

## Using SQL with SQL Developer

### 4.0.3 Part II

Section	Title	Page	
One	<b>Data Manipulation in SQL Developer</b>	2	
	- Introduction	3	
	- Updating a record in Data	4	
	- Updating a Primary Key in Data	6	
	- Reverting Changes using Refresh	7	
	- Updating a table with a trigger in Data	8	
	- Deleting a record in Data	10	
	- Deleting a record which has children	11	
	- Inserting a record in Data	12	
	- Problems manipulating data	14	
	Two	<b>Data Manipulation in SQL Worksheet</b>	15
		- Introduction	16
		- Inserting Records using SQL Worksheet	17
- Rules When Populating Tables		18	
- SQL Syntax for Populating Tables		19	
- Using Sysdate To Populate Tables		24	
- General Comments		25	
- Inserting Data using the SQL Worksheet		26	
- Saving the Insert statement		32	
- Updating Data in SQL Worksheet		33	
- Deleting Data in SQL Worksheet		37	
- Deleting Records using Truncate		40	
- <i>Exercise One</i>		41	
Three	<b>Importing External Data</b>	51	
	- Introduction	52	
	- Beginning the Import	53	
	- Importing xls files	55	
	- Importing xls files (Step 1)	57	
	- Importing xls files (Step 2)	59	
	- Importing xls files (Step 3)	60	
	- Importing xls files (Step 4)	61	
	- Importing xls files (Step 5)	63	
	- Importing xls files (date problems)	65	
	- Importing xls files (Insert Script)	66	
	- Importing xls files (Targeting Columns)	67	
	- Importing xls files (date problems)	65	
	- Cutting and pasting xls files	70	
	- Importing csv files	71	
- <i>Exercise Two</i>	72		
Four	<b>Table Manipulation in SQL Developer</b>	73	
	- Creating Columns for Tables	74	
	- Naming Tables and Columns	75	
	- Creating Tables	77	
	- Creating Columns	80	
	- Column Datatypes	81	
	- Creating Mandatory Columns	83	
	- Creating Indexes for Tables	84	
	- Default	86	
	- Table Creation DDL	88	

## Using SQL with SQL Developer

### 4.0.3 Part II

Section	Title	Page
	- Creation Syntax for Tables	89
	- Comments for Columns	90
	- Comments for Tables	93
	- Renaming a Table	96
	- Creating a Table by copying an existing one	97
	- Copying Tables SQL Syntax	99
	- Dropping Tables	101
	- Dropping Tables (Cascade Constraints)	103
	- Dropping Tables (Purge)	104
	- Dropping Tables (Flashback to Before Drop)	107
	- Dropping Tables SQL Syntax	109
	- Restoring Tables from Recycle SQL Syntax	110
	- Altering Columns	111
	- Renaming Columns	113
	- Renaming Columns Syntax	115
	- ORA-00957: Duplicate Column Name	116
	- Adding Columns	117
	- Adding Columns SQL Syntax	119
	- Dropping Columns	121
	- ORA-12992: Cannot drop parent key column	122
	- Dropping Columns Syntax	123
	- Modifying Columns Syntax	124
	- Rules for Modifying Columns	125
	- Multiple Column Modification	126
	- Normalizing Columns	127
<b>Five</b>	<b>Table Constraints</b>	131
	- Introduction	132
	- Creating Indexes in SQL	133
	- Index Creation in SQL	136
	- Disabling Indexes in SQL	138
	- Check Constraints	139
	- Add Check	140
	- Add Primary Key	142
	- Add Foreign Key	144
	- Add Unique	147
	- Drop	149
	- Rename Single	151
	- Enable Related Foreign Keys	152
	- Disable Related Foreign Keys	153
	- Enable All	154
	- Disable All	155
	- Enable Single	156
	- Disable Single	157
	- Advanced Table Creation	158
	- Advanced Table Creation (Constraints)	160
	- Advanced Table Creation (Indexes)	165
	- Advanced Table Creation (Storage)	166
	- Advanced Table Creation (Comment)	167
	- Advanced Table Creation (DDL)	168

## Using SQL with SQL Developer 4.0.3 Part II

Section	Title	Page
	– Renaming a Table	169
	– <i>Exercise Three</i>	170
<b>Six</b>	<b>Accessing Objects</b>	182
	– Introduction	183
	– Privileges	184
	– Granting Privileges	186
	– Granting Privileges Syntax	187
	– Revoking Privileges	189
	– Revoking Privileges Syntax	190
	– Viewing Privileges	191
	– Accessing other Schemas	192
	– ORA-01031: Insufficient Privileges	194
	– Accessing other Schemas with SQL Worksheet	195
	– Accessing other Schemas with Synonyms	196
	– Synonym SQL Syntax	200
	– ORA-00955: Name is already used	201
	– Dropping Synonyms	202
	– Dropping Synonyms Syntax	204
	– Public Synonyms	205
	– ORA-01031: Insufficient Privileges	206
	– <i>Exercise Four</i>	207
<b>Seven</b>	<b>Virtual Columns</b>	209
	– Creating Virtual Columns with new Table	211
	– Specifying Virtual Column Datatype and Size	212
	– Adding Virtual Columns to Existing Table	213
	– Using Virtual Columns in SQL	215
	– Using Virtual Columns with Functions	217
	– Limitations of Virtual Columns (ORA-54012)	218
	– Limitations of Virtual Columns (ORA-54015)	219
	– Limitations of Virtual Columns (ORA-54013)	220
	– Limitations of Virtual Columns (ORA-54017)	221
<b>Eight</b>	<b>Invisible Columns in Oracle 12c</b>	222
	– <i>Exercise Four</i>	227
<b>Nine</b>	<b>Views</b>	229
	– Introduction	230
	– Creating Views Syntax	232
	– Create (simple)	235
	– Creating Views	237
	– Properties	241
	– Force on Create	242
	– Query Restriction	243
	– Updating using Views	245
	– ORA-42399: Cannot perform a DML operation on a read-only	246
	– ORA-01732: Data manipulation operation not legal on this view	247
	– Renaming Views SQL Syntax	248
	– Dropping Views SQL Syntax	249
	– <i>Exercise Six</i>	250

## Using SQL with SQL Developer

### 4.0.3 Part II

Section	Title	Page
<b>Ten</b>	<b>Materialized Views</b>	254
	– Introduction	255
	– Creating Simple Materialized Views	257
	– Refreshing Materialized Views	261
	– New Materialized View	262
	– Refresh Options	264
	– Time Interval	266
	– Fast Refresh and Materialized View Logs	268
	– Key Type	273
	– Editing Materialized Views	274
	– Viewing Materialized Views	276
	– Dropping Materialized Views	277
	– Synchronizing Materialized Views	278
	– <i>Exercise Seven</i>	279
<b>Eleven</b>	<b>Sequences</b>	282
	– Introduction	283
	– Creating Sequences	284
	– Viewing Sequences	286
	– Editing Sequences	287
	– Using Sequences	288
	– Dropping Sequences	289
<b>Twelve</b>	<b>Tree Walking in SQL Worksheet</b>	290
	– Introduction	291
	– Syntax for Tree Walking	294
	– Example of Tree Walking	295
	– Using LPAD with Tree Walking	298
	– Using Order Siblings By in Tree Walks	301
	– Using Sys_Connect_By_Path in Tree Walks	302
	– <i>Exercise Eight</i>	304
<b>Thirteen</b>	<b>Sub-Queries in Oracle SQL</b>	308
	– Introduction	309
	– Using Equals	310
	– In and Not In	313
	– Exists	315
	– Any	316
	– Some	317
	– All	318
	– Correlated Queries	319
	– Correlated Updates and Deletes	320
	– Inline Views	321
	– Inline View Example	322
	– Sub-Queries in a Select Statement	323
	– Sub-Query Factoring (Using With)	324
	– Sub-Query Factoring Example with Aliases	326
	– Sub-Query Factoring Example with Joins	327
<b>Fourteen</b>	<b>Advanced SQL Query Techniques</b>	328
	– Introduction	329
	– Using First_Value/Last_Value	330
	– Window Specification	332

## Using SQL with SQL Developer

### 4.0.3 Part II

Section	Title	Page
	- Breakdown of Window Specification	333
	- Window Specification – The Arguments	335
	- Window Specification – Query Partition	336
	- Window Specification – The Order By	338
	- Window Specification – The Windowing	340
	- Window Specification – Rows between	342
	- Window Specification – Shortcuts	346
	- Difference between Range and Rows	347
	- Using Lead and Lag	350
	- Using Case Function	352
	- Nesting the Case Function	355
	- Subqueries in the Case Function	356
	- Using the Rank Function	357
	- Using Ntile Function	360
	- Using Width_Bucket Function	361
	- Using Width_Bucket Function in SQL Worksheet	362
	- Pivot	363
	- Adding a Total to a Pivot	367
	- Changing the Pivot Headings of X Axis	368
	- Rotating the Axis of the Pivot	369
	- Unpivot	370
	- Unpivot and Null values	373
	- Using Listagg Function in SQL	374
	- <i>Exercise Nine</i>	376
<b>Fifteen</b>	<b>Using Merge Into</b>	384
	- Introduction	385
	- SQL Syntax	386
<b>Sixteen</b>	<b>Export DDL (and Data)</b>	389
	- Introduction	390
	- Object by Object	391
	- Exporting DDL and DML	392
	- Export Wizard (Step One)	394
	- Pretty Print	395
	- Show Schema	396
	- Grants	397
	- Byte	398
	- Terminator	399
	- Force to Views	401
	- Drops	402
	- Cascade Drops	403
	- Storage	404
	- Dependents	405
<b>Seventeen</b>	<b>SQL Developer Reports</b>	407
	- Introduction	408
	- User Defined Reports	410
	- Creating User Defined Reports	411
	- New Folder	412
	- New Report	413

## Using SQL with SQL Developer 4.0.3 Part II

Section	Title	Page
	- Master Report	414
	- Editing / Advanced Options	417
	- SQL Query	418
	- Binds	419
	- Refreshing	423
	- Child Reports	425
	- Property	430
	- Multiple Child Reports	432
	- Drill Down	433
	- PDF	437
	- PDF (Binary Large Object)	440
	- PDF (Cell Layout)	442
	- PDF (Column Layout)	444
	- PDF (Header and Footer)	446
	- PDF (Table Layout)	449
	- PDF (Security)	451
	- PDF (Page Layout)	452
	- Styles	453
	- Chart	454
	- Bar	455
	- Properties	457
	- Pie	463
	- Child Reports with Charts	465
	- Line	467
	- Area	469
	- Combination	470
	- Scatter	471
	- Bubble	472
	- Stock	473
	- Polar	474
	- Pareto	475
	- Funnel	476
	- 3D	477
	- Gauge	478
	- Script	480
<b>Eighteen</b>	<b>SQL Developer Help Facility</b>	<b>481</b>
	- Introduction	482
	- Search and Table of Contents	483
	- Start Page	484
	- Data Miner	485
	- Check for Updates	486
	- About	487
	- <i>Exercise Ten</i>	488

# Using SQL with SQL Developer 4.0.3 Part II

<b>Section</b>	<b>Title</b>	<b>Page</b>
----------------	--------------	-------------

**Appendices**

**Appendix S1 – SQL Functions**

**Appendix S2 – SQL Number Formats**

**Appendix S3 – SQL Date Formats**

**Delegate Questionnaire**

