



Using SQL with SQL Developer 19.2 Part II

Section	Title	Page
One	Data Manipulation in SQL Developer	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	Data Manipulation in SQL Worksheet	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 Records using Truncate	40
	- <i>Exercise One</i>	42
Three	Importing External Data	52
	- Introduction	53
	- Beginning the Import	54
	- Import method	57
	- Choose Columns	58
	- Column Definition	60
	- Finish	62
	- Importing xls files (Insert Script)	64
	- Importing xls files (Targeting Columns)	65
	- Cutting and pasting xls files	66
	- Importing csv files	67
	- Exercise Two	68
Four	Table Manipulation in SQL Developer	69
	- Creating Columns for Tables	70
	- Naming Tables and Columns	71
	- Creating Tables	73
	- Creating Columns	76
	- Column Datatypes	77
	- Creating Mandatory Columns	79
	- Creating Indexes for Tables	80
	- Default	82
	- Table Creation DDL	85
	- Creation Syntax for Tables	86
	- Comments for Columns	87
	- Comments for Tables	91



Using SQL with SQL Developer 19.2 Part II

Section	Title	Page
	- Renaming a Table	94
	- Copying Tables SQL Syntax	97
	- Creating a Table by copying an existing one	98
	- 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
	- ORA-00910: specified length too long for its datatype	118
	- 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
Five	Table Constraints and Indexes	130
	- Introduction	131
	- Creating Indexes in SQL	134
	- Primary Key Creation in SQL	137
	- Add Primary Key	139
	- ORA-02260: Table can have only one primary key	141
	- Unique Key Creation in SQL	142
	- Add Unique Key	144
	- Add Foreign Key	146
	- ORA-02270: no matching unique or primary key	149
	- Non-Unique Index	150
	- Disabling Indexes in SQL	153
	- Check Constraints	154
	- ORA-02293: cannot validate – check constraint	155
	- Check Constraint Syntax	156
	- Add Check	157
	- Drop	158
	- Other options	160
	- Enable / Disable Related Foreign Keys / All / Single	161
	- Rename Single	162
	- <i>Exercise Three</i>	163



Using SQL with SQL Developer 19.2 Part II

Section	Title	Page
Six	Accessing Objects	175
	- Introduction	176
	- Privileges	177
	- Granting Privileges Syntax	178
	- Privileges	180
	- Granting Privileges	181
	- Revoking Privileges Syntax	182
	- Revoking Privileges	183
	- Viewing Privileges	184
	- Accessing other Schemas	185
	- ORA-01031: Insufficient Privileges	187
	- Accessing other Schemas with SQL Worksheet	188
	- Accessing other Schemas with Synonyms	189
	- Synonym SQL Syntax	193
	- ORA-00955: Name is already used	194
	- Dropping Synonyms	195
	- Dropping Synonyms Syntax	196
	- Public Synonyms	197
	- ORA-01031: Insufficient Privileges	198
	- <i>Exercise Four</i>	199
Seven	Virtual Columns	201
	- Introduction	202
	- Creating Virtual Columns with new Table	203
	- Specifying Virtual Column Datatype and Size	204
	- Adding Virtual Columns to Existing Table	205
	- Using Virtual Columns in SQL ...	206
	- Using Virtual Columns with Functions	208
	- ORA-54012: virtual column is referenced in a column	209
	- ORA-54015: Duplicate column expression specified	210
	- ORA-54013: INSERT disallowed on virtual columns	211
	- ORA-54017: UPDATE disallowed on virtual columns	212
Eight	Invisible Columns in Oracle 12c	213
	- <i>Exercise Five</i>	218
Nine	Views	220
	- Introduction	221
	- Creating Views Syntax	223
	- Create (simple)	226
	- Creating Views	228
	- ORA-00936: Missing expression	230
	- Properties	231
	- Force on Create	232
	- Query Restriction	233
	- Updating using Views	235
	- ORA-42399: Cannot perform a DML on a read-only	236
	- Renaming Views SQL Syntax	237
	- Renaming Views	238
	- Dropping a View SQL Syntax	239



Using SQL with SQL Developer 19.2 Part II

Section	Title	Page
	- Dropping a View	240
	- <i>Exercise Six</i>	241
Ten	Materialized Views	245
	- Introduction	246
	- Creating Simple Materialized Views	248
	- Refreshing Materialized Views	252
	- New Materialized View	253
	- New Materialized View	254
	- Refresh Options	255
	- Materialized Refresh Options	256
	- Time Interval	257
	- Materialized Time Interval	258
	- Fast Refresh and Materialized View Logs	259
	- Key Type	264
	- Editing Materialized Views	265
	- Viewing Materialized Views	268
	- Dropping Materialized Views	269
	- Synchronizing Materialized Views	270
	- <i>Exercise Seven</i>	271
Eleven	Sequences	274
	- Introduction	275
	- Creating Sequences	276
	- Viewing Sequences	278
	- Editing Sequences	279
	- Using Sequences	280
	- Dropping Sequences	281
Twelve	Tree Walking Tables in SQL Worksheet	282
	- Introduction	283
	- Syntax for Tree Walking	286
	- Example of Tree Walking	287
	- Using LPAD with Tree Walking	290
	- Using Order Siblings By in Tree Walks	292
	- Using Sys_Connect_By_Path in Tree Walks	293
	- <i>Exercise Eight</i>	295
Thirteen	Sub-Queries in Oracle SQL	299
	- Introduction	300
	- Using Equals	301
	- In and Not In	304
	- Exists	306
	- Any	307
	- Some	308
	- All	309
	- Correlated Queries	310
	- Correlated Updates and Deletes	311
	- Inline Views	312
	- Inline View Example	313
	- Sub-Queries in a Select Statement	314



Using SQL with SQL Developer 19.2 Part II

Section	Title	Page
	- Sub-Query Factoring (Using With)	315
	- Sub-Query Factoring Example with Aliases	317
	- Sub-Query Factoring Example with Joins	318
Fourteen	Advanced SQL Query Techniques	319
	- Introduction	320
	- Using First_Value/Last_Value	321
	- Window Specification	323
	- Breakdown of Window Specification	324
	- Window Specification - The Arguments	326
	- Window Specification - Query Partition	327
	- Window Specification - The Order By	329
	- Window Specification - The Windowing	331
	- Window Specification - Rows between	333
	- Window Specification - Shortcuts	337
	- Difference between Range and Rows	338
	- Using Lead and Lag	341
	- Using Case Function	343
	- Nesting the Case Function	346
	- Subqueries in the Case Function	347
	- Using the Rank Function	348
	- Using the Ntile Function	351
	- Using Width_Bucket Function	352
	- Using Width_Bucket Function in SQL Worksheet	353
	- Pivot	354
	- Adding a Total to a Pivot	358
	- Changing the Pivot Headings of X Axis	359
	- Rotating the Axis of the Pivot	360
	- Unpivot	361
	- Unpivot and Null values	364
	- Using Listagg Function in SQL	365
	- <i>Exercise Nine</i>	367
Fifteen	Using Merge Into	375
	- Introduction	376
	- SQL Syntax	377
Sixteen	Export DDL (and Data)	380
	- Introduction	381
	- Object by Object	382
	- Exporting DDL and DML	383
	- Export Wizard (Step One)	385
	- Pretty Print	386
	- Show Schema / Grants	387
	- Byte	388
	- Terminator	389
	- Force to Views	391
	- Drops	392
	- Cascade Drops	393
	- Storage	394



Using SQL with SQL Developer 19.2 Part II

Section	Title	Page
	- Dependents	395
	- Compatible	397
Seventeen	SQL Developer Reports	398
	- Introduction	399
	- User Defined Reports	401
	- Creating User Defined Reports	402
	- New Folder	403
	- New Report	404
	- Master Report	405
	- Table	407
	- Editing / Advanced Options	408
	- SQL Query	409
	- Binds	410
	- Refreshing	415
	- Child Reports	416
	- Multiple Child Reports	421
	- Drill Down	422
	- PDF	426
	- PDF (Binary Large Object)	428
	- PDF (Cell Layout)	430
	- PDF (Column Layout)	431
	- PDF (Table Layout)	432
	- PDF (Header and Footer)	433
	- PDF (Page Layout)	434
	- Styles	435
	- Chart	436
	- Bar	438
	- Properties	440
	- Pie	444
	- Line	446
	- Area	448
	- Combination	449
	- Scatter	450
	- Bubble	451
	- Stock	452
	- Polar	453
	- Pareto	454
	- Funnel	455
	- 3D	456
	- Gauge	457
	- Script	459
	- Child Reports with Charts	460
	- Refresh	462
Eighteen	SQL Developer Help Facility	463
	- Introduction	464
	- Search and Table of Contents	465
	- Start Page	466



Using SQL with SQL Developer 19.2 Part II

Section	Title	Page
	- Data Miner	467
	- Check for Updates	468
	- About	469
	- <i>Exercise Ten</i>	470

Appendices

Appendix S1 – SQL Functions

Appendix S2 – SQL Number Formats

Appendix S3 – SQL Date Formats

Delegate Questionnaire

