PeopleSoft Query
Building an Expression Using an SFIS/HRMS Function

(This demonstration is adapted from the Introduction to Query documentation, Lesson 8: Adding an Expression and Inserting Functions)

Expressions Overview

Expressions are calculations that PeopleSoft Query performs as part of a query. They are created on the **Expressions** page. Use them when you must calculate a value that PeopleSoft Query does not provide by default (for example, to add the values from two fields together or to multiply a field value by a constant). Calculations are rarely stored in a database.

An expression can be used like a field. If you use an expression as a field, the expression can be used like any other field in a query. When you preview the query, the expression name appears as a column heading in the query. When selected for output, you can change its column heading or sort it. Normally, data that is the result of a calculation is produced when the query is run in real time.

You use expressions to *display* a field value differently from the way you *store* the value.

In Query, you can use expressions in two ways:
1. As a column in the output.
2. In selection criteria to narrow results.

In this example a query uses the records **PERS_DATA_SA_VW** and **ADDRESSES.** The expression to be added to the query will show the Wesleyan Class Year for each student row returned.

Functions: The expression to be used in the following Demonstration is based on one of many *Functions* created by the Wesleyan SFIS/HRMS technical staff to facilitate common query requests. These Functions usually have the word "GET" as part of the name (as in WES_GET_ABC).

In this demonstration the "WES_GET_CLASS_YEAR" Function is used as an **Expression** to
- Determine a student's Wesleyan Class Year
- Add a new field consisting of the Class Year and format the header

Demonstration – Building an Expression (with a WES Function) and using it as a Criterion:

1.   Open the **Expressions** page

2.   Click on the **Add Expression** button. This will open the **Edit Expression Properties** page

Edit Expression Properties

*Expression Type:
[Character ▾]   Length: [1]

☐ Aggregate Function   Decimals: [ ]

Expression Text:
[   ]

Add Prompt   Add Field

[OK]   [Cancel]

These are the fields on the **Edit Expression Properties** page:

- **Expression Type** - used to identify the data type of the value this expression will return. Options are as follows:
  - Character
  - Long Character
  - Number
  - Signed Number
  - Date
  - Time
  - DateTime
  - Length - should contain the maximum length of the string.
    - For *Number* and *Signed Number* Expression Types the Length field defines the total length of the number (integer portion + decimals portion). For example, if Length = *10* and Decimals = *3*, then this means that the integer portion = *7* (Length - Decimals = Integer).
- **Aggregate Function** - should be toggled on if an expression includes an aggregate function, such as COUNT, SUM, or AVG.
- **Add Prompt** – click to add prompt properties for this expression
- **Add Field** – click to add a field to this expression.

3.   Leave the **Expression Type** as Character

4.   Change the **Length** to 4, i.e., a Wesleyan Class Year is four characters long
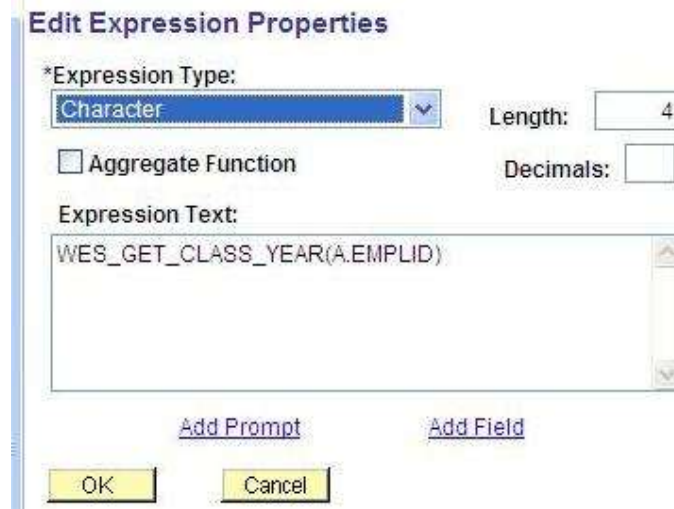
5.   In the **Expression Text** box type the following (this is not case sensitive):
WES_GET_CLASS_YEAR(

6.   Next, you will need to associate the Expression with a field in one of the Records; the field will be EmplID in Record A (**PERS_DATA_SA_VW**). Click on the **Add Field** link to the lower right. This will open the **Select a field** page which displays all the fields contained in any record in the query. Displayed in the screen shot are the first few fields in the "**A**" Record, **PERS_DATA_SA_VW**. By clicking on a field, you make that field part of the Expression that you are building.

Select a field

Alias	Record	Record Description	Show Fields
A	PERS_DATA_SA_VW	Common Person Information	Show Fields
B	ADDRESSES	Address Type	Show Fields

Select a record to show fields for — Customize | Find | First 1-2 of 2 Last

Select a field

Customize | Find | View All | First 1-35 of 35 Last

A.EMPLID - EmplID
A.COUNTRY_NM_FORMAT - Format Using
A.NAME - Name
A.NAME_INITIALS - Name Initials
A.NAME_PREFIX - Name Prefix
A.NAME_SUFFIX - Name Suffix
A.NAME_ROYAL_PREFIX - Name Royal Prefix
A.NAME_ROYAL_SUFFIX - Name Royal Suffix
A.NAME_TITLE - Title
A.LAST_NAME_SRCH - Last Name
A.FIRST_NAME_SRCH - First Name
A.LAST_NAME - Last Name
A.FIRST_NAME - First Name
A.MIDDLE_NAME - Middle Name
A.SECOND_LAST_NAME - Second Last Name
A.SECOND_LAST_SRCH - Second Name
A.NAME_AC - Alternate Character Name

7.   Click on A.EMPLID – EmplID. You will be brought back to the **Edit Expression Properties** page where the text in the **Expression Text** box will now appear as: WES_GET_CLASS_YEAR(A.EMPLID

8.   Add a closing parenthesis to the expression so that it now reads WES_GET_CLASS_YEAR(A.EMPLID). The page should now appear as follows:

Edit Expression Properties

*Expression Type:
Character   Length: 4

☐ Aggregate Function   Decimals:

Expression Text:
WES_GET_CLASS_YEAR(A.EMPLID)

Add Prompt   Add Field

OK   Cancel

9.   Click OK.

10.   The **Expressions** page will open displaying the Expression Text as the name of the Expression – **WES_GET_CLASS_YEAR(A.EMPLID)**. Click on **Use as Field**. This will add the Expression as a field to the Query.

11. The **Fields** page opens. The Expression WES_GET_CLASS_YEAR(A.EMPLID) is now the fifth field in the Query, and it appears on the **Fields** page. Next you will be changing the heading of the new field and using it as criteria.

12. Change the heading text of the new field by clicking on the Edit button to the right. On the **Edit Field Properties** page, replace the text in the **Heading Text** box -
(WES_GET_CLASS_YEAR(A.EMPLID) - with *Class Year*. Click OK.