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**Population Selection – ALLIANCE 08**  
**25202 : New in 9.0: "Population Selection" - A Deep Dive**

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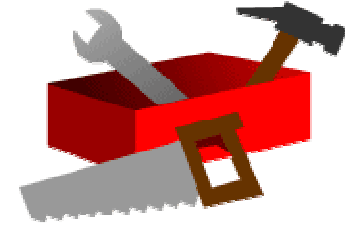
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# Agenda

- What is Population Selection?
- Examples in Student Admin 9.0
- Population Selection Components
- How to configure shipped processes
- How to enable your own processes
- How to create a Selection Tool



# What is it?



- Population Selection is a framework that:
  - Feeds “Populations” to a client process
    - Emplids, Orgs, both, neither, or any other field(s)
    - Can include any number of fields the process needs
  - Enables loose integration to “Selection Tools”
    - PS Query
    - External Files (e.g. spreadsheet)
    - Equation Engine
  - Is highly configurable and extensible
  - Engineered for easy integration into existing processes

# Student Groups

## PS Query



### Process Student Groups

Run Control ID: MIKE

[Report Manager](#) [Process Monitor](#)

Run

Population Selection	
<input checked="" type="checkbox"/> Population Selection	
Selection Tool	PS Query
Query Name	STUDENT_GROUP_QUERY_SAMPLE
	<a href="#">Edit Prompts</a> <a href="#">Launch Query Manager</a> <a href="#">Preview Selection Results</a>
Student Group Data	
*Academic Institution	PSUNV PeopleSoft University
*Student Group	360 Test 360 Stdnt Services Center
*Effective Date	03/09/2006
*Effective Status	Active
Comment	
Student Override	
<input type="checkbox"/> Student Override	

Population Selection

Run Control Information

Alternative Selection

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# Student Groups

## PS Query



Records Query Expressions Prompts Fields Criteria Having View SQL Run

**Query Name:** STUDENT\_GROUP\_QUERY\_SAMPLE      **Description:** Select Student Groups

Click folder next to record to show fields. Check fields to add to query. Uncheck fields to remove from query. Add additional records by clicking the records tab. When finished click the fields tab.

**Chosen Records**

**Alias Record**

A STDNT\_GRP\_BIND - Pop Select Student Group Bind [Hierarchy Join](#)

**Fields** Find | View All First 1 of 1 Last

<input checked="" type="checkbox"/>		EMPLID - EmplID	
-------------------------------------	--	-----------------	--

[Save As](#) [New Query](#) [Preferences](#) [Properties](#) [New Union](#)

← PS Query

Records Query Expressions **Prompts** Fields Criteria Having View SQL Run

**Query Name:** STUDENT\_GROUP\_QUERY\_SAMPLE      **Description:** Select Student Groups

**Prompts List** Customize | Find First 1 of 1 Last

Prompt	Edit	Delete
:1 = EMPLID - ID	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>

[Save As](#) [New Query](#) [Preferences](#) [Properties](#) [New Union](#)

← Prompts Supported



# Student Groups

*Demo*







# 3C Engine External File



Run Control ID: MIKE [Report Manager](#) [Process Monitor](#) [Run](#)

Process 3Cs	Process Joint Records
<input checked="" type="checkbox"/> Population Selection <input type="checkbox"/> Trigger Table <input type="checkbox"/> Mass Change	<input checked="" type="radio"/> No <input type="radio"/> Yes, all Joint IDs <input type="radio"/> Yes, if match exists

Event Selection

Academic Institution: PSUNV PeopleSoft University

Administrative Function: ADMA Admissions Application

Event ID: NEWAPPUGR New Applicant - Undergraduate [Detail](#)

**Communication Key**

UFAPPACK Application Acknowledgment

**Checklist Code**

UGALL UG Appl Requirements - All

**Checklist Item**

100	ACTSAT	ACT or SAT I Test Scores
200	PERSTA	Personal Statement
300	TRANS	Academic Transcripts

**Comment Category**

UADO Undergraduate Admission - Open

**Population Selection**

Selection Tool: External File

Attached File: adma\_sample.csv [Upload File](#) [Delete File](#) [View File](#)

File Mapping: ADMA FILE MAP [Edit File Mapping](#) [Preview Selection Results](#)

Selection  
Method

Run Control  
Information

Population  
Selection

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# 3C Engine

## External File



	A	B	C	D	E	F	G
1		390					
2	<b>Appl Nbr</b>	<b>State</b>	<b>High School</b>	<b>Career</b>	<b>Career Nbr</b>	<b>Institution</b>	<b>ID</b>
3	00022514	CA	Claremont	UGRD	0	PSUNV	FA0331
4	00022515	CA	Claremont	UGRD	0	PSUNV	FA0332
5	00022516	CA	Claremont	UGRD	0	PSUNV	FA0334
6	00022517	CA	Claremont	UGRD	0	PSUNV	FA0335
7	00022518	CA	Claremont	GRAD	0	PSUNV	FA0336
8	00022519	CA	Claremont	GRAD	0	PSUNV	FA0337
9	00022520	CA	Claremont	GRAD	0	PSUNV	FA0338
10	00022521	CA	Claremont	GRAD	0	PSUNV	FA0339
11	00022522	CA	Claremont	UGRD	0	PSUNV	FA0340
12	00022523	CA	Claremont	UGRD	0	PSUNV	FA0341
13	00022524	CA	Claremont	UGRD	0	PSUNV	FA0342
14	00022525	CA	Claremont	UGRD	0	PSUNV	FA0343
15	00022526	CA	Claremont	UGRD	0	PSUNV	FA0344
16	00022527	CA	Claremont	UGRD	0	PSUNV	FA0345
17	00022528	CA	Claremont	UGRD	0	PSUNV	FA0346
18	00022529	CA	Claremont	GRAD	0	PSUNV	FA0347
19	00022530	CA	Claremont	GRAD	0	PSUNV	FA0349
20	00022531	CA	Claremont	UGRD	0	PSUNV	FA0349
21	00022532	CA	Claremont	UGRD	0	PSUNV	FA0350
22	00022533	CA	Claremont	UGRD	0	PSUNV	FA0351
23	00022534	CA	Claremont	UGRD	0	PSUNV	FA0352
24	00022535	CA	Claremont	UGRD	0	PSUNV	FA0353
25	00022536	CA	Claremont	GRAD	0	PSUNV	FA0354
26	00022537	CA	Claremont	UGRD	0	PSUNV	FA0355



# 3C Engine

## External File

# *Demo*



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# Service Indicators Equation Engine



## Create Service Indicators

Run Control ID: MIKE

[Report Manager](#) [Process Monitor](#)

[Run](#)

Population Selection			
Selection Tool	<input type="text" value="Equation Engine"/>	<a href="#">Edit Prompts</a>	
Equation Name	<input type="text" value="CCSDPOPSEL01"/>	<a href="#">Edit Equation</a>	<a href="#">Preview Selection Results</a>
Service Indicator Data			
*Institution	<input type="text" value="PeopleSoft University"/>		
*Service Indicator Code	<input type="text" value="ALL"/>	All Services Hold	
Reason	<input type="text" value="BILL"/>	Overdue Account Balance	
Effective Period			
Start Term	<input type="text" value="0000"/>	Begin Term - Svc Indicatr Use	Start Date <input type="text" value="03/07/2006"/>
End Term	<input type="text"/>		End Date <input type="text"/>
Assignment Details			
*Department	<input type="text" value="10000"/>	Human Resources	
Reference	<input type="text"/>		
Amount	<input type="text"/>	Currency Code	<input type="text" value="USD"/> Dollar
Group Box			
Contact ID	<input type="text"/>	Contact Person	<input type="text"/>
Placed Person ID	<input type="text"/>	Placed By	<input type="text"/>

← Population Selection

← Run Control Information

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# Service Indicators

## Equation Engine



### Equation Editor

Equation Name: CCSDPOPSEL01

\*Eff Date: 01/01/1900  Active  Enable Preview Results

Short Desc: Svc Ind01 \*Descr: Person Mass Service Indicator1

Compile Status: Successfully Parsed

Equation Edit Function:

Equation Detail Find | View All First 1-18 of 22 Last

Sel	Line	Keyword	Operand Type	Operand	Comment:
<input type="checkbox"/>	1	Skip			
<input type="checkbox"/>	2	Assign	Local Variable	EMPLID	
<input type="checkbox"/>	5	Find First	Local Variable	FOUND_SCC_BND_SRCIND	
<input type="checkbox"/>	6		Table	SCC_BND_SRCIND	
<input type="checkbox"/>	7		Keyed Local Greater Equal	EMPLID	
<input type="checkbox"/>	8	End Find			
<input type="checkbox"/>	9	Loop			
<input type="checkbox"/>	10	If			
<input type="checkbox"/>	16	If			
<input type="checkbox"/>	24	Assign	Local Variable	EMPLID	
<input type="checkbox"/>	25		Table	SCC_BND_SRCIND	
<input type="checkbox"/>	26		Field	EMPLID	
<input type="checkbox"/>	27	End Assign			
<input type="checkbox"/>	28	Call	Equation	CCSSINSRSLT1	
<input type="checkbox"/>	29	Call Parns			
<input type="checkbox"/>	30		Local Variable	EMPLID	

# Service Indicators

*Demo*



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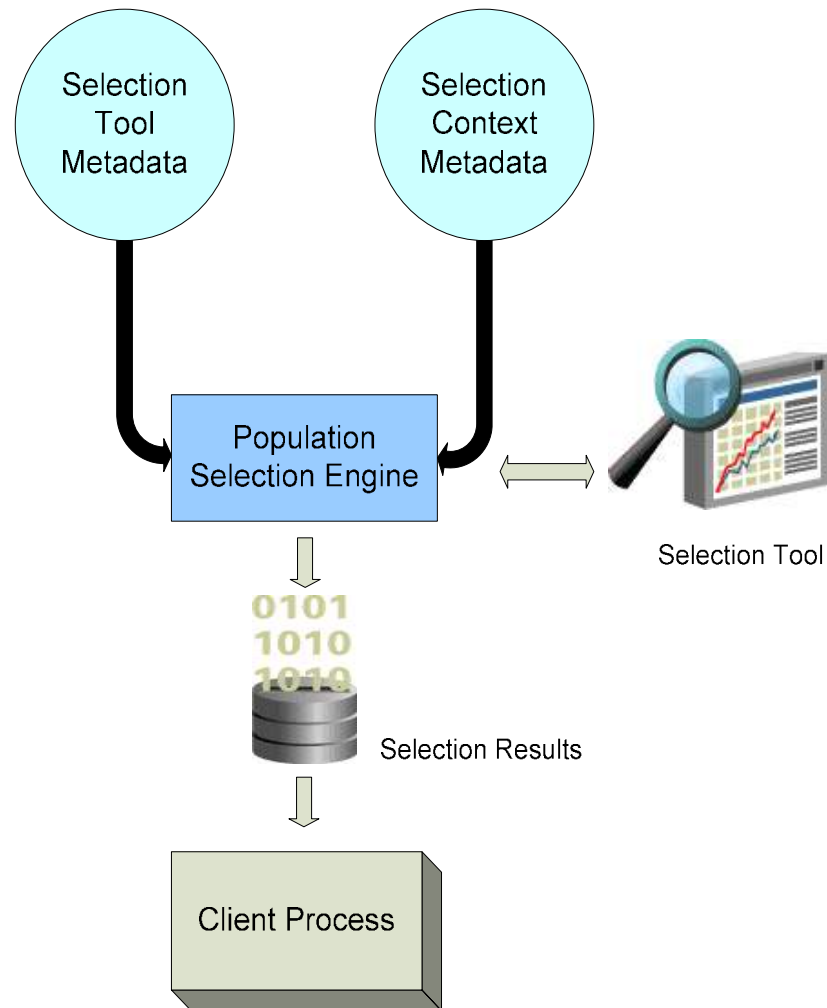
# Pop Select in 9.0

1. CC - 3C Engine
2. CC - CommGen
3. CC - Batch Service Indicators
4. CC - Student Groups
5. CC - User ID Replacement
6. CC - Population Update
7. ES - Academic Advisement Batch Reporting
8. ES - Batch Transcripts
9. FA - Mass Packaging/Re-Packaging
10. FA - Aid Year Activate
11. SF - Payment Plan Enrollment
12. SF - Third Party Contract Enrollment
13. AD - Applicant/Prospect Delete
14. CR – Audience/Initiative
15. AA – Batch Report Request
16. FA - Process and Maintain SAP
17. SF - SF External Award Feed
18. SF - Mass Contract Select
19. SF – Process Transcripts



***added after 9.0 release***

# Pop Select Components







# Selection Context

- A Population Context is tied to each process that uses the utility
- Contexts are delivered as system data for SA processes that use Population Selection
- A Context tells Pop Select
  - Associated Batch Process (optional)
  - Associated PIA Components
  - Allowed Selection Tools (optionally based on Peopletools security)
  - Required and Optional fields the process uses
  - Results record used to interface the population
  - How to map the Selection Results into the Results record

# Selection Context

Context Definition Selection Mapping

\*Context Name

Process Type

Process Name

Description

\*Status

Applicable Menu Navigation Customize | Find | First 1-2 of 2 Last

	*Menu Name	*Component Name		
1	DEFINE_CAMPUS_COMMUNITY	COMMITTEE_SETUP	+	-
2	TRACK_STUDENT_CAREERS	SCC_RUN_STD_GRP	+	-

Applicable Selection Tools Customize | Find | First 1-3 of 3 Last

	Selection Tool	Description	Full Access	Exception		
1	PS Query	PeopleSoft Query Manager	<input checked="" type="checkbox"/>	Exception	+	-
2	Equation Engine	Student Administration Equation Engine	<input checked="" type="checkbox"/>	Exception	+	-
3	External File	Student Administration File Parser	<input checked="" type="checkbox"/>	Exception	+	-



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# Selection Context

**Context Definition** | **Selection Mapping**

**Context Name** Student Group Batch  
**Status** Active

**Pop Selection Integration**

Context varies per Application Data

**Process Required Fields** Find | View All First 1 of 1 Last

**Results Record** STDNT\_GRP\_TRGT PopSelect Student Group Target  
**Required Fields Record** STDNT\_GRP\_BIND Pop Select Student Group Bind

Validate Edit Prompt Values

**Required Fields Mapping** Customize | Find First 1-2 of 2 Last

	Results Record Fields	Mapping Action	Required Fields
1	EMPLID	Direct	EMPLID
2	PROCESS_INSTANCE	Process Instance	



# Selection Context

- Advanced Features
  - Vary the “Required Fields” and “Results” records based on a user defined field
  - Automatically default “Prompt” values based on fields on the page
  - Advanced mapping actions
    - System Variables (e.g. %OperatorID, %Date,...)
    - %CommonID (uses Emplid, Org, or CommonID)
    - Sequence
    - Process Instance

# Selection Context

Context Definition | **Selection Mapping**

**Context Name** 3C Engine  
**Status** Active

**Pop Selection Integration**

**Context varies per Application Data**      **Application Data** Administrative Function

**Process Required Fields** Find | View All    First 1 of 1 Last

**Administrative Function** ADMA + -

**Results Record** TRGR\_PS\_3CS\_TBL Pop Select - Trigger Table

**Required Fields Record** SCC\_PS\_ADMA\_BND PopSel Bind record for ADMA

**Validate Edit Prompt Values**

**Required Fields Mapping** Customize | Find    First 1-59 of 69 Last

	Results Record Fields	Mapping Action	Required Fields	Bind Value
1	EVENT_3CS_ID	Default		Dummy
2	DATE_ADDED	Default		%Date
3	OPRID	Default		%OperatorId
4	COMMON_ID	Default		%CommonID
5	COMMENT_PRINT_FLAG	Default		N
6	COMM_ID	Default		%EmployeeId
7	SCC_TRGR_STATUS	Default		P
8	SA_ID_TYPE	Default		P
9	TRGR_SOURCE	Default		B
10	ADMIN_FUNCTION	Default		ADMA
11	PRCSNAME	Default		3CENGINEPOP
12	STDNT_CAR_NBR	Direct	STDNT_CAR_NBR	
13	INSTITUTION	Direct	INSTITUTION	



# Selection Tool

- Defines a “Selection Tool”
- Delivered as System Data
- Some attributes are updatable
  - Customer can configure look and feel
- Adding new tools is a Customization
- Adding new tools requires OO knowledge



# Selection Tool

- A Pop Select Tool defines
  - Tool Name
  - Application Class adapter
  - SQL View for “Selection Name” prompt
  - Various user facing labels
  - Maximum rows allowed
  - External File support and details
  - PIA navigation to tool

# Configuring Selection Tool

## Population Selection Tool

*Selection Tool	External File
Description	Student Administration File Parser
*Status	Active <input checked="" type="checkbox"/> Automated Selection
<b>Tool Configuration</b>	
*Application Class	SCC_POP_SELECT:MODEL:Adapters:FileParserAdapter
*Selection View	SCCPS_FILE_WW <input type="text"/> File Parser / Pop Select ww
*Selection Label	File Mapping
*Maximum Results Rows	10,000
	<input checked="" type="checkbox"/> Enable Preview Results
Maximum Preview Rows	300
	<input checked="" type="checkbox"/> File Input Support    File Option: Attachment
URL Identifier	SCCFP_FILE_PARSER <input type="text"/> File Parser URL for attachment
Max File Size (bytes)	1,000,000
<b>Tool Launch Parameters</b>	
Tool URL Edit Label	Edit File Mapping
Tool URL Add Label	Create File Mapping
Menu Name	SCCFP_MENU <input type="text"/> File Parser Menu
Menu Bar Name	USE <input type="text"/> USE
Menu Item Name	SCCFP_PS_MAP <input type="text"/> Population Selection File Map
Menu Page Name	SCCFP_PS_FILE <input type="text"/> Pop Selection File

## Configurable Attributes

- Name
- Active/Inactive
- Selection 'Name' Label
- Max Results Rows
- Max Preview Rows
- File Option (path or attach)
- File URL (FTP server,table)
- Max attached file size
- Tool Edit URL label
- Tool Add URL label



# Configuring Selection Context

- Add / Remove Tools
- Remove from specific Component
- Secure Tools by Role

Context Definition    Selection Mapping

\*Context Name: Student Group Batch

Process Type: Application Engine

Process Name: SCC\_STD\_GRP

Description: Student Groups process

\*Status: Active

Applicable Menu Navigation

	*Menu Name	*Component Name		
1	DEFINE_CAMPUS_COMMUNITY	COMMITTEE_SETUP	+	-
2	TRACK_STUDENT_CAREERS	SCC_RUN_STD_GRP	+	-

Applicable Selection Tools

	Selection Tool	Description	Full Access	Exception		
1	PS Query	PeopleSoft Query Manager	<input checked="" type="checkbox"/>	Exception	+	-
2	Equation Engine	Student Administration Equation Engine	<input checked="" type="checkbox"/>	Exception	+	-
3	External File	Student Administration File Parser	<input checked="" type="checkbox"/>	Exception	+	-

Selection Tool: PeopleSoft Query Manager

Selection Tools Access Exceptions

	*Role Name	Description
1	CS - Administrator	CS - Administrator

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# Configuring Selection Context

[New Window](#) | [Customi](#)

[Context Definition](#) | **Selection Mapping**

**Context Name** Student Group Batch  
**Status** Active

**Pop Selection Integration**

Context varies per Application Data

**Process Required Fields** [Find](#) | [View All](#) First 1 of 1 Last

**Results Record**  PopSelect Student Group Target

**Required Fields Record**  Pop Select Student Group Bind

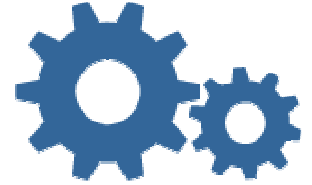
Validate Edit Prompt Values

**Required Fields Mapping** [Customize](#) | [Find](#) First 1-2 of 2 Last

	Results Record Fields	*Mapping Action	Required Fields
1	EMPLID	Direct	EMPLID
2	PROCESS_INSTANCE	Process Instance	

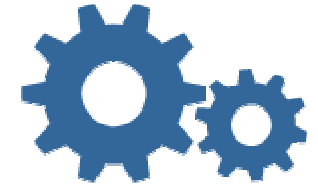
•Probably won't change much here for delivered processes.

# Enabling a Batch Process



1. Create a **Context** – tells pop select what data you need and where to put the results
  1. Required Fields record (view over base driver table)
  2. Result Record (where the results go)
2. Create a **Run Control**
  - Record – with Pop Select subrecord
  - Page – with Pop Select subpage
  - Component – with Pcode that invokes the Pop Select controller class
3. **Incorporate** Pop Select into your process as an App Engine step

# Enabling a Batch Process



- Pop Select Controller does all the UE and error handling logic

SCCPS\_RESULTS\_URL (field)

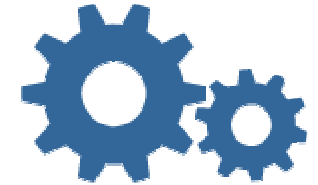
FieldChange

```
import SCC_POP_SELECT:PIAComponents:PopSelectController;
import SCC_POP_SELECT:UTIL:EXCEPTION:PopSelectException;

Component SCC_POP_SELECT:PIAComponents:PopSelectController &PopController;

try
    &PopController.FieldChangePreViewResults();
catch SCC_POP_SELECT:UTIL:EXCEPTION:PopSelectException &Excpn
    &Excpn.LogToScreen();
end-try;
```

# Enabling a Batch Process



- Code to Execute a Selection

```
PopSel (aestep) OnExecute
import SCC_POP_SELECT:MODEL:PopSelectFacade;

/* Instance of the Population Selection Facade Class */
Local SCC_POP_SELECT:MODEL:PopSelectFacade &PopSelectFacade;

&PopSelectFacade = create PopSelectFacade(SCC_SRV_IND_AET.SCCPS_TOOL_ID,
                                           SCC_SRV_IND_AET.SCCPS_CNTXT_ID);

&PopSelectFacade.Oprid = SCC_SRV_IND_AET.OPRID;
&PopSelectFacade.RunControlID = SCC_SRV_IND_AET.RUN_CNTL_ID;

/* Set the Query Name, Oprid, and Run Control ID
   |(needed to run selection and get parm data) */
&PopSelectFacade.QueryName = SCC_SRV_IND_AET.SCCPS_QUERY_NAME;

&PopSelectFacade.FilePath = SCC_SRV_IND_AET.SCCPS_FILE_PATH;
&PopSelectFacade.FilePath = SCC_SRV_IND_AET.ATTACHSYSFILENAME;

/* Get the parm data if there is any*/
&PopSelectFacade.GetParmData();

/* Run Pop Select to a Record (e.g. SQL table)*/
&PopSelectFacade.ExecuteToRecord();
```

# Add a Selection Tool



- You must write an application class that extends/implements PopToolAbstract

```
PopToolAbstract [application_class] OnExecute
import SCC_POP_SELECT:MODEL:PopSelectContext;

/**
 * class PopToolAbstract
 *
 * @version 1.0
 * @author Campus Solutions
 *
 * Module: Campus Community / Common
 * Description: Abstract class for a Population Selection Tool. This class
 *              declares the public interface fo the Population Selection Tool
 *              At runtime the Pop Selection Tool Factory (PopToolFactory) creates
 *              the correct subclass.
 */
class PopToolAbstract
    ...
```

# Add a Selection Tool



- You must implement the following abstract methods
  1. ExecuteToRecord() – results to sql table
  2. ExecuteToRowSet() – results to rowset
  3. ExecuteToHTML() - preview
  4. OpenQuery() – open and validates the selection
  5. LaunchTool() – launches the tool
  6. LaunchToolValid() – returns boolean based on permissions
  7. Parm related methods – if you allow parameters, stubbed out in abstract class

# Add a Selection Tool



- You must register your tool in the Selection Tool metadata

Your adapter

**Population Selection Tool**

\*Selection Tool: PS Query  
Description: PeopleSoft Query Manager  
\*Status: Active  Automated Selection

**Tool Configuration**

\*Application Class: BCC\_POP\_SELECT\_MODEL/Adapters/PSQueryAdapter  
\*Selection View: BCCPS\_PSQRY\_VW Pop Select PS Query Prompt Vw  
\*Selection Label: Query Name  
\*Maximum Results Rows: 50,000  
 Enable Preview Results  
Maximum Preview Rows: 300  
 File Input Support

**Tool Launch Parameters**

Tool URL Edit Label: Launch Query Manager  
Tool URL Add Label:  
Menu Name: QUERY\_MANAGER Query Manager  
Menu Bar Name: USE &Use  
Menu Item Name: QUERY\_MANAGER Query &Manager  
Menu Page Name: QRY\_RECORDS Query Manager Records Tab



# Add a Selection Tool



- You must add your tool to the allowed tools on the Selection Context(s)

Applicable Selection Tools					Customize	Find	First	1-3 of 3	Last
	Selection Tool	Description	Full Access	Exception					
1	PS Query	PeopleSoft Query Manager	<input checked="" type="checkbox"/>	<a href="#">Exception</a>	<a href="#">+</a>	<a href="#">-</a>			
2	Equation Engine	Student Administration Equation Engine	<input checked="" type="checkbox"/>	<a href="#">Exception</a>	<a href="#">+</a>	<a href="#">-</a>			
3	Customer Tool		<input checked="" type="checkbox"/>	<a href="#">Exception</a>	<a href="#">+</a>	<a href="#">-</a>			

Customer Tool  
Equation Engine  
External File  
PS Query

Previous in List   Next in List   Notify   Add



Q & A

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