



BE REMARKABLE



# SQL TOOLS FOR FUNCTIONAL USERS

SESSION 36046  
10<sup>th</sup> November 2016

ADU 9-11 NOVEMBER 2016

# PRESENTERS

**Parth Raval**

Senior Functional Analyst

Griffith University

[p.raval@griffith.edu.au](mailto:p.raval@griffith.edu.au)

**Clinton Lamont**

Team Leader, BSS Student Team

Griffith University

[clinton.lamont@griffith.edu.au](mailto:clinton.lamont@griffith.edu.au)





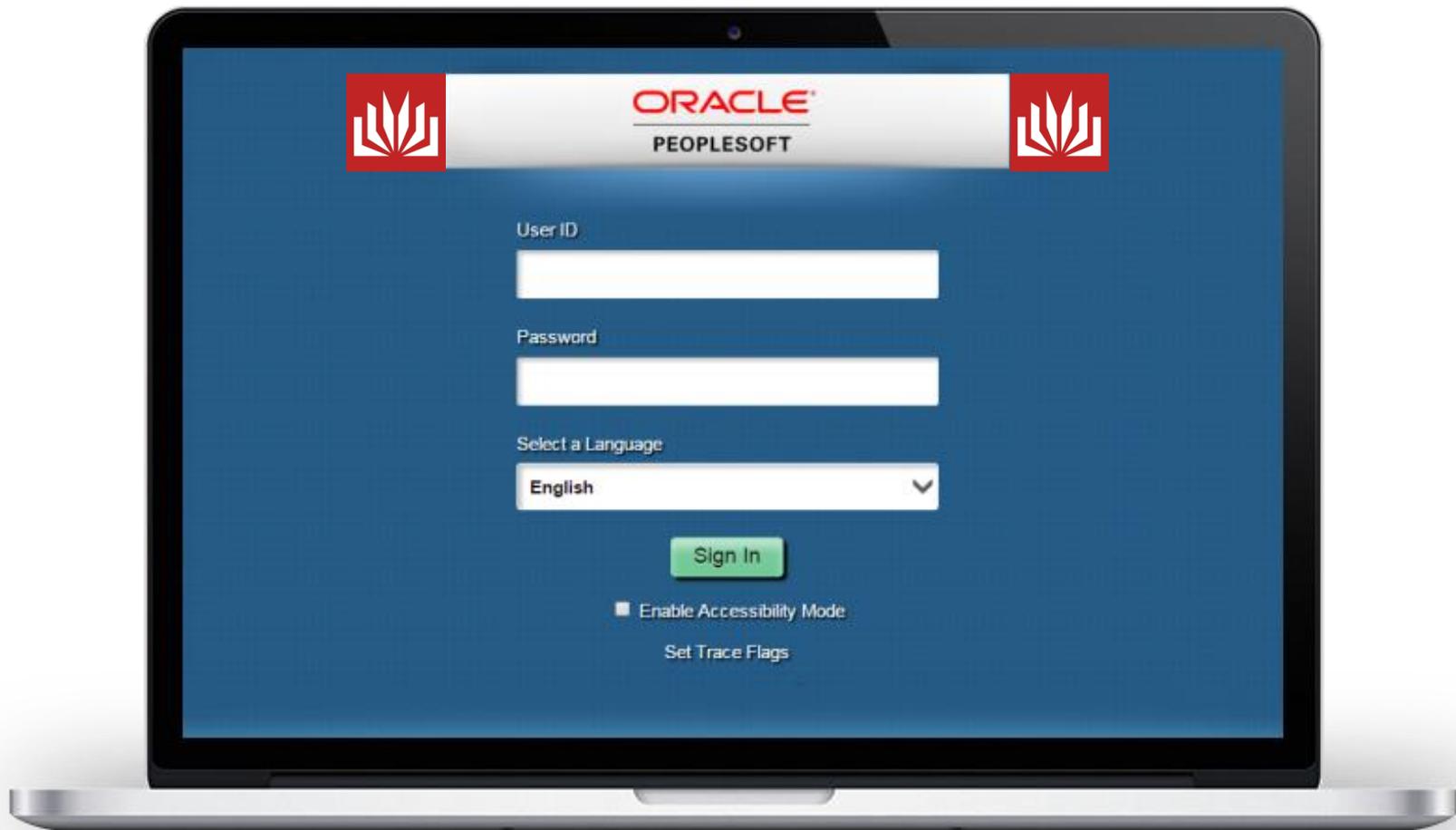
BE REMARKABLE



- Ranked in top 3% of Universities Globally
- 50,000 Students
- 5 campuses
- 200 degrees
- Rated 5 stars for graduate employability
- 4,000 Staff
- 200,000 Alumni across 130 nationalities

GRIFFITH  
UNIVERSITY

ADU 9-11 NOVEMBER 2016



### Database Infrastructure

- Oracle 12c Real Application Clusters Database/Dataguard
- Oracle 12c Grid Infrastructure/ASM

### Peopletools 8.54/8.55

- PeopleTools 8.54.18
- PeopleTools 8.55.08 (Upgrade go-live 25/11)

### PeopleSoft

- Campus Solutions 9.0 (bundle 42 go-live 25/11)
- Integration Hub Portal 9.1
- Finance 9.2 Bundle 36 (9.2 project underway)
- HR 9.2 (pum 17 go-live 25/11)

# ORGANIZATION & ORACLE

# OVERVIEW

1

Oracle SQL  
Developer  
*Tips and Tricks*

2

Surveillance App  
Engine  
Custom Application  
Engine for data  
surveillance



**BE  
REMARKABLE**



# ORACLE SQL DEVELOPER

Tips and Tricks for  
Functional Analysts

ADU 9-11 NOVEMBER 2016



# ORACLE SQL DEVELOPER

*“Modern Technology has become a total phenomenon for civilization, the defining force of a new social order in which efficiency is no longer an option but a necessity imposed on all human activity.”*

**Jacques Ellul**  
French Philosopher

Oracle SQL Developer is a great tool that enhances productivity and simplifies several functional tasks to achieve greater efficiency that we all require in today's world.



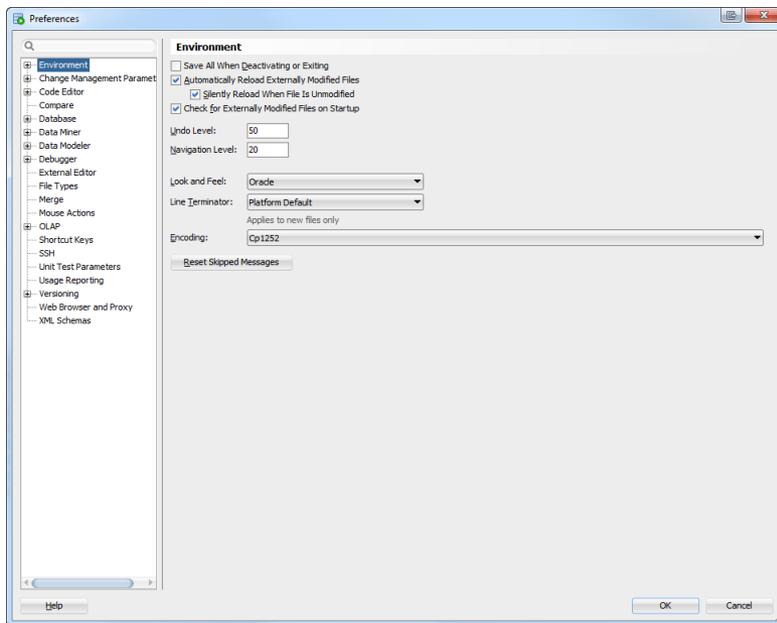
# ORACLE SQL DEVELOPER

Tips and Tricks for  
Functional Analysts

- Useful Preferences
- Snippets
- Navigating through  
database objects
- Query Builder
- User Defined Reports



# USEFUL PREFERENCES

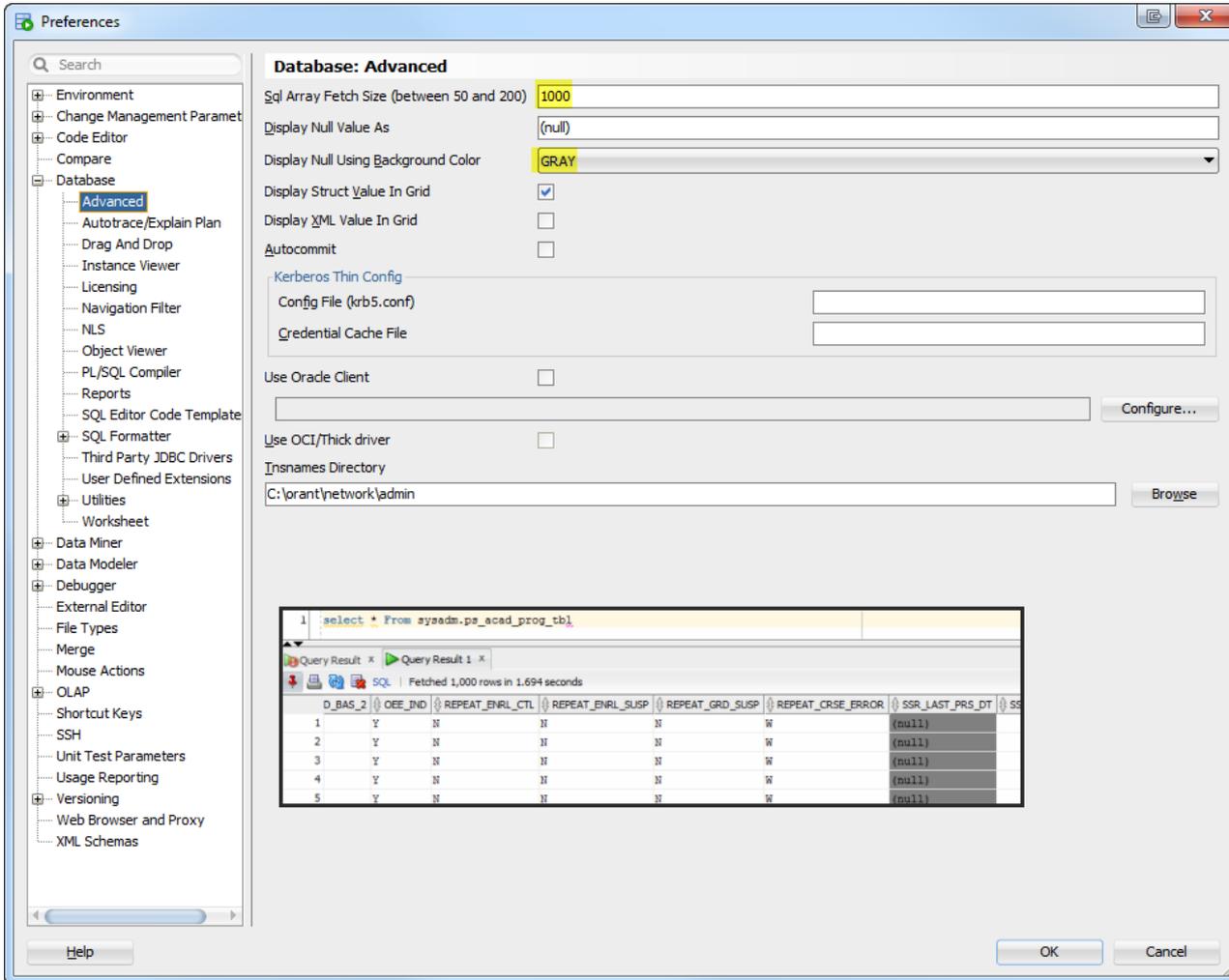


## Useful Preferences for Power Users

- SQL Array Fetch Size
- Completion Insight
- Navigation Filter
- SQL Editor Code Templates
- Multiple Query Tabs



# USEFUL PREFERENCES



**Database: Advanced**

Sql Array Fetch Size (between 50 and 200) **1000**

Display Null Value As (null)

Display Null Using Background Color **GRAY**

Display Struct ualue In Grid

Display XML Value In Grid

Autocommit

Kerberos Thin Config

Config File (krb5.conf)

Credential Cache File

Use Oracle Client

Use OCI/Thick driver

Insnames Directory C:\prant\network\admin

```

1 select * from sysadm.ps_acad_prog_tbl

```

D_BAS_2	OEE_IND	REPEAT_ENRL_CTL	REPEAT_ENRL_SUSP	REPEAT_GRD_SUSP	REPEAT_CRSE_ERROR	SSR_LAST_PRS_DT	SSR
1	Y	N	N	N	N	(null)	
2	Y	N	N	N	N	(null)	
3	Y	N	N	N	N	(null)	
4	Y	N	N	N	N	(null)	
5	Y	N	N	N	N	(null)	

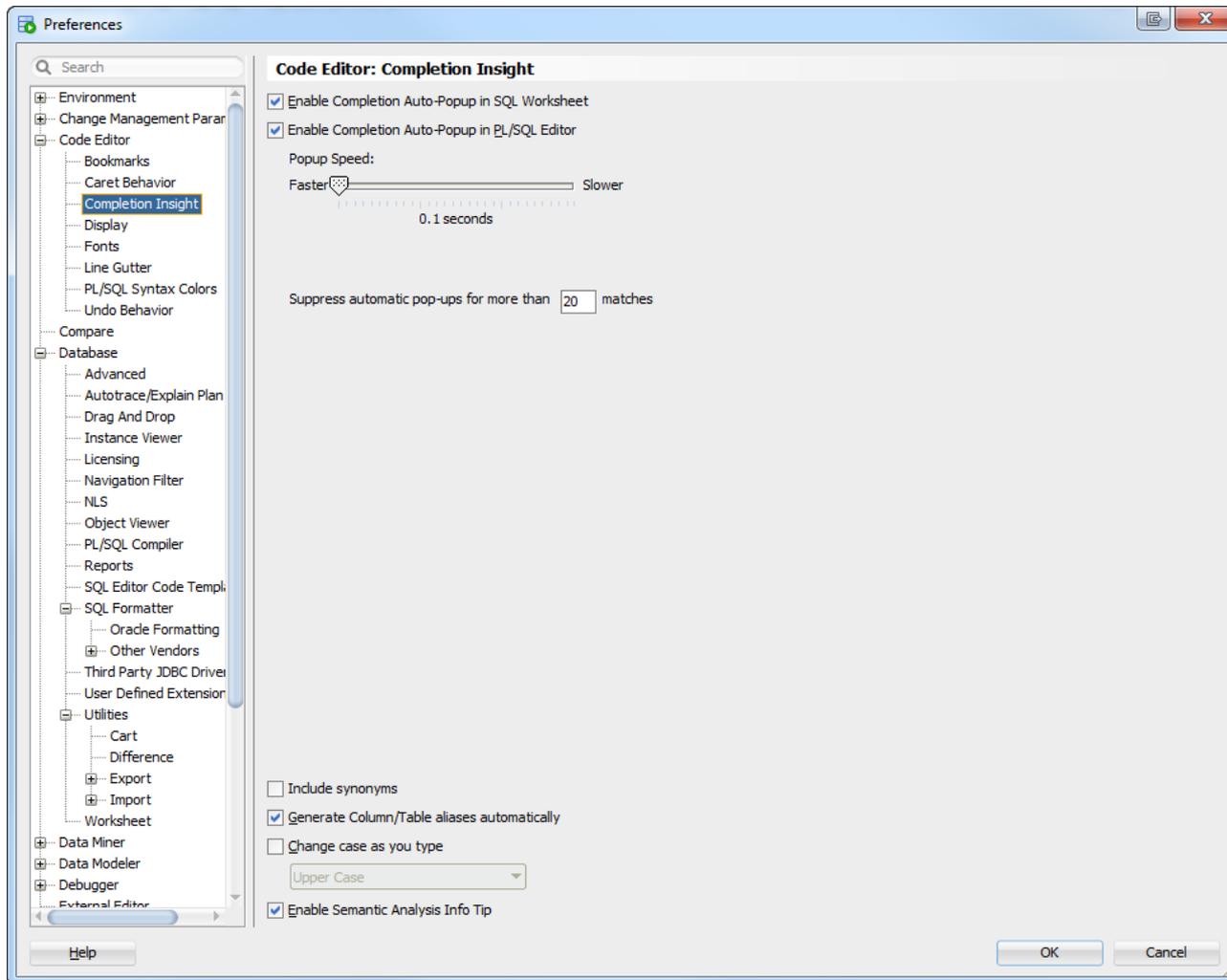
## SQL Array Fetch Size

### Database:Advanced

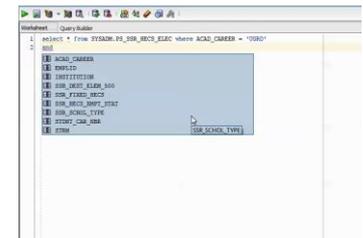
- SQL Array Fetch Size of 1000 returns up to 1000 rows a statement is run (As per Screenshot). Scrolling down through the worksheet returns more rows.
- Display Null Value as a specific colour and text to differentiate nulls from ' ' (blank spaces)



# USEFUL PREFERENCES



- Code Editor:  
Completion Insight**
- Predictive text for database objects and basic functions

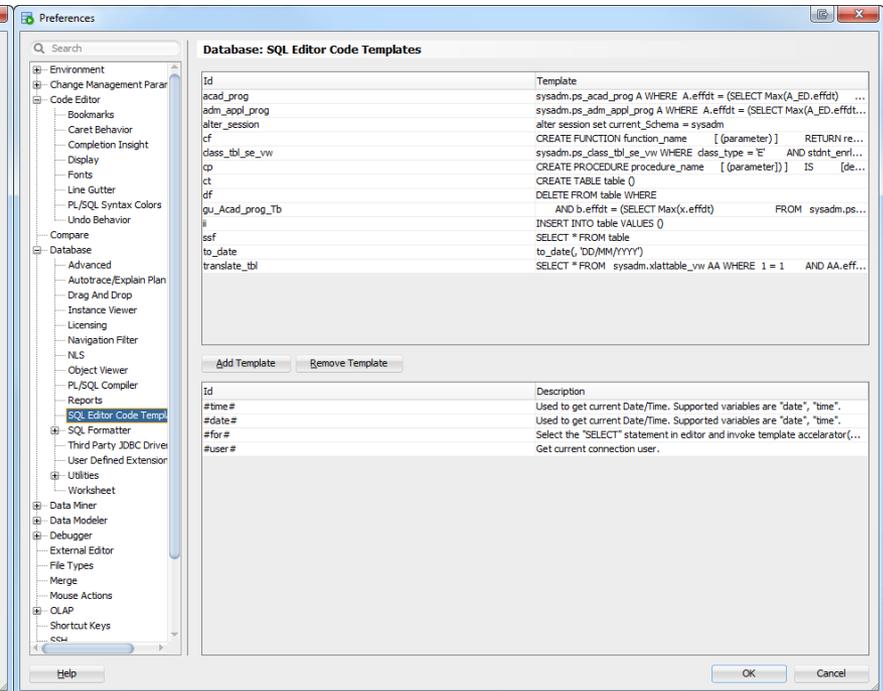
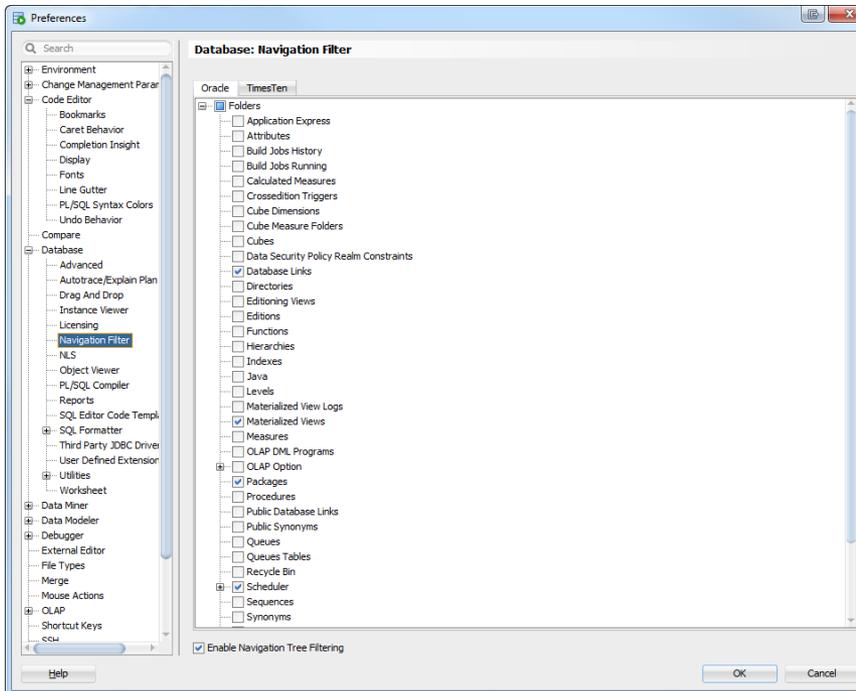




# USEFUL PREFERENCES

## Navigation Filter

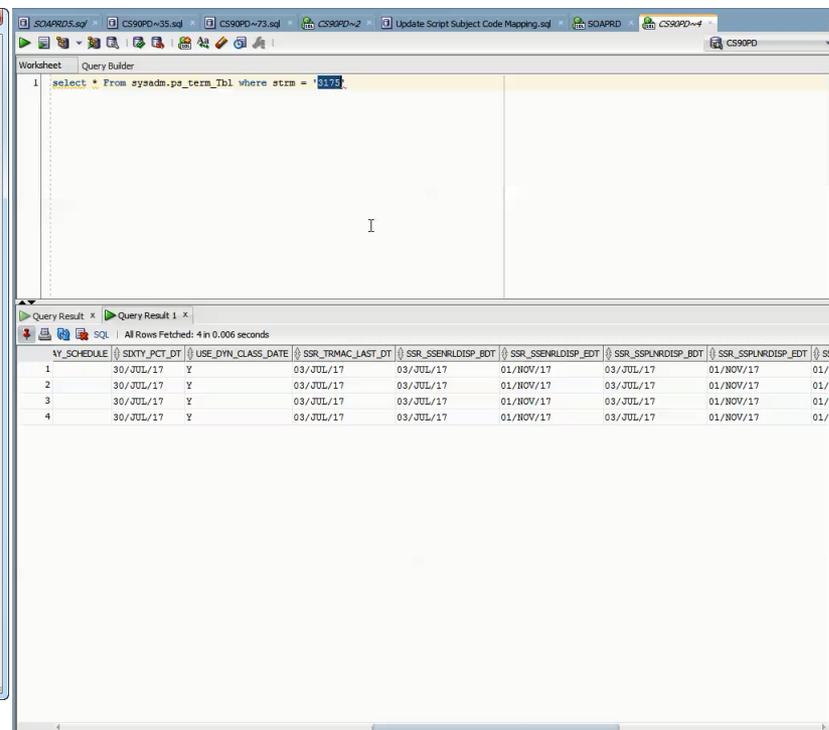
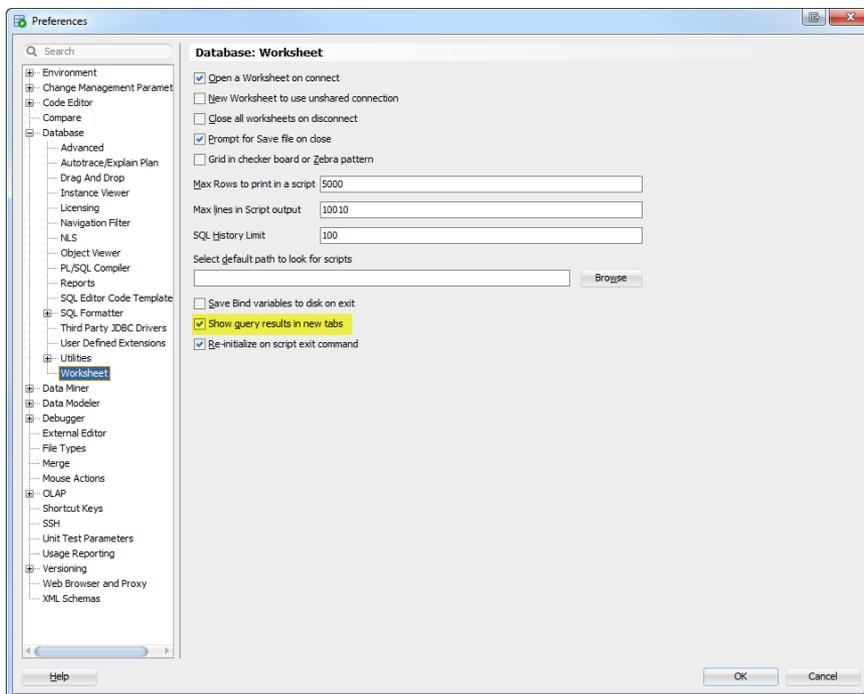
## SQL Editor Code Templates





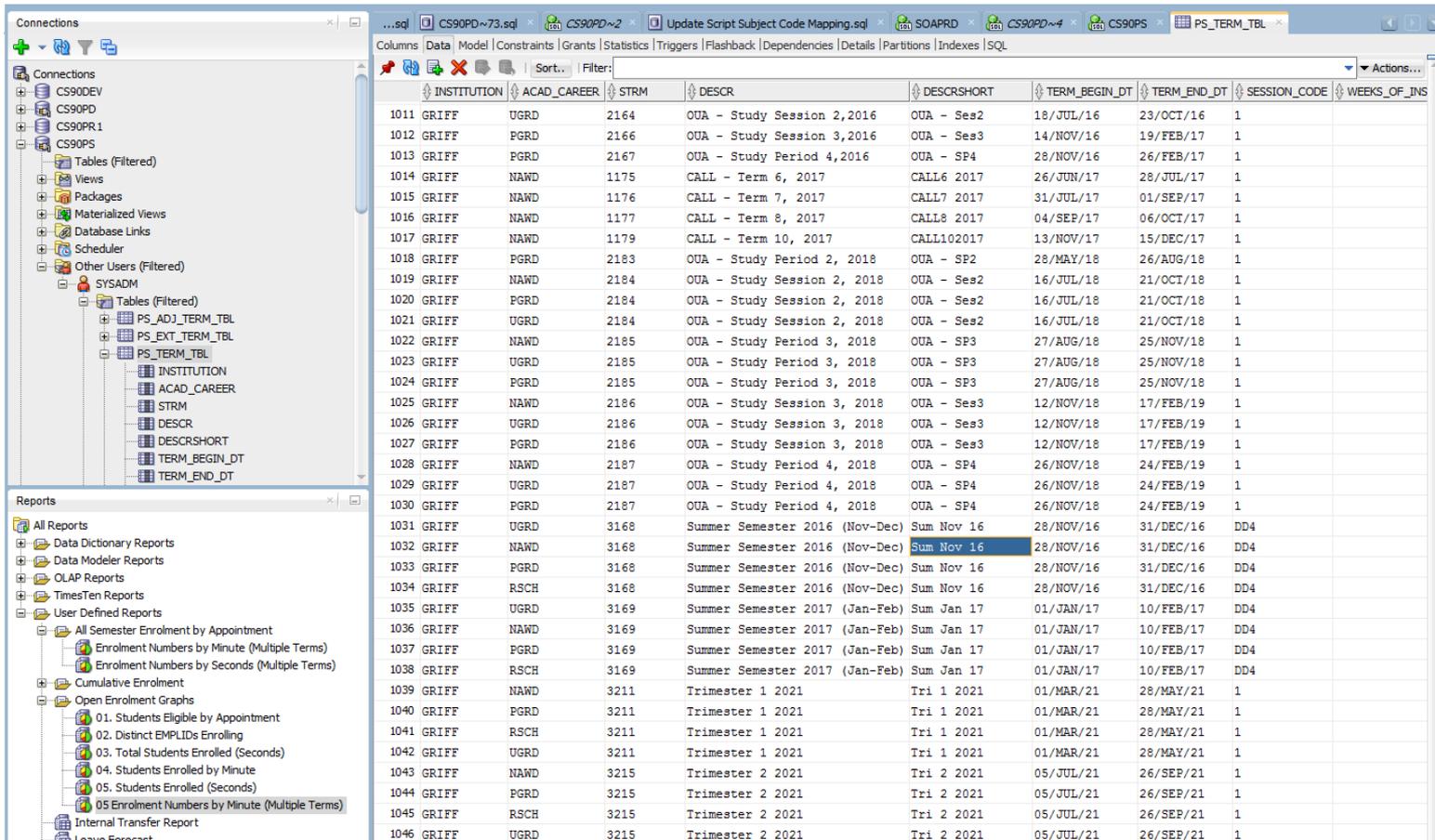
# USEFUL PREFERENCES

## Multiple Query Tabs





# NAVIGATING THROUGH DATABASE OBJECTS



The screenshot displays the SQL Developer interface with the following components:

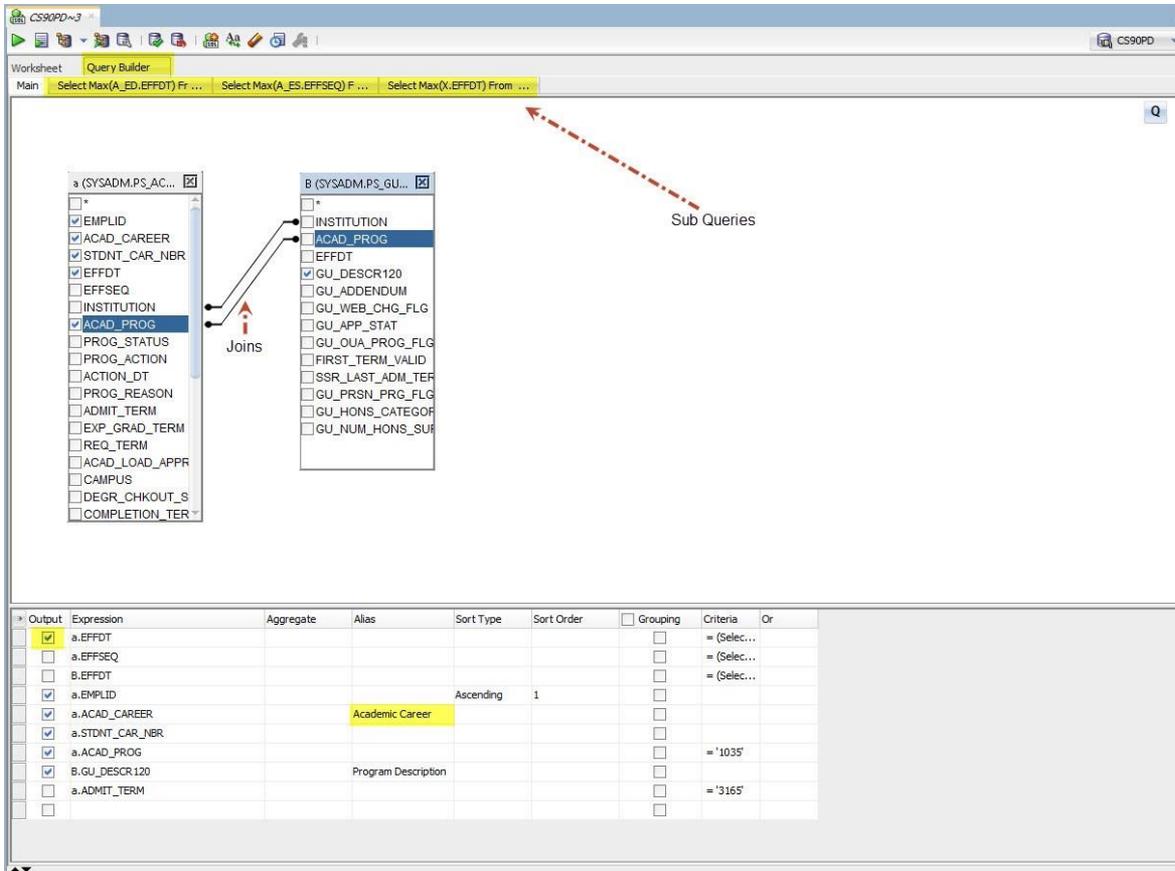
- Connections:** A tree view on the left showing connections to various databases, including CS90DEV, CS90PD, CS90PR1, CS90PS, and SYSADM.
- Reports:** A tree view below connections showing various report categories like Data Dictionary Reports, OLAP Reports, and User Defined Reports.
- Main Table:** A table with columns: INSTITUTION, ACAD\_CAREER, STRM, DESCR, DESCRSHORT, TERM\_BEGIN\_DT, TERM\_END\_DT, SESSION\_CODE, and WEEKS\_OF\_INS. It lists 46 rows of enrollment data for Griffith University across different terms and sessions.

INSTITUTION	ACAD_CAREER	STRM	DESCR	DESCRSHORT	TERM_BEGIN_DT	TERM_END_DT	SESSION_CODE	WEEKS_OF_INS
1011	GRIFF	UGRD	2164	OUA - Study Session 2,2016	OUA - Ses2	18/JUL/16	23/OCT/16	1
1012	GRIFF	PGRD	2166	OUA - Study Session 3,2016	OUA - Ses3	14/NOV/16	19/FEB/17	1
1013	GRIFF	PGRD	2167	OUA - Study Period 4,2016	OUA - SP4	28/NOV/16	26/FEB/17	1
1014	GRIFF	NAWD	1175	CALL - Term 6, 2017	CALL6 2017	26/JUN/17	28/JUL/17	1
1015	GRIFF	NAWD	1176	CALL - Term 7, 2017	CALL7 2017	31/JUL/17	01/SEP/17	1
1016	GRIFF	NAWD	1177	CALL - Term 8, 2017	CALL8 2017	04/SEP/17	06/OCT/17	1
1017	GRIFF	NAWD	1179	CALL - Term 10, 2017	CALL102017	13/NOV/17	15/DEC/17	1
1018	GRIFF	PGRD	2183	OUA - Study Period 2, 2018	OUA - SP2	28/MAY/18	26/AUG/18	1
1019	GRIFF	NAWD	2184	OUA - Study Session 2, 2018	OUA - Ses2	16/JUL/18	21/OCT/18	1
1020	GRIFF	PGRD	2184	OUA - Study Session 2, 2018	OUA - Ses2	16/JUL/18	21/OCT/18	1
1021	GRIFF	UGRD	2184	OUA - Study Session 2, 2018	OUA - Ses2	16/JUL/18	21/OCT/18	1
1022	GRIFF	NAWD	2185	OUA - Study Period 3, 2018	OUA - SP3	27/AUG/18	25/NOV/18	1
1023	GRIFF	UGRD	2185	OUA - Study Period 3, 2018	OUA - SP3	27/AUG/18	25/NOV/18	1
1024	GRIFF	PGRD	2185	OUA - Study Period 3, 2018	OUA - SP3	27/AUG/18	25/NOV/18	1
1025	GRIFF	NAWD	2186	OUA - Study Session 3, 2018	OUA - Ses3	12/NOV/18	17/FEB/19	1
1026	GRIFF	UGRD	2186	OUA - Study Session 3, 2018	OUA - Ses3	12/NOV/18	17/FEB/19	1
1027	GRIFF	PGRD	2186	OUA - Study Session 3, 2018	OUA - Ses3	12/NOV/18	17/FEB/19	1
1028	GRIFF	NAWD	2187	OUA - Study Period 4, 2018	OUA - SP4	26/NOV/18	24/FEB/19	1
1029	GRIFF	UGRD	2187	OUA - Study Period 4, 2018	OUA - SP4	26/NOV/18	24/FEB/19	1
1030	GRIFF	PGRD	2187	OUA - Study Period 4, 2018	OUA - SP4	26/NOV/18	24/FEB/19	1
1031	GRIFF	UGRD	3168	Summer Semester 2016 (Nov-Dec)	Sum Nov 16	28/NOV/16	31/DEC/16	DD4
1032	GRIFF	NAWD	3168	Summer Semester 2016 (Nov-Dec)	Sum Nov 16	28/NOV/16	31/DEC/16	DD4
1033	GRIFF	PGRD	3168	Summer Semester 2016 (Nov-Dec)	Sum Nov 16	28/NOV/16	31/DEC/16	DD4
1034	GRIFF	RSCH	3168	Summer Semester 2016 (Nov-Dec)	Sum Nov 16	28/NOV/16	31/DEC/16	DD4
1035	GRIFF	UGRD	3169	Summer Semester 2017 (Jan-Feb)	Sum Jan 17	01/JAN/17	10/FEB/17	DD4
1036	GRIFF	NAWD	3169	Summer Semester 2017 (Jan-Feb)	Sum Jan 17	01/JAN/17	10/FEB/17	DD4
1037	GRIFF	PGRD	3169	Summer Semester 2017 (Jan-Feb)	Sum Jan 17	01/JAN/17	10/FEB/17	DD4
1038	GRIFF	RSCH	3169	Summer Semester 2017 (Jan-Feb)	Sum Jan 17	01/JAN/17	10/FEB/17	DD4
1039	GRIFF	NAWD	3211	Trimester 1 2021	Tri 1 2021	01/MAR/21	28/MAY/21	1
1040	GRIFF	PGRD	3211	Trimester 1 2021	Tri 1 2021	01/MAR/21	28/MAY/21	1
1041	GRIFF	RSCH	3211	Trimester 1 2021	Tri 1 2021	01/MAR/21	28/MAY/21	1
1042	GRIFF	UGRD	3211	Trimester 1 2021	Tri 1 2021	01/MAR/21	28/MAY/21	1
1043	GRIFF	NAWD	3215	Trimester 2 2021	Tri 2 2021	05/JUL/21	26/SEP/21	1
1044	GRIFF	PGRD	3215	Trimester 2 2021	Tri 2 2021	05/JUL/21	26/SEP/21	1
1045	GRIFF	RSCH	3215	Trimester 2 2021	Tri 2 2021	05/JUL/21	26/SEP/21	1
1046	GRIFF	UGRD	3215	Trimester 2 2021	Tri 2 2021	05/JUL/21	26/SEP/21	1





# QUERY BUILDER

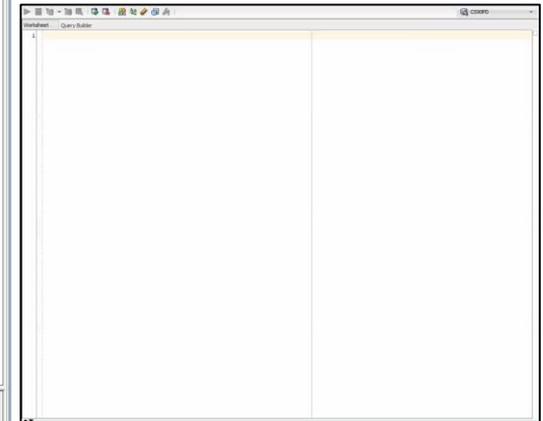


Sub Queries

Joins

Output	Expression	Aggregate	Alias	Sort Type	Sort Order	Grouping	Criteria	Or
<input checked="" type="checkbox"/>	a.EFFDT					<input type="checkbox"/>	= (Selec...	
<input type="checkbox"/>	a.EFFSEQ					<input type="checkbox"/>	= (Selec...	
<input type="checkbox"/>	B.EFFDT					<input type="checkbox"/>	= (Selec...	
<input checked="" type="checkbox"/>	a.EMPLID		Academic Career	Ascending	1	<input type="checkbox"/>		
<input checked="" type="checkbox"/>	a.ACAD_CAREER					<input type="checkbox"/>	= '1035'	
<input checked="" type="checkbox"/>	a.STDNT_CAR_NBR					<input type="checkbox"/>		
<input checked="" type="checkbox"/>	a.ACAD_PROG					<input type="checkbox"/>	= '1035'	
<input checked="" type="checkbox"/>	B.GU_DESCR120		Program Description			<input type="checkbox"/>	= '3165'	
<input type="checkbox"/>	a.ADMIT_TERM					<input type="checkbox"/>		

A visual interface to create queries.





# USER DEFINED REPORTS

**Edit Report**

Master Report  
 SQL Query  
 Child Reports  
 Binds  
 Drill Down  
 Property  
 Data  
 Titles  
 Plot Area  
 X-Axis  
 Y-Axis  
 PDF

**SQL Query - 05 Enrolment Numbers by Minute (Multiple Terms)**

```

SELECT a.stm,
       b.descr      Semester,
       CASE
         WHEN To_char(To_date(datetime, 'HH24:MI') + 1 / 1440, 'MI') IN ( '01' )
         THEN
           To_char(To_date(datetime, 'HH24:MI') + 1 / 1440, 'MI"sec"')
         WHEN To_char(To_date(datetime, 'HH24:MI') + 1 / 1440, 'MI') IN ( '02' )
         THEN
           To_char(To_date(datetime, 'HH24:MI') + 1 / 1440, 'MI"nd"')
         WHEN To_char(To_date(datetime, 'HH24:MI') + 1 / 1440, 'MI') IN ( '03' )
         THEN
           To_char(To_date(datetime, 'HH24:MI') + 1 / 1440, 'MI"rd"')
         ELSE To_char(To_date(datetime, 'HH24:MI') + 1 / 1440, 'MI"ch"')
       END
|| ' Minute' DATETIME,
trunc(students_enrolled, 0) students_enrolled
FROM (SELECT a.stm,
           To_char(c.dtm_stamp_sec, 'HH24:MI') DATETIME,
           Count (DISTINCT a.empId)      Students_Enrolled
      FROM sysadm.ps_acdtm_caz_term a,
           sysadm.ps_acdtm_enrl_app b,
           sysadm.ps_enrl_req_detail c ,
           (SELECT stm,
                  appointment_nbr,
                  To_char(appt_start, 'DD/MM/YYYY HH24:MI')      APPT_START,
                  To_char(appt_start + 10 / 1440, 'DD/MM/YYYY HH24:MI') APPT_END
           FROM (SELECT DISTINCT stm,
                                 appointment_nbr,
                                 To_date(To_char(appt_start_date, 'DD/MM/YYYY')
                                       || ' ',
                                       'DD/MM/YYYY HH24:MI') APPT_START,
                                 'DD/MM/YYYY HH24:MI') APPT_START
            FROM sysadm.ps_appointment_tbl
           WHERE stm IN (:STM01, :STM02, :STM03, :STM04, :STM05, :STM06)
                  and institution = 'GRIFF'
                  and acad_Career = 'UGRD'
                  AND appointment_nbr <> '0006') l appt.

```

help

**Edit Report**

Master Report  
 SQL Query  
 Child Reports  
 Binds  
 Drill Down  
 Property  
 Data  
 Titles  
 Plot Area  
 X-Axis  
 Y-Axis  
 PDF

**Property - 05 Enrolment Numbers by Minute (Multiple Terms)**

Chart Type: Bar - Vertical Cluster

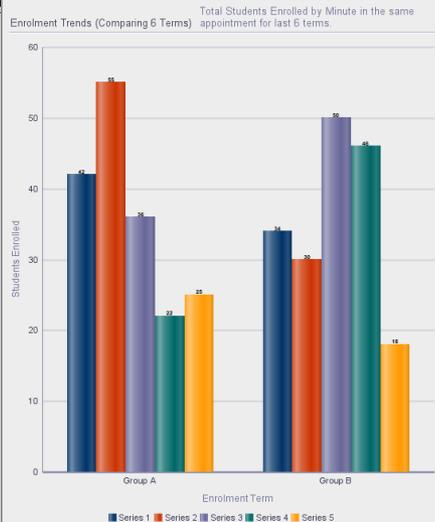
Style: Default  Gradient  3D Effect  
 Revert to Defaults for Style

Default Grid:  Default Line Width: Thinner

Default Colors: Foreground... Background...

Default Font...  
 Default Number Formats...

**Enrolment Trends (Comparing 6 Terms)** Total Students Enrolled by Minute in the same appointment for last 6 terms.



Group	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6
Group A	42	55	36	22	25	46
Group B	34	30	50	46	18	46

Students Enrolled

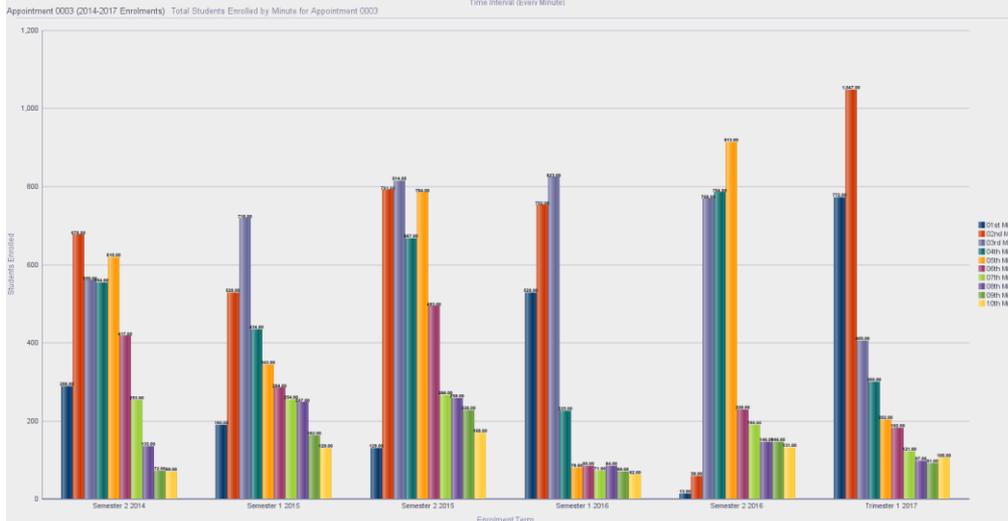
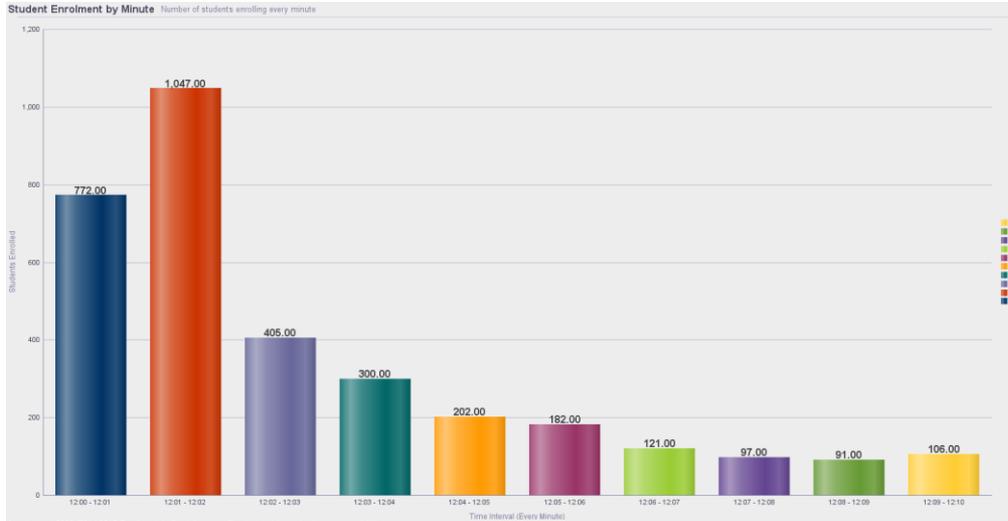
Enrolment Term

Series 1 Series 2 Series 3 Series 4 Series 5

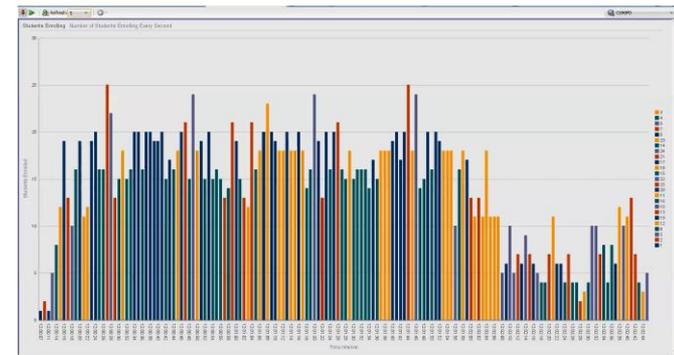
help apply Cancel



# GRIFFITH OPEN ENROLMENT REPORTS



- Monitor Open Enrolment
- Visual Representation of Students enrolling in Real Time
- Understanding Enrolment Trends over Multiple Terms





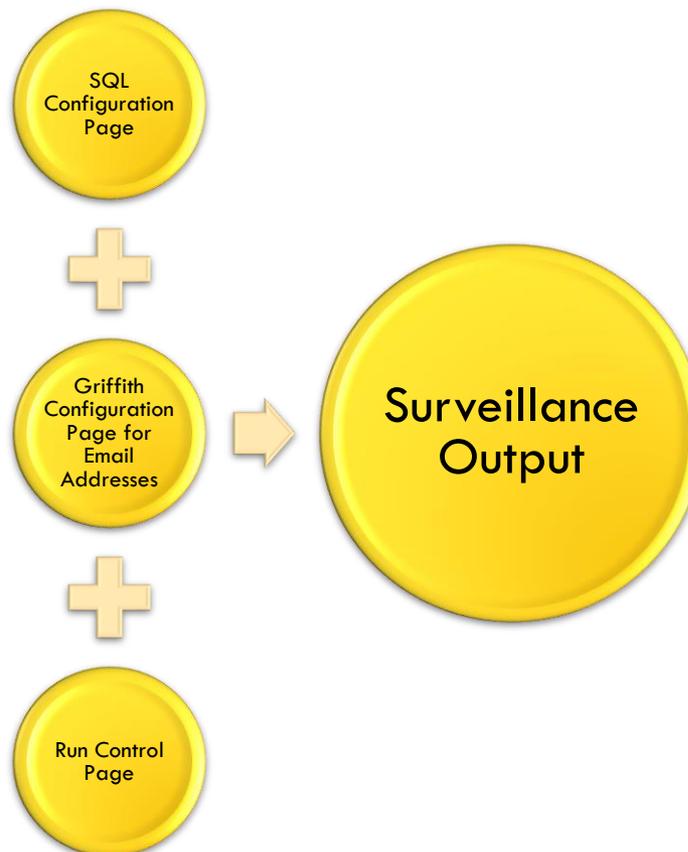
**BE  
REMARKABLE**

# SURVEILLANCE APP ENGINE

A custom built application engine to run multiple SQL statements as a batch process.

# SURVEILLANCE APPLICATION ENGINE

Application engine  
to automate  
running of multiple  
SQLs as a batch  
process



# SQL CONFIGURATION PAGE

Surveillance queries

Configuration Type ADU\_PRESENTATION

File Format CSV

Surveillance queries ?

Find | View All First 1 of 1 Last

\*Query Title: Cancelled classes in 3165

Description: Cancelled classes in 3165 Status Active

Comment's

Surveillance SQL: select distinct crse\_id, crse\_offer\_nbr, catalog\_nbr, descr  
From sysadm.ps\_class\_tbl where class\_Stat = 'X'  
and strm = '3165'

Edit SQL

Test SQL

Comma seperated  
Column Headings

COURSE\_ID, COURSE\_OFFER\_NUMBER, CATALOG\_NBR, CLASS\_DESCR

Save

Notify

Add

Update/Display

# GU CONFIGURATION – EMAIL ADDRESSES

## Configuration

SetID: GRIFF

Application Code: GU\_SRVC\_QRY\_ADMIN

Config Find | View All First 1 of 1 Last

\*Effective Date: 12/03/2015 \*Status: Active

\*App. Description: Surveillance Emails

Config Data Find First 1-2 of 2 Last

1	*Field Desc: Email address	+ -
	*Config Field Id: SRVC_ADMIN	
	Field Value: p.raval@griffith.edu.au	
2	*Field Desc: Email address	+ -
	*Config Field Id: SRVC_ADMIN	
	Field Value: p.raval@griffith.edu.au	

Save

Return to Search

Add

Update/Display

Include History

Correct History

# RUN CONTROL PAGE

Run Surveillance Query

Run Control ID: 2641953

Report Manager

Process Monitor

Run

Select the Output File Format ?

\*File Format

CSV

Email List

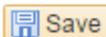
GU\_SRVC\_QRY\_ADMIN



Select the Configuration Type

\*Configuration Type

ADU\_PRESENTATION



Save



Return to Search



Previous in List



Next in List



Notify



Refresh



Add



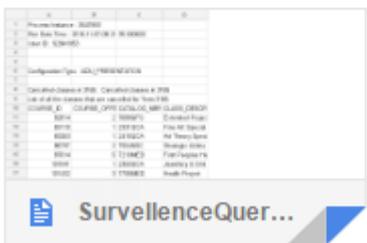
Update/Display

# OUTPUT

**Surveillance Query Output** Inbox x

 **bss-student-team@griffith.edu.au**  
to p.raval

Surveillance Query Output is attached



COURSE_ID	OFFER_NUMBER	CATALOG_NUMBER	DESCRIPTION
60			Classes to be Cancelled in 3165 : To Be Cancelled Classes 3165
61			Lists all the classes that are to be cancelled for Semester 2 2016
62			
63	3205	1 3205MED	Healthcare Systems
64	80346	3 3215HSL	Hotel Service Operations Mgt
65	80423	1 7209HSL	Tourism Management
66	81140	3 1081LHS	Elementary Spanish II
67	81556	2 3001EHR	Negotiation
68	82769	1 2006GIR	Rhetoric, Spin and the Media
69	83088	1 2514QCA	Concept Visualisation
70	86229	1 3093LHS	Italy through Theatre & Cinema
71	87462	1 1002PSY	Intro Individual&Social Psych
72	88793	1 2246QCM	Advanced Aural Studies
73	88904	2 4047ENV	Public Involv & Community Dev
74	89650	1 2010HSV	Working in Communities
75	89650	2 2010HSV	Working in Communities
76	90177	1 7617GFS	Screen Directing
77	100161	1 7107MKT	Franchising
78	100732	1 2545QCA	Creative Thinking
79	100818	1 5326LAW	Law, Culture and Anthropology
80	101106	1 4302EDN	The Collegial Classroom
81	101246	1 2548QCM	North Indian Music
82	101388	1 2154QCM	Keyboard Accom Studies 2
83	101420	1 3820QCA	Indiv Proj 2 - Photo Art Prac
84	101741	1 3708GFS	Sound Design 2
85	101746	1 1704GFS	Cinematography
86	101848	2 1005ICT	Object Oriented Programming
87	101984	1 2511ICT	Business Analysis
88	102100	1 1209QCA	Mapping the Postmodern
89	103437	2 7302ICT	Enterprise Architecture App.
90	103843	1 3504QCA	Design Teams, Probs&Processes
91	103960	1 3101IBA	Climate and Sus Growth in Asia
92	104328	3 1254EDN	Genre, Text and Lang
93	104347	1 3291EDN	PEL2: Learning & Teach Sec Sch
94	104623	2 1028HSV	Equity and Diversity
95	104827	2 6009CJ	Contemp Perspectives on Crime

SurveillanceQuery\_OutPut\_3547993



# CONCLUDING THOUGHTS

ANY QUESTIONS?

# PRESENTERS

## Parth Raval

Senior Functional Analyst

Griffith University

[p.raval@griffith.edu.au](mailto:p.raval@griffith.edu.au)

## Clinton Lamont

Team Leader, BSS Student Team

Griffith University

[clinton.lamont@griffith.edu.au](mailto:clinton.lamont@griffith.edu.au)

**ALL ALLIANCE PRESENTATIONS WILL BE AVAILABLE FOR  
DOWNLOAD FROM THE CONFERENCE SITE**



# THANK YOU!



BE REMARKABLE



ADU 9-11 NOVEMBER 2016