

Forms 11g

Section	Title	Page
One	Introduction to Forms	2
Two	Running Forms in 11g	4
	– Starting OPMN	5
	– Starting Weblogic Server	7
	– Runform,.htm in Forms 11g	9
	– Runform,.htm Parameters	11
Three	Using Forms 11g in a Browser	17
	– Forms 11g in a Browser	18
	– Forms 11g Browser Menu Bar	19
	– Forms 11g Menu and Toolbars	21
	– Querying Records in Forms 11g	22
	– Inserting Records in Forms 11g	24
	– Counting Query Hits in Forms 11g	25
	– Using List of Values in Forms 11g	26
	– Editing Values	27
	– Forms 11g Locking Records	28
	– Problem with Running Forms in a Browser	30
	– <i>Exercise One</i>	31
Four	Forms 11g Builder Interface	42
	– Topography of Forms 11g	45
	– Toolbar	46
	– Object Navigator	47
Five	Using Forms 11g Wizards	49
	– Using the Data Block Wizard in Forms 11g	51
	– Using the Layout Wizard in Forms 11g	60
Six	Using Forms 11g	68
	– Saving Modules in Forms 11g	69
	– Opening Modules in Forms 11g	70
	– Running Modules in Forms 11g	71
	– Look and Feel Using Formsweb.cfg	74
	– <i>Exercise Two</i>	76
Seven	The Layout Editor in Forms 11g	79
	– Layout Types	80
	– The Form Layout	81
	– The Tabular Layout	82
	– Layouts	83
	– The Layout Editor in Forms 11g	84
	– Anatomy	85
	– Toolbar	86
	– Formatting Toolbar	87
	– Tool Palette	88
	– Rulers	89
	– Markers and Ruler Guides	91
	– Grid	92
Eight	Objects in Forms 11g	93
	– Introduction to Windows	94
	– Introduction to Canvases	95
	– Canvas Types	96
	– Content Canvas	97
	– Stacked Canvas	98
	– Tab Canvas	99
	– Toolbar Canvas	101
	– Canvases on the Object Navigator	102
	– Viewing the Canvas and the Window	103
	– Blocks	109

Forms 11g

Section	Title	Page
	– Data Blocks	110
	– Control Blocks	111
	– Items	112
	– Program Units	113
	– Procedures	114
	– Functions	115
	– Packages	116
	– Package Body	117
Nine	Forms 11g Property Palettes	118
	– Invoking Property Palettes	120
	– Anatomy of the Palette	121
	– Palette Toolbar	126
	– Opening Several Palettes	129
Ten	Master-Detail Relations in Forms 11g	130
	– Introduction	131
	– Creating in Forms 11g	132
	– Structure of the Processing	139
	– Appearance in Forms 11g	142
	– Creating Relations Manually	143
	– Prevent Masterless Operation in Forms 11g	145
	– <i>Exercise Three</i>	146
Eleven	Creating new Canvases in Forms 11g	153
Twelve	PL/SQL in Forms 11g	158
	– Introduction	159
	– Referencing Forms Items	160
	– Referencing Stored Programs	161
	– Database Stored Programs	162
	– Local Variables	163
	– Performing DML	166
	– Forms Packages	167
	– PL/SQL Editor	168
	– Colour Coding in PLSQL Editor	169
	– Compiling Programs	170
	– Compilation Errors	171
	– Commenting Code	174
	– Changing Program Names	175
	– Navigation of Programs	176
Thirteen	Syntax Palette	177
	– The Syntax Palette in Forms 11g	178
	– Anatomy of the Syntax Palette in Forms 11g	179
	– Using the Syntax Palette in Forms 11g	181
Fourteen	Triggers in Forms 11g	182
	– Introduction	183
	– Positioning within Forms	184
	– Triggers at Form Level	185
	– Triggers at Block Level	186
	– Triggers at Item Level	187
	– Trigger Execution Hierarchy	188
	– Temporarily Disabling Forms 11g Triggers	192
	– Creating Triggers in Forms 11g	193
	– Implicit Firing	195
	– PLSQL in Forms 11g Triggers	198
	– Key-Others Trigger	199

Forms 11g

Section	Title	Page	
Fifteen	Essential Triggers in Forms 11g	201	
	– Validation Triggers	202	
	– Post-Change	203	
	– When-Validate-Item	204	
	– When-Validate-Record	206	
	– Block Triggers in Forms 11g	207	
	– Post-Block Trigger	208	
	– Pre-Block Trigger	209	
	– When-Clear-Block Trigger	210	
	– When-New-Block-Instance Trigger	211	
	– Record Event Triggers	212	
	– Post-Record Trigger	213	
	– Pre-Record Trigger	214	
	– When-Create-Record Trigger	215	
	– When-Database-Record Trigger	216	
	– When-New-Record-Instance Trigger	217	
	– When-Remove-Record Trigger	218	
	– Query Triggers in Forms 11g	219	
	– Pre-Query Trigger	220	
	– Post-Query Trigger	221	
	– Using Smart Triggers	223	
	Sixteen	Built-in Packages in Forms 11g	225
– Introduction		226	
– Message		230	
– Pause		231	
– Form_Trigger_Failure		232	
– Bell		234	
– Synchronize		235	
– Navigation Functions		237	
– Go-Block		240	
– Go-Item		242	
– Next and Previous		244	
– Next_Record and Previous_Record		245	
– Next_Block and Previous_Block		246	
– Next_Item and Previous_Item		247	
– Form_Success		248	
– DML Commands		250	
– Record Selection		251	
– Do_Key		252	
– Logon and Logout		253	
– Cursor		256	
Seventeen		Manipulating Attributes of Objects in Forms 11g	258
		– Introduction	259
	– Changing Properties in Forms 11g	261	
	– Get_Item_Property in Forms 11g	263	
	– <i>Exercise Four</i>	264	
Eighteen	Text and Display Items in Forms 11g	267	
	– Text Item	268	
	– Display Item	269	
	– Creating in Forms 11g	270	
	– Format Masks in Forms 11g	271	
	– Calculated Values in Forms 11g	272	
	– Calculation Mode in Forms 11g	273	
	– Summary Calculations in Forms 11g	275	
	– Creating in Layout Editor	277	

Forms 11g

Section	Title	Page
	– Initial Values in Forms 11g	278
	– Control Items in Forms 11g	280
Nineteen	Forms 11g Attributes	282
	– Navigation Attributes	284
	– Database Attributes	285
	– Item Attributes	287
	– <i>Exercise Five</i>	289
Twenty	Record Groups in Forms 11g	302
	– Introduction	303
	– Creating Dynamic Record Groups	304
	– SQL Style in Record Groups	305
	– Creating Static Record Groups	306
Twenty One	List of Values in Forms 11g	308
	– Introduction	309
	– Assigning Values to LOVs	311
	– Creating LOVs in Forms 11g	313
	– Forms 11g LOV Wizard	314
	– Using Query Builder in Forms 11g	316
	– Completing the LOV Wizard	325
	– Creating LOVs Manually	333
	– Column Mapping in LOVs	334
	– Attributes of an LOV	335
	– Programmatically Displaying LOVs	336
	– Key-Listval Trigger	337
	– <i>Exercise Six</i>	338
Twenty Two	Gui Items in Forms 11g	343
	– Introduction	344
	– Creating a Check Box	345
	– When-Checkbox-Changed Trigger	346
	– Creating Radio Buttons	347
	– Problems with Radio Groups	350
	– When-Radio-Changed Trigger	351
	– Creating List Items	352
	– Creating Poplists	354
	– Creating Combo Box	357
	– List Items Triggers	358
	– When-List-Activated Trigger	359
	– When-List-Changed Trigger	360
	– Forms 11g Buttons	361
	– When-Button-Pressed Trigger	363
Twenty Three	Mouse Triggers in Forms 11g	364
	– When-Mouse-Up/When-Mouse-Down	367
	– Mouse Movements	368
	– <i>Exercise Seven</i>	369
Twenty Four	IDs in Forms 11g	378
	– Introduction	379
	– Find_Item	380
	– Testing ID_NULL in Forms 11g	382
Twenty Five	Error and Message Handling in Forms 11g	383
	– User Exceptions	387
	– Forms Errors	390
	– Database Errors	392
	– SQL Errors	395
	– Error Triggers	397
	– On-Error Trigger	398

Forms 11g

Section	Title	Page
	- On-Message Trigger	400
Twenty Six	Alerts in Forms 11g	402
	- Introduction	403
	- Alert Styles in Forms 11g	406
	- Displaying Alerts in Forms 11g	407
	- Alert Built-Ins	409
	- Set_Alert_Property	410
	- Set_Alert_Button_Property	411
Twenty Seven	Timers in Forms 11g	412
	- Introduction	413
	- Creating Timers in Forms 11g	415
	- Modifying or Deleting Timers	416
	- When-Timer-Expired Trigger in Forms 11g	417
	- Testing Timers in Forms 11g	418
	- <i>Exercise Eight</i>	419
Twenty Eight	System Variables in Forms 11g	425
	- Introduction	426
	- Accessing Variables	427
	- Displaying Variables	429
	- Get_Application_Property	431
	- Set_Application_Property	433
	- Initial Values	434
Twenty Nine	Changing the Window in Forms 11g	435
	- Set_window_property	436
Thirty	Sub-Classing in Forms 11g	437
	- Introduction	438
	- Dragging and Dropping	440
	- Pathnames	441
	- Object Attributes	443
Thirty One	Object Libraries in Forms 11g	444
	- Introduction	445
	- Creating Object Libraries	446
	- Populating Object Libraries	447
	- Commenting Object Libraries	449
	- Using Object Libraries	450
	- Maintaining Object Libraries	451
	- SmartClasses	452
	- Creating SmartClasses	453
Thirty Two	Variables and Parameters in Forms 11g	455
	- Introduction	456
	- Pre-Defined Parameters	457
	- Using Pre-Defined Parameters	460
	- Dynamic Parameters	461
	- Creating Dynamic Parameters	464
	- Dynamic Parameters Built-Ins	466
	- Global Variables	467
	- Using Global Variables	469
	- Removing Global Variables	472
Thirty Three	Reports in Forms 11g	473
	- Create a new Report Module	476
	- Using an Existing Report Module	477

Forms 11g

Section	Title	Page	
Thirty Four	Calling Modules in Forms 11g	479	
	- Types of Calls	482	
	- Open_Form	488	
	- Call_Form	496	
	- New_Form	492	
	- Run_Report_Object	495	
	- Closing Called Forms Modules	499	
	- Exit_Form	501	
	- Close_Form	503	
	- Problems when calling Forms 11g modules	504	
	- When-Window-Activated Trigger	505	
	- Web.Show_Document	505	
	- <i>Exercise Nine</i>	507	
	Thirty Five	PL/SQL Libraries in Forms 11g	513
- Introduction		514	
- Populating PLSQL Libraries		516	
- Attaching PLSQL Libraries		517	
- Updating PLSQL Libraries		521	
- Missing PLSQL Libraries		523	
- Removing PLSQL Libraries		525	
Thirty Six	Generic Coding in Forms 11g	526	
	- Introduction	527	
	- Name_in	529	
Thirty Seven	Visual Items in Forms 11g	532	
	- Copy	531	
Thirty Eight	Visual Items in Forms 11g	532	
	- Image Item	533	
	- Read_Image_File	535	
	- Image Item Triggers	537	
	- LOBS in Forms	538	
	- Using LOBS in Forms	540	
	- <i>Exercise Ten</i>	542	
Thirty Eight	Visual Items in Forms 11g	547	
	- Introduction	548	
	- Creating Visual Attributes	549	
	- Visual Attributes Properties	550	
Thirty Nine	Visual Items in Forms 11g	551	
	- Assigning Visual Attributes	551	
Thirty Nine	Hierarchical Tree Items in Forms 11g	552	
	- Introduction	553	
	- Creating Tree Items	556	
	- Data Structure	560	
	- Ftree.Populate_Tree	561	
	- Ftree.Get_Tree_Node_Property	562	
	- Tree Item Triggers	564	
	- When-Tree-Node-Activated Trigger	565	
	- When-Tree-Node-Expanded Trigger	566	
	- When-Tree-Node-Selected Trigger	567	
	- <i>Exercise Eleven</i>	568	
	Forty	Forms Standards in Forms 11g	574
		- Introduction	575
- Module Naming Conventions		577	
- Object Naming Conventions		578	
- Block and Items		579	
- Form Templates		581	
Forty One	Object Groups in Forms 11g	582	
	- Using Object Groups	587	

Forms 11g

Section	Title	Page
Forty Two	Property Classes in Forms 11g	588
	– Introduction	589
	– Creating Property Classes	592
	– Populating Property Classes	594
	– Referencing Property Classes	598
	– Detecting Property Classes	601
	– Removing Property Classes	603
Forty Three	Editor in Forms 11g	604
	– Introduction	605
	– Creating Editors	606
	– Assigning Editors	607
Forty Four	Menus in Forms 11g	608
	– Show_Editor	609
	– Structure of Menus	614
	– Anatomy within Object Navigator	616
	– Attached Libraries	617
	– Program Units and Triggers	618
	– Startup Code	619
	– Menu Item Code	620
	– Menu Editor in Forms 11g	621
	– Anatomy of Menu Editor in Forms 11g	622
	– Menu Editor Toolbar in Forms 11g	623
	– Creating Menus in Forms 11g	624
	– Menu Item Attributes	625
	– Menu Item Types	628
	– Command Types	630
	– Menu Item Code	631
	– Menu Smartbars	632
	– Set_Menu_Item_Property	633
	– Name_in and Copy Functions	634
	– Popup Menus in Forms 11g	635
– Editing Popup Menus in Forms 11g	636	
– Pre-Popup-Menu Trigger in Forms 11g	637	
– <i>Exercise Twelve</i>	638	
Forty Five	Database Objects in Forms 11g	642
	– Introduction	643
	– Database Triggers	645
	– PL/SQL Stored Program Units	649
Forty Six	Forms 11g Preferences	650
	– General	652
	– Subclass	653
	– Wizards	654
	– Runtime	655
Forty Seven	Forms Debug in Forms 11g	657
	– Breakpoints in Forms 11g	659
	– Creating Breakpoints in Forms 11g	660
	– Running Forms Debug in Forms 11g	662
	– Debug Stack	665
	– Debug Variables	666
	– Debug Watch	667
	– Debug Form Values	668
	– Debug PL/SQL Packages	669
	– Debug Global/System Variables	670
	– Debug Breakpoints	671
– Continuing from a Breakpoint	672	

Forms 11g

Section	Title	Page
Forty Eight	Security in Forms 11g	673
	- Access to the Module	675
	- Ability to run the Module	676
Forty Nine	Help Facility in Forms 11g	677
	- Online Help	679
	- About Form Builder	683
	- <i>Exercise Thirteen</i>	684

