

The Power is in Their Hands: Facilitating Data Usage Throughout the University

Presented by: Dr. Susan Moreno, Carmen Allen and Vyas Krishnamurthy
University of Houston, Office of Institutional Research

Southern Association for Institutional Research (SAIR)
Charlotte, North Carolina
October 11, 2016

Welcome to the Powerhouse.

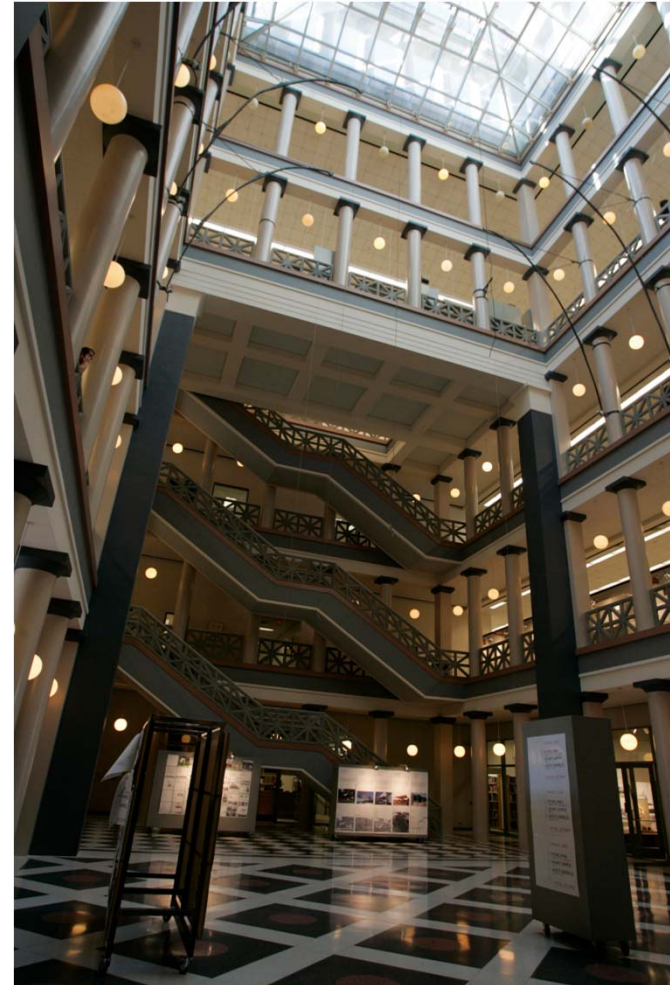
UNIVERSITY of **HOUSTON**

Outline

- Introductions
- What are Reporting Tables?
- Reporting Tables Schema
- Description of Tables
- Query Training Overview
- Demonstration

University of Houston

- 43,774 students
- 14 colleges
- 110 bachelors, 119 masters, 47 doctoral, and 3 professional programs
- 9,596 degrees awarded annually



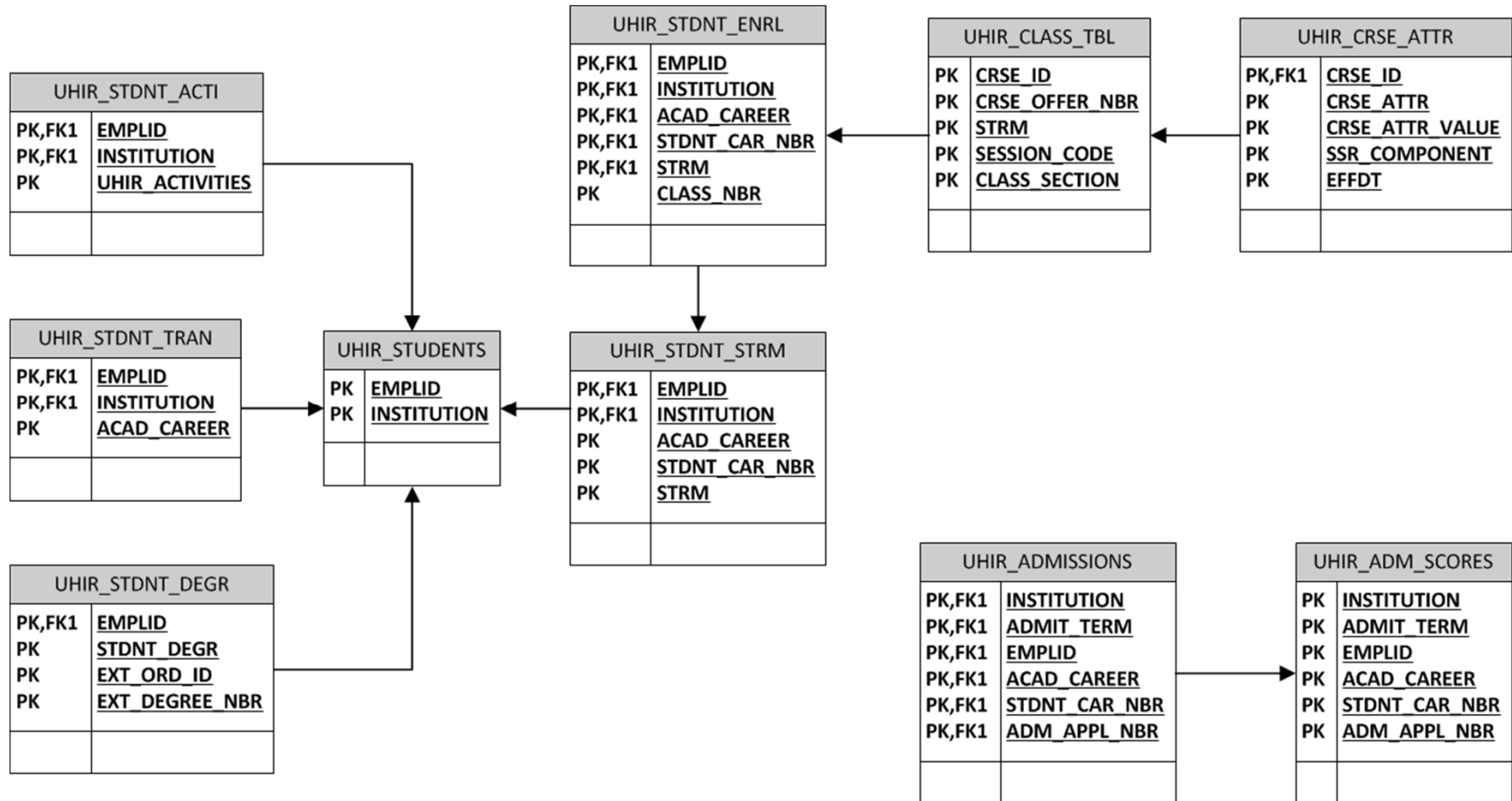
The Need for Reporting Tables

- Data access before PeopleSoft...
 - Data dump
 - No query ability
 - Little flexibility in terms of fields included
- Data access after PeopleSoft...
 - Opportunity to change how we make data available
 - Consolidate data from many tables into about a dozen tables
 - Facilitate development of queries

Reporting Table Logistics

- Refreshed daily overnight
- Roughly three hours to load
- Table purged and reloaded for the term being processed
- Key fields aid in query building

Reporting Tables Schema



Tables & Descriptions

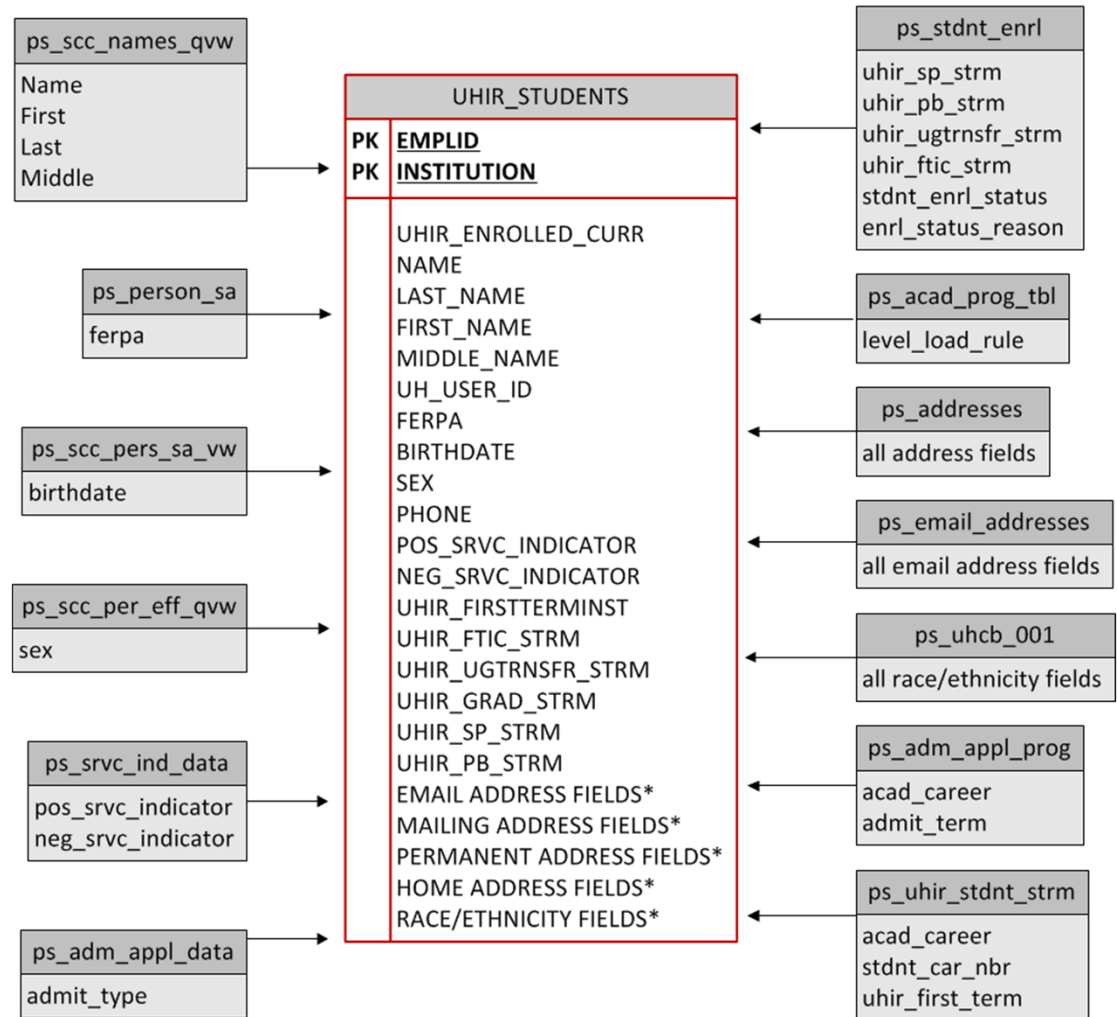
| Table Name | Description |
|-----------------|---|
| UHIR_STUDENTS | Current demographic information for students. One record per student, per institution. |
| UHIR_STDNT_STRM | Term-specific information for students that have been enrolled in at least one class for that term. |
| UHIR_STDNT_ENRL | Class enrollment data by term. |
| UHIR_STDNT_DEGR | Degree information. |
| UHIR_STDNT_TRAN | Transfer information. |
| UHIR_STDNT_ACTI | Combination of student attributes, extra-curricular, student activity and student group data. |
| UHIR_CLASS_TBL | Data related to classes offered. |
| UHIR_ADMISSIONS | Admission application data. |
| UHIR_ADM_SCORES | Admission test score information. |

Tables & Descriptions (cont'd)

| Table Name | Description |
|-----------------|--|
| UHS_STDNT_LOC | Identifies the locations of all of the classes in which a student is enrolled. |
| UHM_ADM_FTICPOP | Key information about admitted FTICs and where they are in the onboarding process. |
| UHM_FTIC_COHDAT | Tracks members of FTIC cohorts as they progress through the university. |
| UHM_UGRD_COHORT | Identifies new undergraduate students each semester; includes FTIC/transfer and degree-seeking status. |
| UHIR_HOUSING | Student data from the housing system from application to booking. |

Source Tables for UHIR_STUDENTS

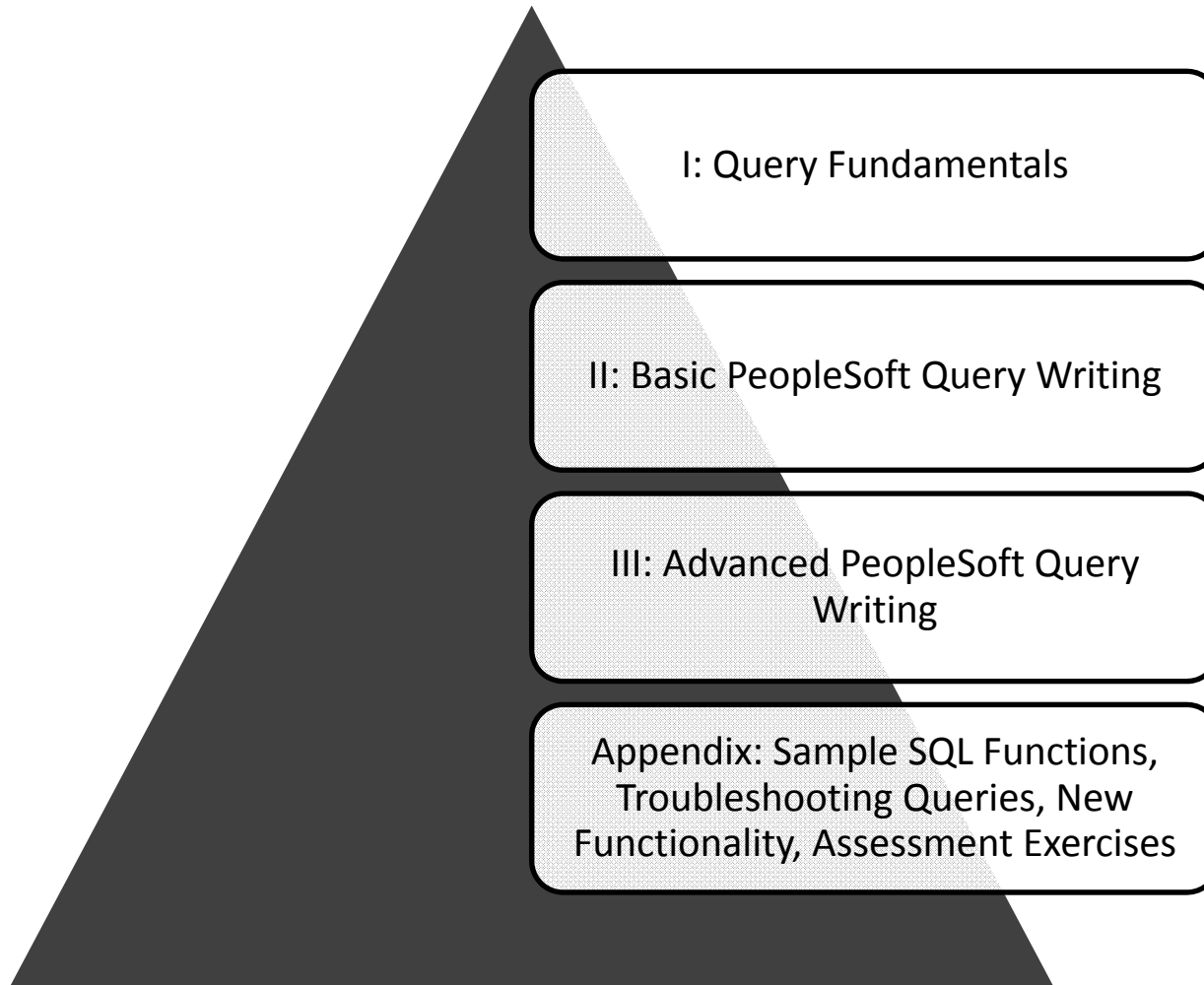
- 13 source tables
- 61 fields
 - 55 fields pulled
 - 6 derived fields



Query Training

- Class Length
 - Fifteen hours
 - 5 consecutive days, 3 hours per day
- Participants
 - Users wanting access to be able to write queries in the PeopleSoft student module
- Frequency
 - 3 times a year (spring, summer, fall)
- Uses Training Database
- Partner with IT

Query Training Outline



Query Training Topics

- Overview of Tables
 - UHIR Reporting Tables
 - Coordinating Board (CB) Report Tables
- Query Writing
 - Effective Date Logic
 - Query Methodology
 - Joins/Functions/Expressions
- Assessment Exercises

Query Training Assessment

- Background
 - Goal: grant access to query production data
 - Needed to ensure that users understood how to accurately query data
- Format
 - 2 exercises; 1 beginner, 1 advanced
- Grading
 - Correct tables/fields
 - Joins
 - Output formatting
 - Expressions, functions, aggregation, etc.

Example Assessment Exercise

Provide a list that displays the EMPLID and CUM_GPA for all students enrolled at the end of the term during Fall 2009 at UH if the student had a cumulative GPA of at least 3.0. If the student belonged to the Honors (R003) activity type, provide that additional information in a column (UHIR_ACTIVITY_TYPE). Also add a calculated column that combines the student's current Academic Standing code with their primary plan (with a dash in between), i.e. 'E-TELSBS'; the title of the column should be "Standing and Plan". The institution should be a run-time variable that defaults to value '00730', having a lookup against master table 'INSTITUTION_TBL' and having custom heading text that says "Enter the institution". Sort the data by activity type, then by student ID.

Tip: You should receive 18,144 rows of data.

Query Tool Demonstration



Thank you!!

Dr. Susan Moreno

semoreno@uh.edu

Carmen Allen

ceallen74@uh.edu

Vyas Krishnamurthy

vkrishnamurthy@uh.edu

UNIVERSITY of **HOUSTON** | INSTITUTIONAL RESEARCH



Query Manager

Enter any information you have and click Search. Leave fields blank for a list of all values.

[Find an Existing Query](#) | [Create New Query](#)

*Search By ▾ begins with

[Advanced Search](#)

Search Results

*Folder View ▾

*Action ▾

| Query | | | | | | | | | | |
|--------------------------|--------------------------------|-------------------------------|---------|--------|------|-------------|--------------|------------|----------|-------------------------|
| Select | Query Name | Descr | Owner | Folder | Edit | Run to HTML | Run to Excel | Run to XML | Schedule | Definitional References |
| <input type="checkbox"/> | UHIR_09GRADS_FTIC_TRANSFER2 | 2009 grads cum hours- | Private | UHIR | Edit | HTML | Excel | XML | Schedule | Lookup References |
| <input type="checkbox"/> | UHIR_CONTACTLIST_FALL09 | Contact info for all students | Private | UHIR | Edit | HTML | Excel | XML | Schedule | Lookup References |
| <input type="checkbox"/> | UHIR_CONTACT_ALL_LANDRUM | Open Request- email and phone | Private | UHIR | Edit | HTML | Excel | XML | Schedule | Lookup References |
| <input type="checkbox"/> | UHIR_ENROLLED_PASSED_KH | all students | Private | UHIR | Edit | HTML | Excel | XML | Schedule | Lookup References |
| <input type="checkbox"/> | UHIR_EVENINGMBAPROGRAM_FALL09 | includes ethnicity field | Private | UHIR | Edit | HTML | Excel | XML | Schedule | Lookup References |
| <input type="checkbox"/> | UHIR_FALL2010FTIC_FORSIMONBOTT | FTIC students enrolled Fall10 | Private | UHIR | Edit | HTML | Excel | XML | Schedule | Lookup References |
| <input type="checkbox"/> | UHIR_INCOMINGSTUDENTSFALL09_KH | Legal Counsel Office | Private | UHIR | Edit | HTML | Excel | XML | Schedule | Lookup References |
| <input type="checkbox"/> | UHIR_MATH_GRADES_KH | | Private | UHIR | Edit | HTML | Excel | XML | Schedule | Lookup References |
| <input type="checkbox"/> | UHIR_UNDERGRAD_COURSE_INFO_KH | undergrad course info | Private | UHIR | Edit | HTML | Excel | XML | Schedule | Lookup References |



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

Query Name New Unsaved Query

Description



*Search By begins with

Search

Advanced Search

Search Results

| Record | Personalize | Find | View All | First | 1-13 of 13 | Last |
|--|-------------|------|----------|------------|------------|-------------|
| Recname | | | | | | |
| UHIR_ADMISSIONS - Custom IR Admissions Rpt Table | | | | Add Record | | Show Fields |
| UHIR_ADM_SCORES - Custom IR Admissions Rpt Table | | | | Add Record | | Show Fields |
| UHIR_CLASS_TBL - Course Catalog Offerings | | | | Add Record | | Show Fields |
| UHIR_CRSE_ATTR - Course Attribute Tbl | | | | Add Record | | Show Fields |
| UHIR_HOUSING - Housing Database Rptg Table | | | | Add Record | | Show Fields |
| UHIR_PNAME_VW - Primary Name View | | | | Add Record | | Show Fields |
| UHIR_STDNT_ACTI - Reporting Table-Stdnt Semester | | | | Add Record | | Show Fields |
| UHIR_STDNT_DEGR - Reporting Table-Student Degree | | | | Add Record | | Show Fields |
| UHIR_STDNT_ENRL - Student Enrollment Table | | | | Add Record | | Show Fields |
| UHIR_STDNT_STRM - Reporting Table-Stdnt Semester | | | | Add Record | | Show Fields |
| UHIR_STDNT_TRAN - Reporting Table-Transfer Data | | | | Add Record | | Show Fields |
| UHIR_STGR_UPDLS - UHIR_STGR_UPDLS | | | | Add Record | | Show Fields |
| UHIR_STUDENTS - Reporting Table-Student Data | | | | Add Record | | Show Fields |

Save

Save As

New Query

Preferences

Properties

Publish as Feed

Publish as Pivot Grid

New Union

Return To Search

Fields for record UHIR_STDNT_STRM - Reporting Table-Stdnt Semester:

| Fieldname | Personalize | Find | First | 1-163 of 163 | Last |
|------------|-------------|---|-------|--------------|------|
| Key | | Description | | | |
| Y | | EMPLID - Empl ID | | | |
| Y | | INSTITUTION - Academic Institution | | | |
| Y | | ACAD_CAREER - Academic Career | | | |
| Y | | STRM - Term | | | |
| Y | | STDNT_CAR_NBR - Student Career Nbr | | | |
| | | UHIR_ENROLL_CENSUS - Enrolled on Census Date | | | |
| | | UHIR_ENROLL_CURR - Currently Enrolled Flag | | | |
| | | UHIR_ENROLL_EOS - Enrolled - End of Semester | | | |
| | | ACAD_LEVEL_BOT - Academic Level - Term Start | | | |
| | | UHIR_ACAD_LEVEL - Acad Level Description | | | |
| | | UHIR_COLLEGE - College | | | |
| | | UHIR_COLLEGE_DESCR - College (Group) Description | | | |
| | | UHIR_PRIMARY_ORG - Primary Plan Org Owner | | | |
| | | PRIMARY_ORG_DESCR - Primary Org Description | | | |
| | | UHIR_ACAD_STANDING - Current Term Academic Standing | | | |
| | | UHIR_ACAD_STNDDESC - Current Acad Standing Desc | | | |
| | | UHIR_PRE_ACAD_STD - Pror semester academic stading | | | |
| | | UHIR_P_ACAD_STDESC - Prior Term Acad Stdg Descr | | | |
| | | UHIR_P_ACDSTD_TERM - Prior Acad Standing Term | | | |
| | | ACAD_PROG_PRIMARY - Primary Academic Program | | | |
| | | EXP_GRAD_TERM - Expected Graduation Term | | | |

[Records](#) | **[Query](#)** | [Expressions](#) | [Prompts](#) | [Fields](#) | [Criteria](#) | [Having](#) | [View SQL](#) | [Run](#)

Query Name New Unsaved Query **Description**

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 | UHIR_STDNT_STRM - Reporting Table-Stdnt Semester | Hierarchy Join <input type="checkbox"/> |
| <input type="button" value="Check All"/> <input type="button" value="Uncheck All"/> | | |
| Fields | | |
| Find View 100 First 1-50 of 163 Last | | |
| <input type="checkbox"/> | EMPLID - Empl ID | Join PEOPLE_SRCH - People Search View |
| <input type="checkbox"/> | INSTITUTION - Academic Institution | |
| <input type="checkbox"/> | ACAD_CAREER - Academic Career | Join ACAD_CAR_TBL - Academic Career Table |
| <input type="checkbox"/> | STRM - Term | Join TERM_VAL_TBL - Term Value Table |
| <input type="checkbox"/> | STDNT_CAR_NBR - Student Career Nbr | |
| <input type="checkbox"/> | UHIR_ENROLL_CENSUS - Enrolled on Census Date | |
| <input type="checkbox"/> | UHIR_ENROLL_CURR - Currently Enrolled Flag | |
| <input type="checkbox"/> | UHIR_ENROLL_EOS - Enrolled - End of Semester | |
| <input type="checkbox"/> | ACAD_LEVEL_BOT - Academic Level - Term Start | Join ACAD_LEVEL_TBL - Academic Level Table |
| <input type="checkbox"/> | UHIR_ACAD_LEVEL - Acad Level Description | |
| <input type="checkbox"/> | UHIR_COLLEGE - College | Join ACAD_GROUP_TBL - Academic Group Table |
| <input type="checkbox"/> | UHIR_COLLEGE_DESCR - College (Group) Description | |
| <input type="checkbox"/> | UHIR_PRIMARY_ORG - Primary Plan Org Owner | |
| <input type="checkbox"/> | PRIMARY_ORG_DESCR - Primary Org Description | |
| <input type="checkbox"/> | UHIR_ACAD_STANDING - Current Term Academic Standing | |
| <input type="checkbox"/> | UHIR_ACAD_STNDDESC - Current Acad Standing Desc | |



Records Query Expressions Prompts Fields Criteria Having View SQL Run

Query Name SAIR_DEMO

Description Demo query for SAIR



*Search By begins with

[Advanced Search](#)

Search Results

| Record | Personalize Find View All | First | 1-13 of 13 | Last |
|--|-------------------------------|-----------------------------|------------|-----------------------------|
| Recname | | Join Record | | Show Fields |
| UHIR_ADMISSIONS - Custom IR Admissions Rpt Table | | Join Record | | Show Fields |
| UHIR_ADM_SCORES - Custom IR Admissions Rpt Table | | Join Record | | Show Fields |
| UHIR_CLASS_TBL - Course Catalog Offerings | | Join Record | | Show Fields |
| UHIR_CRSE_ATTR - Course Attribute Tbl | | Join Record | | Show Fields |
| UHIR_HOUSING - Housing Database Rptg Table | | Join Record | | Show Fields |
| UHIR_PNAME_VW - Primary Name View | | Join Record | | Show Fields |
| UHIR_STDNT_ACTI - Reporting Table-Stdnt Semester | | Join Record | | Show Fields |
| UHIR_STDNT_DEGR - Reporting Table-Student Degree | | Join Record | | Show Fields |
| UHIR_STDNT_ENRL - Student Enrollment Table | | Join Record | | Show Fields |
| UHIR_STDNT_STRM - Reporting Table-Stdnt Semester | | Join Record | | Show Fields |
| UHIR_STDNT_TRAN - Reporting Table-Transfer Data | | Join Record | | Show Fields |
| UHIR_STGR_UPDLS - UHIR_STGR_UPDLS | | Join Record | | Show Fields |
| UHIR_STUDENTS - Reporting Table-Student Data | | Join Record | | Show Fields |

[Save As](#) [New Query](#) [Preferences](#) [Properties](#) [Publish as Feed](#) [Publish as Pivot Grid](#) [New Union](#)

Select join type and then record to join with UHIR_STUDENTS - Reporting Table-Student Data.

Join Type

Join to filter and get additional fields (Standard Join)
 Join to get additional fields only (Left outer join)

Join Record Personalize | Find | | First 1 of 1 Last

A = UHIR_STDNT_STRM - Reporting Table-Stdnt Semester

Cancel

Auto Join Criteria

Query has detected the join conditions shown below.
Use the checkboxes to unselect the criteria that you do not want to add to the query and click add criteria when done. The criteria added can always be modified later using the criteria tab.

| | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | A.EMPLID - Empl ID = B.EMPLID - Empl ID |
| <input checked="" type="checkbox"/> | A.INSTITUTION - Academic Institution = B.INSTITUTION - Academic Institution |

Add Criteria Cancel

Query Name SAIR_DEMO




Description Demo query for SAIR

 Feed ▾

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 | UHIR_STDNT_STRM - Reporting Table-Stdnt Semester | Hierarchy Join  |
|  B | UHIR_STUDENTS - Reporting Table-Student Data | Hierarchy Join  |

Expand All Records

Collapse All Records

Save

Save As

New Query

Preferences

Properties

Publish as Feed

Publish as Pivot Grid

New Union

[Records](#) | **[Query](#)** | [Expressions](#) | [Prompts](#) | [Fields](#) | [Criteria](#) | [Having](#) | [View SQL](#) | [Run](#)

Query Name SAIR_DEMO **Description** Demo query for SAIR

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 UHIR_STDNT_STRM - Reporting Table-Stdnt Semester | Hierarchy Join <input type="checkbox"/> |
| | B UHIR_STUDENTS - Reporting Table-Student Data | Hierarchy Join <input type="checkbox"/> |

Fields Find | View All | First 1-50 of 63 | Last

| | | |
|-------------------------------------|--|--|
| <input checked="" type="checkbox"/> | EMPLID - Empl ID | Join PEOPLE_SRCH - People Search View |
| <input type="checkbox"/> | INSTITUTION - Academic Institution | |
| <input type="checkbox"/> | UHIR_ENROLL_CURR - Currently Enrolled Flag | |
| <input type="checkbox"/> | NAME - Name | |
| <input type="checkbox"/> | LAST_NAME - Last Name | |
| <input type="checkbox"/> | FIRST_NAME - First Name | |
| <input type="checkbox"/> | MIDDLE_NAME - Middle Name | |
| <input type="checkbox"/> | SSN - Social Security # | |
| <input type="checkbox"/> | UHIR_USER_ID - User ID - U of H - Houston | |
| <input type="checkbox"/> | UHIR_UHASSIGNEDSSN - UH Assigned Social Security # | |
| <input type="checkbox"/> | FERPA - FERPA | |
| <input type="checkbox"/> | BIRTHDATE - Date of Birth | |
| <input type="checkbox"/> | SEX - Gender | |
| <input type="checkbox"/> | ETHNIC_GRP_CD - Ethnic Group | Join ETHNIC_GRP_TBL - Ethnic Group Table |
| <input type="checkbox"/> | UHCB_ETHNIC_ORIGIN - Ethnic Origin | |
| <input type="checkbox"/> | UHIR_NEW_ETHNIC_CB - IR CB New Ethnicity | |
| <input type="checkbox"/> | UHIR_NEW_EDESC_CB - IR CB New Ethnic Description | |
| <input type="checkbox"/> | EMAIL_ADDR - Email Address | |
| <input type="checkbox"/> | UHIR_OTHR_EMAIL - Other Email Address | |
| <input type="checkbox"/> | UHIR_DEST_EMAIL - Destination Email | |
| <input type="checkbox"/> | PHONE - Telephone | |
| <input type="checkbox"/> | UHIR_MAIL_ADDRESS1 - Mail Address 1 | |
| <input type="checkbox"/> | UHIR_MAIL_ADDRESS2 - Mail Address 2 | |
| <input type="checkbox"/> | UHIR_MAIL_ADDRESS3 - Mail Address 3 | |
| <input type="checkbox"/> | UHIR_MAIL_ADDRESS4 - Mail Address 4 | |
| <input checked="" type="checkbox"/> | UHIR_MAIL_CITY - Mail City | |
| <input type="checkbox"/> | UHIR_MAIL_STATE - Mail State | |
| <input type="checkbox"/> | UHIR_MAIL_POSTAL - Mail Postal-Zipcode | |
| <input type="checkbox"/> | UHIR_MAIL_COUNTRY - Mailing Address Country | |



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

Query Name SAIR_DEMO

Description Demo query for SAIR

Feed

View field properties, or use field as criteria in query statement.

Reorder / Sort

| Fields | | | | | | Personalize Find View All | First | 1-2 of 2 | Last |
|--------|------------------------------|--------|-----|------|-----|-------------------------------|--------------|----------|--------|
| Col | Record.Fieldname | Format | Ord | XLAT | Agg | Heading Text | Add Criteria | Edit | Delete |
| 1 | B.UHIR_MAIL_CITY - Mail City | Char30 | | | | Mail City | | Edit | |
| 2 | B.EMPLID - Empl ID | Char11 | | | | ID | | Edit | |

Save

Save As

New Query

Preferences

Properties

Publish as Feed

Publish as Pivot Grid

New Union

Edit Field Properties

Field Name B.EMPLID - Empl ID

| Heading | Aggregate |
|---|--|
| <input type="radio"/> No Heading <input type="radio"/> RFT Short | <input type="radio"/> None |
| <input checked="" type="radio"/> Text <input type="radio"/> RFT Long | <input type="radio"/> Sum |
| Heading Text | <input checked="" type="radio"/> Count |
| <input type="text" value="TOTAL STUDENTS"/> | <input type="radio"/> Min |
| *Unique Field Name | <input type="radio"/> Max |
| <input type="text" value="B.EMPLID"/> | <input type="radio"/> Average |
| | <input type="radio"/> Count Distinct |
| <input type="button" value="OK"/> <input type="button" value="Cancel"/> | |

Edit Field Ordering

Reorder columns by entering column numbers on the left. Columns left blank or assigned a 0 will be automatically assigned a number. Change the order by number by entering numbers on the right. To remove an order by number, leave the field blank or enter a 0.

| Edit Field Ordering | | | | | |
|----------------------|--------|------------------------------|----------|-------------------------------------|--------------------------------|
| New Column | Column | Record.Fieldname | Order By | Descending | New Order By |
| <input type="text"/> | 1 | B.UHIR_MAIL_CITY - Mail City | | <input type="checkbox"/> | <input type="text"/> |
| <input type="text"/> | 2 | B.EMPLID - Empl ID | | <input checked="" type="checkbox"/> | <input type="text" value="1"/> |



Records Query Expressions Prompts Fields Criteria Having View SQL Run

[View All](#) | [Rerun Query](#) | [Download to Excel](#) | [Download to XML](#)

First 1-100 of 1052 Last

| | Mail City | TOTAL STUDENTS |
|-----|---------------|----------------|
| 1 | Houston | 22287 |
| 2 | Sugar Land | 2591 |
| 3 | Katy | 2554 |
| 4 | Spring | 1355 |
| 5 | Pearland | 1201 |
| 6 | Richmond | 1165 |
| 7 | Missouri City | 994 |
| 8 | Cypress | 966 |
| 9 | Humble | 669 |
| 10 | Pasadena | 540 |
| 11 | League City | 425 |
| 12 | Kingwood | 414 |
| 13 | Friendswood | 389 |
| 14 | Tomball | 356 |
| 15 | The Woodlands | 321 |
| 16 | Stafford | 283 |
| 17 | San Antonio | 255 |
| 18 | Baytown | 243 |
| 19 | Conroe | 229 |
| 20 | Austin | 199 |
| 21 | Rosenberg | 186 |
| 22 | Bellaire | 168 |
| ... | ... | ... |