

Defining More Attributes of Programs

If MORE Attributes is set to "Y", a window is displayed which contains the following additional attributes for selection:

- Entry points
Entry points are to be modified. This is valid only for programs written in certain languages. See Overview of Language-Specific Program Types.
- SQL procedure code
Only for programs of type R and Language S.
The SQL Procedure Editor is called.
- Procedure options
see Programs of Type Procedure
- Class definition
see Programs of Type Class
- Resource definition
see Programs of Type Resource
- Database function options
see Programs of Type Database function

The following rules apply:

- Only those types of additional attributes appear in the window that apply to the type of program. For example: the option Class definition is not contained in the list when a program of type Resource is processed.
- More than one choice can be made at a time. The respective input maps are then displayed one after the other.

The additional attributes are described in the following sections.

Programs of Type Class

```

13:33:43          ***** P R E D I C T 4.2.2 *****          2002-07-31
                        - Modify Program -
Program ID ..... HEB-CLASS                               Modified 2002-07-31 at 13:31
                                                           by HEB

Class definition
Name .....
GUID .....
Version .....

EDIT:  Owner: N   Desc: N   Uses PR concept.: N   Uses FI concept.: N
    
```

Parameters	
Class definition	
Name	The name of the class.
GUID	The globally unique ID of the class.
Version	The version number of the class.

Programs of Type Resource

```

13:35:26          ***** P R E D I C T 4.2.2 *****          2002-07-31
                        - Modify Program -
Program ID ..... HNO-RES                               Modified 2002-07-31 at 08:23
                                                by HNO

Resource definition
File name .....

Library .....
User system Fnr ..
User system DBnr .

EDIT:   Owner: N   Desc: N   Uses PR concept.: N   Uses FI concept.: N
    
```

Parameters	
Resource definition	
File name	File name documented by the Predict program.
Library	The name of the library in which the file name is stored.
User System Fnr	The number of the user system file.
User System DBnr	The number of the database in which the user system file is located.

The type of Resource can be documented in the language field of a Predict program object. There is a user exit program U-PGMLAN that allows dynamic extension of possible languages in each installation.

Programs of Type Procedure

```

13:35:26          ***** P R E D I C T 4.2.2 *****          2002-07-31
                    - Modify Program -
Program ID ..... HNO-PROC                               Modified 2002-07-31 at 08:23
                                                    by HNO

Procedure options
Collection .....* Y FIRST_COL
WLM environment * N NO WLM
Dyn. result set .
Deterministic ... N (Y,N)
Null input ..... Y (Y,N)
DB info ..... N (Y,N)
Stay resident ... N (Y,N)
Security .....* D DB2
Run options ..... RUN
Parameter style * D DB2SQL
Fenced ..... Y (Y,N)
SQL data .....* M Modifies SQL data
Asutime .....
Program type ...* M Main
Commit ..... N (Y,N)

EDIT:  Owner: N  Desc: N  Uses PR concept.: N  Uses FI concept.: N
    
```

Parameters	
Collection	Identifies the package collection. N NO COLLID Y Use collection-ID blank none
WLM environment	Identifies the MVS workload manager application environment.
Dyn. result set	Specifies the maximum number of query result sets that the stored procedure can run.
Deterministic	Specifies whether the procedure returns the same results for identical arguments. Y Yes N No blank undefined
Null input	Specifies whether the procedure is called if any of the input arguments is null at execution time. Y Yes N No blank undefined

DB info	<p>Specifies whether specific information that is included in DB2 is passed to the procedure when it is invoked.</p> <p>Y Yes N No blank undefined</p>
Stay resident	<p>Specifies whether the load module for the procedure remains resident in memory when the procedure ends.</p>
Security	<p>Specifies whether how the procedure interacts with an external security product.</p> <p>D DB2 F Definer U User blank none</p>
Run options	<p>Specifies the language environment run-time options to be used for the procedure.</p>
Parameter style	<p>Identifies the linkage convention use to pass parameters to the procedure.</p> <p>D DB2SQL G General N General with nulls J Java blank none</p>
Fenced	<p>Determines that the external procedure runs in an external address space.</p> <p>Y Yes N No blank undefined</p>
SQL data	<p>Indicates whether the procedure can execute any SQL statements.</p> <p>M Modifies SQL data N No SQL R Read SQL data S Contains SQL blank none</p>
Asutime	<p>Specifies the total amount of processor time.</p>

Program type	Specifies whether the procedure runs as a main or a subroutine. S Sub M Main blank none
Commit	Indicates whether DB2 commits the transaction immediately on return from the procedure. Y Yes N No blank undefined

Programs of Type Database function

```

13:35:26          ***** P R E D I C T  4.2.2  *****          2002-07-31
                        - Modify Program -
Program ID ..... HNO-U-C                               Modified 2002-07-31 at 08:37
                                                by HNO

Function options
Function type ..* T Table
Specific name ... HEB-SPEC
Collection .....* (none)
WLM environment *
Deterministic ... N (Y,N)          Fenced ..... Y (Y,N)
Null input ..... Y (Y,N)          SQL data .....* S Contains SQL
External action . Y (Y,N)          Scratchpad ..... 100
Final call ..... N (Y,N)          Allow parallel . Y (Y,N)
DB info ..... N (Y,N)             Cardinality ....
Asutime .....                     Stay resident ... N (Y,N)
Program type ...* S Sub            Security .....* D DB2
Run options ..... test

EDIT:  Owner: N  Desc: N  Uses PR concept.: N  Uses FI concept.: N
    
```

Parameters	
Function type	The type of the function. S Scalar T Table
Specific name	Specifies an unique name for the function.

Collection	Identifies the package collection. N NO COLLID Y Use collection-ID blank none
WLM environment	Identifies the MVS workload manager application environment.
Deterministic	Specifies whether the function returns the same results for identical arguments. Y Yes N No blank undefined
Null input	Specifies whether the function is called if any of the input arguments is null at execution time. Y Yes N No blank undefined
External action	Specifies whether the function takes an action that changes the state of an object that DB2 does not manage. Y Yes N No blank undefined
Final call	Specifies whether final call is made to the function. Y Yes N No blank undefined
DB info	Specifies whether specific information that DB2 knows is passed to the function when it is invoked. Y Yes N No blank undefined
Asutime	Specifies the total amount of processor time.

Program type	Specifies whether the function runs as a main or a subroutine. S Sub M Main blank none
Run options	Specifies the language environment run-time options to be used for the function.
Fenced	Determines that the external function runs in an external address space. Y Yes N No blank undefined
SQL data	Indicates whether the function can execute any SQL statements. N No SQL R Read SQL data S Contains SQL blank none
Scratchpad	Specifies whether DB2 provides a scratchpad for the function
Allow parallel	Specifies whether parallelism can be used. Y Yes N No blank undefined
Cardinality	Specifies an estimate of the expected number of rows that the function returns.
Stay resident	Specifies whether the load module for the function remains resident in memory when the function ends.
Security	Specifies whether how the function interacts with an external security product. D DB2 F Definer U User blank none

System Programs

Programs that are only available as object code and hence have no language are documented with programs of type E (external object) and language Z (system program). Predict creates XRef data for these so called system programs because neither the preprocessor nor Natural can create XRef data for object code.

The implementation pointer for a system program has to be specified explicitly. One entry point (with the ID of the program object) is created by Predict, additional entry points have to be specified manually.

Programs of Type dynamic

Programs of type dynamic are used to document calls of programs of the same name from different steplibs depending on the library structure. The following rules apply:

- Because programs of type dynamic document any number of implemented members, no check is performed as to whether the members documented by the program are actually implemented.
- With the active retrieval function Programs using programs, programs of type dynamic are ignored as current objects.
- Programs of this type can only have children for association Uses PR concept.