	FMB	udruqe_fmb.xml	1	1	7	5	0	0	0	0	17	4	23.53

1 - 1

Forms Conversion

Tasks

- Delete Project
- Edit Project Details and Applicability
- About Forms Conversion
- Set Application Defaults

Recent

- udruqe_fmb.xml

Completion Status

Components: 17
Completed: 4
Percent Complete: 23.53

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ORACLE® Application Express Logout Help

Home Application Builder SQL Workshop Utilities

Home > Application Migrations > Project: ORCLForms > Forms Objects > Blocks > Block Details

Cancel Apply Changes

Show All Block Details Annotations **Block Items** Block Triggers

Block Items

Edit	Item Type	Item Prompt	Column Name	Triggers	Database Item	Name	Complete	Applicable
	Display Item	-	ID_UDRUGE	0	Yes	ID_UDRUGE	No	Yes
	Text Item	-	NAZIV_UDRUGE	0	Yes	NAZIV_UDRUGE	No	Yes
	Text Item	-	ADRESA_U	0	Yes	ADRESA_U	No	Yes
	Text Item	-	GRAD	0	Yes	GRAD	No	Yes
	Push Button	-	-	1	Yes	PUSH_BUTTON488	No	Yes
	Push Button	-	-	1	Yes	ITEM489	No	Yes
	Push Button	-	-	1	Yes	ITEM19	No	Yes
				3				

1 - 7

Block Status

Convert As: **Tabular Form**
Blocks: **1**
Items: **7**
Triggers: **5**
Components: **13**
Completed: **0**
Complete: **0.00%**

Block Tasks

- Set All Block Items Completeness and Applicability
- Set All Block Triggers Completeness and Applicability

All Blocks

- UDRUGE

Audit

1 - 1

MIGRACIJA



ORACLE® Application Express [Logout](#) [Help](#)

[Home](#) [Application Builder](#) [SQL Workshop](#) [Utilities](#)

Home > Application Migrations > Project: ORCLForms > **Project Details**

Cancel Delete Apply Changes

Show All Project Details Component Applicability **Trigger Applicability**

Trigger Applicability

Changing the applicability will update all components within your project to the new value, irrespective of their current setting.

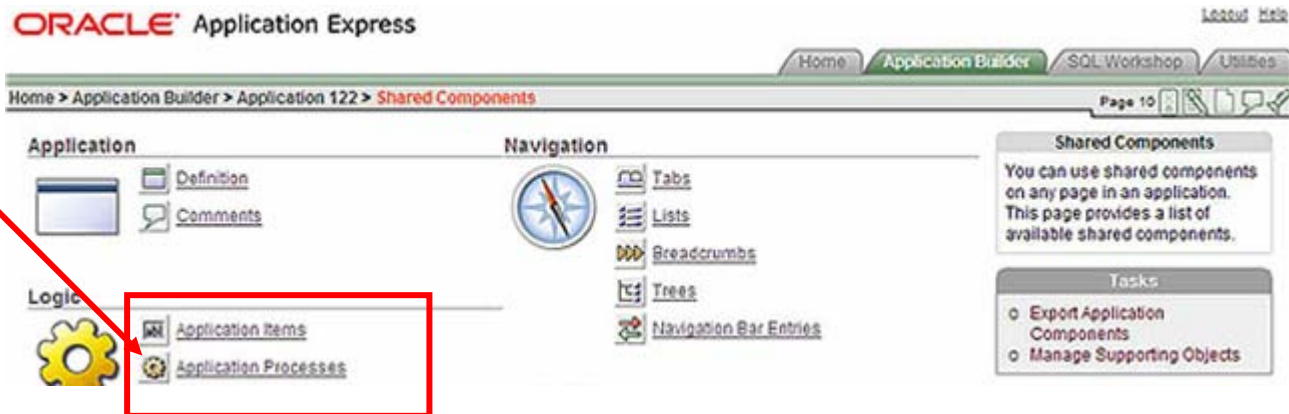
Trigger Name ▲	Form Level	Block Level	Item Level
KEY-CLRBLK	No ▼	No ▼	No ▼
KEY-CLRFRM	Yes ▼	No ▼	No ▼
KEY-CLRREC	Yes ▼	Yes ▼	No ▼
KEY-COMMIT	No ▼	No ▼	No ▼
KEY-CQUERY	No ▼	No ▼	No ▼
KEY-CRREC	No ▼	No ▼	No ▼
KEY-DOWN	No ▼	No ▼	No ▼
KEY-DUP-ITEM	No ▼	No ▼	No ▼
KEY-DUPREC	No ▼	No ▼	No ▼
KEY-EDIT	No ▼	No ▼	Yes ▼
KEY-ENTER	No ▼	No ▼	No ▼

Completion Status

Components: 17
Completed: 4
Percent Complete: 23.53

JAVASCRIPT&AJAX

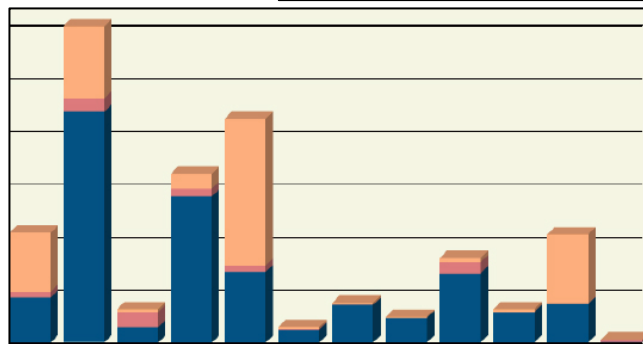
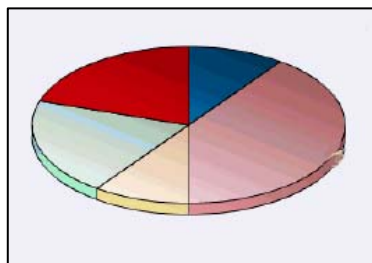
- htmldb_Get
- Application processes
(“On Demand: Run this application process when requested by a page process”)
- PL/SQL kod
- JavaScript akcija
(“onKeyUp”)



IZVJEŠĆIVANJE

- Interaktivni izvještaji
- Grafovi

(HTML, SVG, FLASH)



Empno	Ename	Job	Mgr	Hiredate	S
7839	KING	PRESIDENT	-	17-NOV-81	5
7698	BLAKE	MANAGER	7839	01-MAY-81	2
7782	CLARK	MANAGER	7839	09-JUN-81	2
7566	JONES	MANAGER	7839	02-APR-81	2
7788	SCOTT	ANALYST	7566	09-DEC-82	3
7902	FORD	ANALYST	7566	03-DEC-81	3
7369	SMITH	CLERK	7902	17-DEC-80	1
7499	ALLEN	SALESMAN	7698	20-FEB-81	1
7521	WARD	SALESMAN	7698	22-FEB-81	1
7654	MARTIN	SALESMAN	7698	28-SEP-81	1
7844	TURNER	SALESMAN	7698	08-SEP-81	1
7876	ADAMS	CLERK	7788	12-JAN-83	1
7900	JAMES	CLERK	7698	03-DEC-81	1
7934	MILLER	CLERK	7782	23-JAN-82	1

Rows 15 Go

- Select Columns
- Filter
- Sort
- Control Break
- Highlight
- Compute
- Aggregate
- Chart
- Flashback
- Save Report
- Reset
- Help
- Download

IZVJEŠĆIVANJE

- Oracle BI Publisher
- Oracle containers form Java EE (OC4J)
Apache FOP (besplatan)
- XSL-FO



TEME



Create Theme

Cancel < Previous Next >

Show All Themes

Theme:

- Theme 1
- Theme 2
- Theme 3
- Theme 4
- Theme 5
- Theme 6
- Theme 7
- Theme 8
- Theme 9
- Theme 10
- Theme 11
- Theme 13
- Theme 14
- Theme 15
- Theme 16
- Theme 17
- Theme 18
- Theme 19
- Theme 20

The screenshot shows a 'Create Theme' dialog box with a grid of 20 theme preview cards. Each card has a radio button next to its label. Theme 13 is selected, indicated by a green dot in its radio button. The preview cards show various UI designs with different color schemes and layouts. At the bottom right of the dialog, there is a large play button icon.

PREDLOŠCI



ORACLE® Application Express

[Logout](#) [Help](#)

Templates Utilization Subscription Publish History

Template Name Theme 16. Dark Blue Referenced All Templates
Type - All - Since - All - Subscribed All Templates

Type	Name	References	Updated	Updated By	Subscribed	Default	Theme	Preview	Copy
Breadcrumb	Breadcrumb Menu		13 minutes ago	admin	-	-	16	-	
	Hierarchical Menu		13 minutes ago	admin	-	-	16	-	
Button	Button		13 minutes ago	admin	-	-	16	-	
	Button, Alternative 1		13 minutes ago	admin	-	-	16	-	
	Button, Alternative 2		13 minutes ago	admin	-	-	16	-	
Calendar	Calendar		13 minutes ago	admin	-	-	16	-	
	Calendar, Alternative 1		13 minutes ago	admin	-	-	16	-	
	Small Calendar		13 minutes ago	admin	-	-	16	-	
Label	No Label		13 minutes ago	admin	-	-	16	-	
	Optional Label		13 minutes ago	admin	-	-	16	-	
	Optional Label with Help		13 minutes ago	admin	-	-	16	-	
	Required Label		13 minutes ago	admin	-	-	16	-	
List	Required Label with Help		13 minutes ago	admin	-	-	16	-	
	Button List		13 minutes ago	admin	-	-	16	-	
	DHTML Menu with Sublist		13 minutes ago	admin	-	-	16	-	
	DHTML Tree		13 minutes ago	admin	-	-	16	-	
	Horizontal Images with Label List		13 minutes ago	admin	-	-	16	-	
	Horizontal Links List		13 minutes ago	admin	-	-	16	-	
	Pull Down Menu with Image		13 minutes ago	admin	-	-	16	-	

Templates

The Application Express engine constructs the appearance of each page in an application using Templates. Templates define how pages, page controls, and page components display.

To edit template attributes, select the template name. To preview a template, click the Run icon.

- Tasks**
- Edit Theme 16
 - Replace templates in this application with templates from another application.
 - View page template region position utilization
 - Theme Reports
 - Replace Templates
 - Unsubscribe Templates

APEX SECURITY



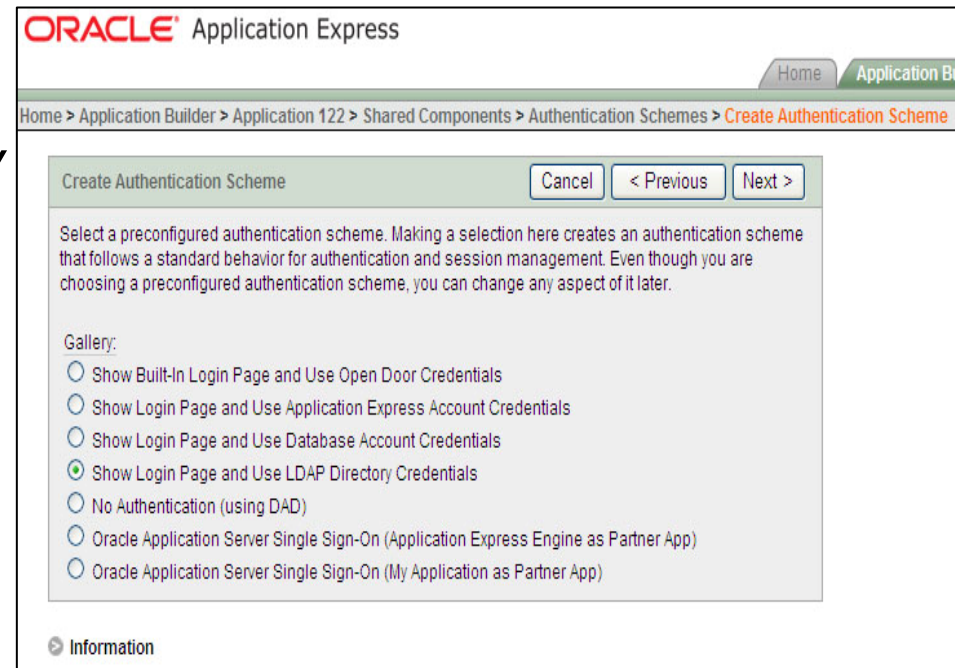
- Autentifikacija

(LDAP, SSO)

Oracle Internet Directory

Microsoft Active Directory

*Vlastite autentifikacijske
funkcije*



APEX SECURITY

- Autorizacija

ORACLE Application Express

Home > Application Builder > Application 122 > Shared Components > Authorization Schemes >

Creation Method
Details

Create Authorization Scheme

Authorization Scheme

Application: 122 ADMIN 01

* Name

Authorization Scheme

* Scheme Type - Select Authorization Scheme Type -
- Select Authorization Scheme Type -

* Expression 1

Exists SQL Query
NOT Exists SQL Query
Item in Expression 1 is NULL
Item in Expression1 is NOT NULL
PL/SQL Function Returning Boolean
Value of Preference in Expression 1 Equals Expression 2
Value of Preference in Expression 1 Does NOT Equal Expression 2
Value of item in Expression 1 Equals Expression 2
Value of Item in Expression 1 Does NOT Equal Expression 2

Expression 2

* Identify error message displayed when scheme violated

Evaluation Point

Validate authorization scheme

Once per page view
 Once per session

- Select Authorization Scheme Type -

- Select Authorization Scheme Type -

Exists SQL Query
NOT Exists SQL Query
Item in Expression 1 is NULL
Item in Expression1 is NOT NULL
PL/SQL Function Returning Boolean
Value of Preference in Expression 1 Equals Expression 2
Value of Preference in Expression 1 Does NOT Equal Expression 2
Value of item in Expression 1 Equals Expression 2
Value of Item in Expression 1 Does NOT Equal Expression 2

LOKALIZACIJA



- Višejezičnost
- Application Builder
- Aplikacija (*XLIFF, APEX_LANG pkg*)

The screenshot shows the Oracle Application Express interface for the 'Translate Application' task. The page title is 'ORACLE Application Express' with 'Logout Help' links. The breadcrumb trail is 'Home > Application Builder > Application 122 > Shared Components > Translate Application'. The main content area is titled 'How to Translate' and includes a globe icon and a numbered list of six steps: 1. Map your primary language application to a translated application; 2. Seed and export the translation text of your application into a translation file; 3. Translate text identified in translation file; 4. Apply your translation file and publish; 5. Optionally translate messages which are used by PL/SQL procedures and functions; 6. Optionally identify any data that needs to be dynamically translated to support SQL based lists of values. On the right side, there are three panels: 'Translate Application' with a description, 'Navigate' with a list of links (Translation Home, Translation Mappings, Export Translations, Export XLIFF, Import Translations, Message Definition, Message Translation, Dynamic Translations), and 'Translation Utilities' with a list of options (Manage Messages Repository, Manage Dynamic Translation Repository, Manually Edit Translations).

ZAKLJUČAK

- Pažnje vrijedan produkt
- Dobre ambicije i perspektive
- Moćan i nezahtjevan alat za brzu izradu jednostavnih web aplikacija
- Osvježenje u svijetu komercijalnih web razvojnih alata za poslovne aplikacije

ORACLE Application Express



HVALA NA PAŽNJI!
PITANJA



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