Defining Basic Attributes of Fields

The functions Add Field and Modify Field can also be called from within the function Edit elements of a File with the editor line command .E. See the section Editors in Predict in the **Predict Reference documentation**.

This section describes the following general attributes. Most attributes are applicable to fields of all file types.

- Add / Copy / Modify Field Screen
- Add/Copy/Modify Screen for SQL Fields
- Field Type
- Level Number
- Field Format
- Character Set (only for SQL File types)
- Character Set (only for Adabas File types)
- Field Length
- DBMS Format (only for SQL File types)
- Descriptor Type
- Maximum Number of Values / Occurrences
- Unique Option
- Field Short Name
- Suppression / Null Value Option
- Variable Length Option - IMS
- Null Default Option
- Natural Field Length
- Do Not Convert Option
- Related standard File
- Check against standard
- Natural Attributes
- EDIT Line Options

Basic attributes applying to different field types are described below. Type-specific attributes are described in the section Defining Derived Fields.

Add / Copy / Modify Screen

The following screen is displayed for the functions Add/Copy/Modify Field.

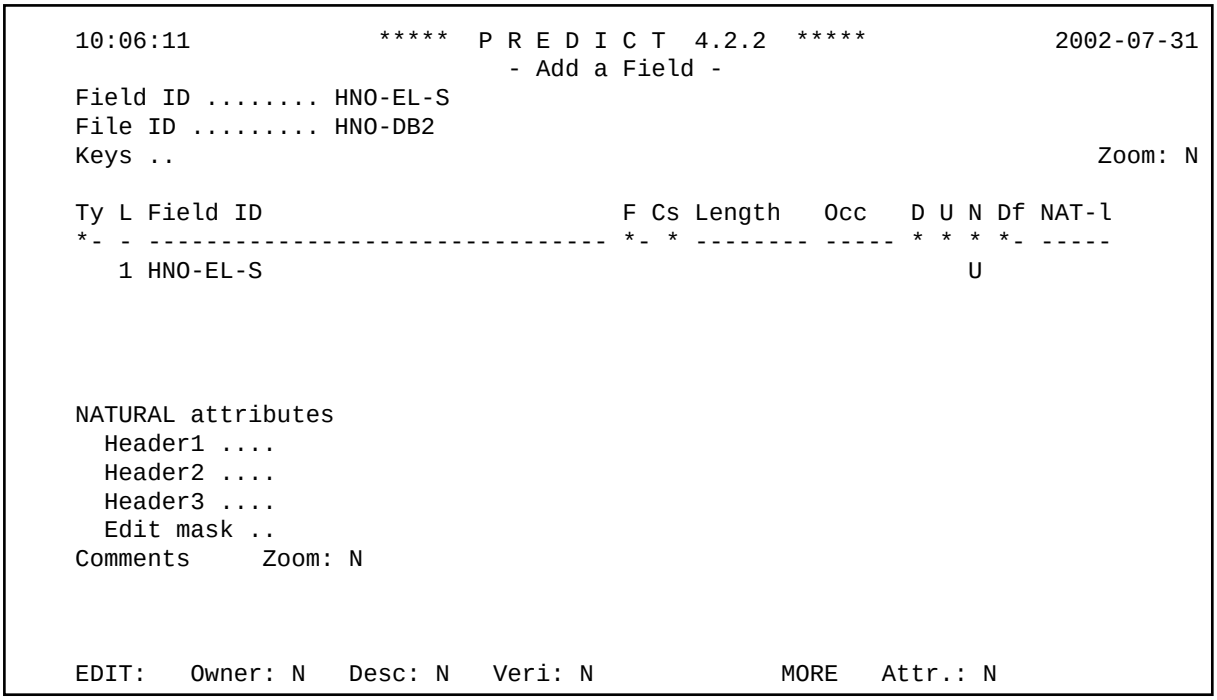

```
13:01:02            *****  P R E D I C T  4.2.2  *****            2002-07-31
                              - Add a Field -
Field ID ........ HNO-EL-NEW
File ID ......... HNO-FI1
Keys ..                                                          Zoom: N

Ty L Field ID                          F Cs Length   Occ   D U DB S NAT-l Cnv
*- - ------------------------------- *- * -------- ----- * * -- * ----- ---
   1 HNO-EL-NEW                                            AC N



NATURAL attributes
  Header1 ..................
  Header2 ..................
  Header3 ..................
  Index on PE group level ..
  Edit mask ........
Abstract     Zoom: N



EDIT:   Owner: N   Desc: N   Veri: N             MORE   Attr.: N
```

The screen for maintaining fields of SQL file types contains some different attributes and is shown below.

Add/Copy/Modify Screen for SQL Fields

The following screen is displayed for the functions Add/Copy/Modify Field and applies to SQL file types.

A	Adabas (with parameter Adabas SQL usage set to Y)
AT	Adabas Cluster Table
B	Adabas SQL view
BT, BV	Adabas D table/view
D, E	DB2 table/view
OT, OV	Oracle table/view
JT, JV	Ingres table/view
X	General SQL file
XT, XV	Informix table/view
YT, YV	Sybase table/view



Field Type

The field type is indicated in the column Ty of the Add/Copy/Modify a field screen above.
The following types can be specified:

CM	Counter Field for multiple value field of type MU/MC
CP	Counter Field for periodic group of type PE/PC
DV	Derived field (SQL File types) see note below
GR	Group
HM	Hyperdescriptor as a multiple value field
HP	Hyperdescriptor as a field of a periodic group
HQ	Hyperdescriptor as a multiple value field of a periodic group
HY	Hyperdescriptor
MC	Multiple value field with automatic counter
MU	Multiple value field
OD	Collation descriptor
PC	Periodic group with automatic counter
PE	Periodic group
PH	Phonetic descriptor
QN	SEQNO field
SB	Subfield/descriptor
SP	Superfield/descriptor
****, /***	Comment line, see Edit List of Fields - Code L
blank	None of the above. Normal field

Note:
Derived field is also used in Predict as a generic term for hyperdescriptors, phonetic descriptors and sub/superfields and descriptors.

If HM, HP, HQ, HY, OD, PH, SB or SP is specified, an additional input screen is displayed. See Defining Derived Fields.

See also section **ADACMP (COMPRESS- DECOMPRESS)** in the **Adabas Utilities documentation**.

Redefining Fields

See Redefine Field.

Defining Periodic Groups in Periodic Groups

- Within a redefinition, nested periodic groups (PE within a PE) can be defined in files of all types.
- Outside of a redefinition, nested periodic groups can only be defined in files of the following types:

S Sequential file

C Conceptual file

M ISAM file

Z Standard file

O Other file

Level Number

The level number of the field is indicated in the column L of the Add/Copy/Modify Screen. The level number is used to define a group structure. Level numbers 1 to 9 can be used (except for Adabas files, see below).

- The level number must be increment by 1 immediately following a field of type RE, PE, PC or GR.
- For redefinitions, the level number must be at least one greater than the level number of the field being redefined. See Redefine Field.

Adabas Files

The following rules apply to level numbers for Adabas files:

- The PE/PC-groups, sub/superfields/descriptors, hyperdescriptors and phonetic descriptors must be at level 1.
- Level numbers of fields outside a redefinition must be in the range 1 - 7. See the section **ADACMP (COMPRESS- DECOMPRESS)** of the **Adabas Utilities documentation** for a complete description of Adabas levels.

Field Format

The format of the field is indicated in the column F of the Add/Copy/Modify Screen. One of the following values can be specified (depending on the file type):

A	Alphanumeric	**L**	Logical
AL	Long varchar	**LO**	Large object
AV	Varchar	**LX**	Bfile
B	Binary/char for bit data	**MO**	Money
BL	Long varchar bit data	**MS**	Smallmoney
BT	Bit	**N/U**	Numeric unpacked
BV	Varchar for bit data	**NS/US**	Numeric unpacked with sign
D	Date	**OK**	Object key
DS	Smalldatetime	**P**	Packed numeric
DT	Datetime	**PS**	Packed numeric with sign
F	Floating point	**S**	Serial
G	Graphic	**T**	Time
GL	Long vargraphic	**TK**	Table key
GV	Vargraphic	**TS**	Timestamp
I	Integer	**blank**	Undefined
IV	Interval		

See tables in the section Field Length for valid combinations of format and length.

The following rules apply:

- Any format/length combination is allowed for the file types C (conceptual) or Z (standard).
- For groups, this attribute must be blank.
- For sub/superfields/descriptors in Adabas files, the appropriate format is provided by Predict based on the formats of the fields used. See Rules Applying to Format Changes.
- The following formats are valid for **Fields** within a redefinition: A, B, D, F, I, L, N/U, NS/US, P, PS, T

Character Set - SQL

The parameter Character set determines the format in which data is stored. It is indicated in column Cs of the Add/Copy/Modify Screen. The possible values depend on the file type and format.

File Type	Format		Character Set					
			ASCII	EBCDIC	Bitdata	Single Byte	Double Byte	Mixed Data
Adabas	A, AV					Y		Y
Adabas D	A, AL, AV		Y	Y	Y			
DB2	A, AL, AV				Y	Y		Y
	LO				Y	Y	Y	Y
Oracle	A, AL				Y			
	AV							Y
	LO				Y			Y
Informix	A, AV							Y
	AL				Y			
Ingres	A,AV				Y			
	AL	*			Y			
Sybase	A, AV	*			Y	Y	Y	
	AL				Y			

Note:
A value must be specified for field types and formats marked with an asterisk (*).

Character Set	
ASCII	Data is stored in ASCII format.
EBCDIC	Data is stored in EBCDIC format.
Bitdata	Data is stored in binary form, no conversion is performed.
Single Byte	Data is stored in single-byte format. Double-byte characters are not possible.
Double Byte	Data is stored in double-byte format. String comparisons function differently to single-byte data.
Mixed Data	Data is stored in single and double-bytes. Data is subject to DB2 rules for multiple-byte character sets.

Character Set - Adabas

The following character set is used to define wide character fields.

Adabas		Predict	
Format	Option	Format	Character Set
A		A	blank or single
W		A	Mixed
A	LA	AV	blank or single
W	LA	AV	Mixed

Field Length

The field length is indicated in column Length of the Add/Copy/Modify Screen. This length is independent of its internal representation. When generating external objects, the field length is adjusted according to the internal representation of data used by the data storage system. For example: a field which is documented with length P9 is implemented with length P5 by the Adabas LOADER utility and the Adabas nucleus.

The following additional rules apply:

- For files of type C (conceptual) or Z (standard):
  Any format/length combination is allowed, and field length zero is permitted for all field formats.
- For groups and phonetic descriptors:
  Field length must be set to zero.
- For sub/superfields/descriptors in Adabas files:
  The appropriate length is provided by Predict based on the definition.
- For large object fields:
  A field length greater than 99999 can be defined by entering an additional length unit in the Length column.

  Valid values:

blank	bytes
K	kilobytes
M	megabytes
G	gigabytes

  for example, the term 96 M implies a field length of 96 megabytes.

Table of Field Formats and Lengths

The table on the following pages contains the valid format/length combinations for fields of the following file types:

Column	File Type
A / U	Adabas file / userview
A(SQL) / AT / B	Adabas file with SQL usage, Adabas cluster table, Adabas SQL view
BT / BV	Adabas D table / view
D / E / IT / IV	DB2 table / view / Intermediate table / view
F	rdb file
I / J / K	IMS segment / segment layout / userview
JT / JV	Ingres table / view
L / R / V / W	Logical VSAM file / view / Physical VSAM file / view
M	ISAM file
O	Other
OT / OV	Oracle table / view
P / Q	Entire System Server file / userview
S	Sequential file
T	RMS file
X	General SQL file
XT / XV	Informix table / view
YT / YV	Sybase table / view
1	LEASY
2	ISAM BS2000

Note:
The tables do not contain the file types C (conceptual) and Z (standard). For these file types, any format/length combinations are allowed.

Key for the following table

no length	Format is valid; length must not be specified.
no restr.	No restrictions: any length may be specified.
p.q (m / n)	**p:** number of places before the decimal point **q:** number of places after the decimal point where 0 <= p <= m 0 <= q <= n 1 <= p+q <= m
n.m - n2.m2	Range of places before and after the decimal point. For example, fields of format MO for SYBASE tables and views can have up to 15 places before the decimal point and up to 4 places after the decimal point (1.0 - 15.04).
*1	0 means 2GB
*2	0 means 4GB

Field Format	**A, U**	**A(SQL) AT, B**	**BT, BV**	**D, E**	**F**	**I, J, K**	**JT, JV**	**L, R, V, W**	**M**
A	1-253	1-253	1-4000	1-254	1-253	1-253	1-2000	1-253	no restr.
AL			0-99999 *1	1-99999			0-99999 *1		
AV	1-32767	1-32767	1-4000	1-32767			1-2000		
B	1-126	1-126			1-126	1-126	1-2000	1-126	no restr.
BL							0-99999 *1		
BT									
BV							1-2000		
D	no length	no length	no length	no length	no length	no length		no length	no length
DS									
DT							no length		
F	4 / 8	4 / 8	4 / 8	4 / 8		4 / 8	4 / 8	4 / 8	4 / 8
G				1-127					
GL				1-16383					
GV				1-16383					
I	1 / 2 / 4 / 8	1 / 2 / 4 / 8	2 / 4	2 / 4	1 / 2 / 4 / 8	1 / 2 / 4 / 8	1 / 2 / 4	1 / 2 / 4 / 8	1 / 2 / 4 / 8
IV									
L	no length		no length			no length		no length	no length

Field Format	A, U	A(SQL) AT, B	BT, BV	D, E	F	I, J, K	JT, JV	L, R, V, W	M
LO									
LX									
MO							no length		
MS									
N	p.q (29/7)	p.q (29/7)			p.q(29/29)	p.q (29 / 7)		p.q (29 / 7)	p.q(29/29)
NS	p.q (29 / 7)	p.q (29 / 7)	p.q(18/18)	p.q(31/31)	p.q(29/29)	p.q (29 / 7)		p.q (29 / 7)	p.q(29/29)
OK							no length		
P	p.q (29 / 7)	p.q (29 / 7)			p.q(29/29)	p.q (29 / 7)		p.q (29 / 7)	p.q(29/29)
PS	p.q (29 / 7)	p.q (29 / 7)	p.q(18/18)	p.q(31/31)	p.q(29/29)	p.q (29 / 7)		p.q (29 / 7)	p.q(29/29)
S									
T	no length	no length	no length	no length	no length	no length		no length	no length
TK							no length		
TS			no length	no length					
U	p.q (29 / 7)	p.q (29 / 7)			p.q(29/29)	p.q (29 / 7)		p.q (29 / 7)	p.q(29/29)
US	p.q (29 / 7)	p.q (29 / 7)	p.q(18/18)	p.q(31/31)	p.q(29/29)	p.q (29 / 7)		p.q (29 / 7)	p.q(29/29)

Field Format	O	OT, OV	P, Q	S	T	X	XT, XV	YT, YV
A	no restr.	1-2000	no restr.	no restr.	1-253	1-253	1-32762	1-255
AL		0-99999 *1					0-99999 *1	0-99999 *1
AV		1-2000					1-32762	1-255
B								
BL	no restr.		1-126	no restr.	1-126			1
BT								
BV								no length
D	no length		no length	no length	no length		no length	
DS								no length
DT		no length					no length	no length
F	4 / 8	4 / 8	4 / 8	4 / 8		4 / 8	4 / 8	4 / 8
G								

Field Format	O	OT, OV	P, Q	S	T	X	XT, XV	YT, YV
GL								
GV								
I	1 / 2 / 4 / 8	2 / 4	1 / 2 / 4 / 8	1 / 2 / 4 / 8	1 / 2 / 4 / 8	1 / 2 / 4 / 8	2 / 4	1 / 2 / 4
IV							7 / 17	
L	no length		no length	no length				
LO		0-99999 *2						
LX		0-99999 *2						
MO							p.q(32767/99)	1.0 - 15.04
MS								1.0 - 6.04
N	p.q(29/29)		p.q(29/29)	p.q(29/29)	p.q(29/29)	p.q(32/32)		p.q(38/38)
NS	p.q(29/29)	p.q(29/29)	p.q(29/29)	p.q(29/29)	p.q(29/29)		p.q(32/32)	
OK								
P	p.q(29/29)		p.q(29/29)	p.q(29/29)	p.q(29/29)	p.q(32/32)		
PS	p.q(29/29)	p.q(29/29)	p.q(29/29)	p.q(29/29)	p.q(29/29)		p.q(32/32)	
S							no length	
T	no length		no length	no length	no length			
TK								
TS								no length
U	p.q(29/29)		p.q(29/29)	p.q(29/29)	p.q(29/29)	p.q(32/32)		
US	p.q(29/29)	p.q(29/29)	p.q(29/29)	p.q(29/29)	p.q(29/29)		p.q(32/32)	

Field Format	1	2
A	1-253	1-253
AL		
AV		
B		
BL	1-126	1-126
BT		
BV		
D	no length	no length
DS		
DT		
F	4 / 8	4 / 8
G		
GL		
GV		
I	1 / 2 / 4 / 8	1 / 2 / 4 / 8
IV		
L	no length	no length
LO		
LX		
MO		
MS		
N	p.q(29/29)	p.q(29/29)
NS	p.q(29/29)	p.q(29/29)
OK		
P	p.q(29/29)	p.q(29/29)
PS	p.q(29/29)	p.q(29/29)
S		
T	no length	no length
TK		
TS		
U	p.q(29/29)	p.q(29/29)
US	p.q(29/29)	p.q(29/29)

SQL: DBMS Format and Corresponding Predict Format

The table below indicates the DBMS format and the corresponding Predict format for fields in files of the following types:

BT, BV	Adabas D table/view
JT, JV	Ingres table/view
OT, OV	Oracle table/view
XT, XV	Informix table/view
YT, YV	Sybase table/view

Key for the following table

n	length
p,q	**p:** total number of places **q:** number of places after the decimal point

File Type	DBMS Format	Predict Format	Character Set
BT, BV	BOOLEAN	L	
	CHAR(n)	A(n)	
	CHAR(n) ASCII	A(n)	ASCII
	CHAR(n) BYTE	A(n)	Bitdata
	CHAR(n) EBCDIC	A(n)	EBCDIC
	DATE	D	
	FIXED(p,q)	NU, US, or PS	
	FLOAT(15)	F4	
	FLOAT(18)	F8	
	INTEGER	I4	
	LONG	AL	
	LONG ASCII	AL	ASCII
	LONG BYTE	AL	Bitdata
	LONG EBCDIC	AL	EBCDIC
	SMALLINT	I2	
	TIME	T	
	TIMESTAMP	TS	
	VARCHAR(n)	AV(n)	
	VARCHAR(n) ASCII	AV(n)	ASCII
	VARCHAR(n) BYTE	AV(n)	Bitdata
	VARCHAR(n) EBCDIC	AV(n)	EBCDIC

File Type	DBMS Format	Predict Format	Character Set
JT, JV	BYTE(n)	B	
	BYTE VARYING	BV	
	C(n)	A(n)	
	CHAR(n)	A(n)	Bitdata
	DATE	DT	
	DECIMAL (p,q)	PS	
	DECIMAL (p,q)	NS	
	DOUBLE PRECISION	F8	
	LONG BYTE	BL	
	LONG VARCHAR	AL	Bitdata
	INTEGER	I4	
	INTEGER1	I1	
	MONEY	MO	
	OBJECT_KEY	OK	
	REAL	F4	
	SMALLINT	I2	
	TABLE_KEY	TK	
	TEXT(n)	AV(n)	
	VARCHAR(n)	AV(n)	Bitdata

File Type	DBMS Format	Predict Format	Character Set
OT, OV	BFILE	LX	
	BLOB	LO	Bitdata
	CHAR(n)	A(n)	
	CLOB	LO	
	DATE	DT	
	DECIMAL(p,q)	NS	
	DECIMAL(p,q)	PS	
	DOUBLE PRECISION	F8	
	INTEGER	I4	
	LONG	AL	
	LONG RAW	AL	Bitdata
	NCLOB	LO	Mixed data
	NVARCHAR2(n)	AV(n)	Mixed data
	RAW(n)	A(n)	Bitdata
	REAL	F4	
	ROWID	A and type QN	
	SMALLINT	I2	
	VARCHAR2(n)	AV(n)	
XT, XV	BYTE	AL	Bitdata
	CHAR(n)	A(n)	
	DATE	D	
	DATETIME YEAR TO FRACTION(5)	DT	
	DECIMAL(p,q)	NS	
	DECIMAL(p,q)	PS	
	FLOAT	F8	
	INTEGER	I4	
	INTERVAL DAY TO FRACTION(5)	IV	
	MONEY	MO	
	NCHAR(n)	A(n)	Mixed data
	NVARCHAR(n)	AV(n)	Mixed data
	REAL	F4	
	SERIAL	S	
	SMALLINT	I2	
	TEXT	AL	
	VARCHAR(n)	AV(n)	

File Type	DBMS Format	Predict Format	Character Set
YT, YV	BINARY(N)	A(n)	Bitdata
	BIT	BT	
	CHAR(N)	A(n)	Single byte
	DATETIME	DT	
	FLOAT	F8	
	IMAGE	AL	Bitdata
	INT	I4	
	MONEY	MO	
	NCHAR(N)	A(n)	Double byte
	NUMERIC, DECIMAL (p,q)	NS	
	NUMERIC, DECIMAL (p,q)	PS	
	NVARCHAR(N)	AV(n)	Double byte
	REAL	F4	
	SMALLDATETIME	DS	
	SMALLINT	I2	
	SMALLMONEY	MS	
	TEXT	AL	
	TIMESTAMP	TS	
	TINYINT	I1 or B1	
	VARBINARY(N)	AV(n)	Bitdata
	VARCHAR(N)	AV(n)	Single byte

Descriptor Type

The descriptor type is indicated in column D of the Add/Copy/Modify a field screen. The possible values are given in this and the following table.

Code	Description	File Type								
		A,U	AT,B, A(SQL)	M	O	F	S	T	IV, D,E	C
D	Descriptor/Index	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Disallow									
A	Alternate index									Y
N	Not inverted	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Search field									
P	Primary Index		Y						Y	Y
Q	Sequence									Y
E	Foreign key		Y						Y	Y
F	Foreign index		Y						Y	Y
	Force									
K	Common Key									
blank	No descriptor	Y	Y	Y	Y	Y	Y	Y	Y	Y
	None									

Descriptor Type - continued

File Type											
I,J,K	P,Q	Z	1	2	L,R,V,W	X	BT,BV	OT,OV	JT,JV	YT,YV	XT,XV
	Y										
		Y									
Y			Y	Y	Y						
						Y	Y	Y	Y	Y	Y
Y											
			Y	Y	Y	Y	Y	Y	Y	Y	Y
Y											
						Y	Y	Y	Y	Y	Y
		Y									
										Y	
Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y
		Y									

The following rules apply:

- In an Adabas file, the descriptor must be D if type HM, HP, HQ, HY (all hyperdescriptors), OD (collation descriptor) or PH (phonetic descriptor) is specified.
- For a subdescriptor in an Adabas file, descriptor D and type SB (subfield) must be specified.
- For a superdescriptor in an Adabas file, descriptor D and type SP (superfield) must be specified.
- In a DB2 table, if a key or index (descriptor D, E, F or P) includes more than one field, the type SP (superfield) must be specified
- In a VSAM file or userview (type L, R, V or W), the descriptor must be either P or A if type SP (superfield) is specified.
- If A is specified for a field of a VSAM file (type L or V), an additional screen is displayed for entering the required definitions (see below).
- Descriptor type must be blank for fields within a redefinition.

Maximum Number of Values / Occurrences

Maximum number of values for a multiple value field or occurrences of a periodic group is indicated in the Occ column of the Add/Copy/Modify Screen. This parameter must be specified for multiple value fields and for periodic groups in a redefinition.

Field	**Occurrences in range**
Within a redefinition	1- 99999
Outside a redefinition	1 - 191

When generating Copy Code, the value specified is used as the default for generating the specifications of MU/MC or PE/PC fields in a format buffer and/or record buffer.

When generating ADACMP/ADAFDU definitions, the Occ parameter is evaluated. If Occ is specified, the number of occurrences of each input data record is constant.

If Occ is not specified, the number of occurrences is taken from a counter field preceding a MU/MC or PE/PC field.

See also the section **ADACMP (COMPRESS-DECOMPRESS)** in the **Adabas Utilities documentation**.

Note:
For fields of type QN, the Occ column is used to identify either the table level or an individual occurrence of a multiple value field or periodic group.

Unique Option

The unique option is indicated in column U of the Add/Copy/Modify Screen. For groups, this attribute must be blank; for other fields, one of the following values can be specified:

U	Unique.
X	Used for unique descriptors in PE to exclude the occurrence (index) number from the definition of uniqueness.
blank	Not unique.

Unique option must be blank for fields within a redefinition.

Field Short Name

For file types listed below, the field short name is indicated in the column DB of the Add/Copy/Modify Screen. This two-character short name must be defined for the following file types:

A	Adabas file	**L**	Logical VSAM file
AT	Adabas cluster table	**R**	Logical VSAM view
I	IMS segment	**U**	Adabas userview
J	IMS segment layout	**V**	VSAM file (physical)
K	IMS userview	**W**	Physical VSAM view

A field short name must conform to the rules for coding Adabas field names. See the section **ADACMP (COMPRESS-DECOMPRESS)** in the **Adabas Utilities documentation**.

Field short names for userviews of Adabas, IMS and VSAM files need not be unique.

For fields within a redefinition, parameter Field short name must be blank.

Field short names for SQL tables and views are maintained internally by Predict and cannot be modified by users.

Rotated fields of files of type A (with SQL usage), type AT and B have the same short name and are identified uniquely by an occurrence number (column Occ).

Suppression / Null Value Option

- For fields of Adabas files, the suppression option is indicated in column S of the Add/Copy/Modify Screen.
- For fields of SQL files, the null value option is indicated in column N of the Add/Copy/Modify Screen.

For groups and for fields within a redefinition, this attribute must be blank. For other fields, one of the following values can be specified:

F	Fixed length
N	Null value suppression
R	Not null
U	Null counted
blank	Normal suppression

Parameter	**SQL File Types ***	**Other File Types**
Null value suppression		N
Fixed Length		F
Null allowed	U	U
Not null	R	R
Normal suppression		blank

* See Add/Copy/Modify Screen for SQL Fields for a list of SQL file types.

See also section **ADACMP (COMPRESS-DECOMPRESS)** in the **Adabas Utilities documentation**.

Profile Parameter Automatic Null Value

With the profile parameter Automatic null value you can determine an automatic Suppression/Null Value option when fields are added in Predict. See Customizing Predict with Profiles in the section Predict User Interface in the **Introduction to Predict documentation**.

The value depends on the file type. See table below.

Parameter	All SQL File Types * except X	File Type X	Other File Types
Unique option = Unique or Descriptor type = Primary or Field format = serial	R	R	N
Others	U	blank	N

Note:
SQL file types include files of type A with parameter Adabas SQL usage set to Y. See list in the section Add/Copy/Modify Screen for SQL Fields.

For DB2 fields with Unique option = unique, values R and U are possible.

Variable Length Option - IMS

The variable length option for IMS fields is indicated in column S of the Add/Copy/Modify Screen. The following values are valid:

Y	Variable length
blank	Fixed length

Null Default Option

The NULL default option for fields of SQL tables/views is indicated in the Df column of the Add/Copy/Modify Screen for SQL Fields. Possible values:

N	No default
Y	With default
blank	none

For INGRES fields with format OK or TK, the following additional values are possible:

S	SYSTEM_MAINTAINED
T	not SYSTEM_MAINTAINED
U	with default SYSTEM_MAINTAINED
V	with default not SYSTEM_MAINTAINED
W	not default not SYSTEM_MAINTAINED

This parameter must be blank for fields within a redefinition.

Natural Field Length

The Natural field length is indicated in column NAT-l of the Add/Copy/Modify Screen. The following rules apply:

- The parameter has to be specified if the field can be:
  - alphanumeric and greater than 253
  - graphic and greater than 126
  - numeric p.q (m/n) where p+q > 29 or q > 7.

  See table of valid formats and lengths in the section Field Length.
- The value specified here is the length that Natural uses for the field as defined in the DDM.

Do Not Convert Option

The "do not convert" option is allowed for A and AV format fields of the following file types:

- Adabas file/userview
- Conceptual file

Valid values:

blank	conversion
N	no conversion

Related Standard File

If the field is connected to a corresponding field in a standard file, Predict places the name of the standard file in this field. This attribute is only displayed for fields in files that are connected to standard files.

Check against standard

This parameter determines the handling of fields connected to standard fields. If N (non-standard) is specified, fields are not checked against the definition of the standard field from which they have been derived. In this case, fields can be modified independently of the standard field, and modifications made to attributes of the standard field are not rippled to the field. This attribute is only displayed for fields in files that are connected to standard files.

Note:
Even with Check against standard set to N, a derived field and the standard field remain coupled and a change of the name of a standard field is still rippled to a derived field if they are identical. The option D can be used to purge the connection of a field to the standard file.

This parameter is also described in the section Rippling.

Natural Attributes

Natural Header 1 - 3

Natural Header1

The first line header is used for the field in reports and for labels when generating SQL tables/views.

Natural Header2

The second line header to be used for the field in reports.

Natural Header3

The third line header to be used for the field in reports.

The Natural headers 1 - 3 are included in DDMs generated from the file containing the field.

Alphabetic characters in Natural headers are converted to upper-case if the Predict parameter Upper/lower case has been set to Y. See the section Defaults in the **Predict Administration documentation**.

Index on PE Group Level

If you enter Y in this field and execute the Natural Area Editor command .V for a DDM containing the field object, the maximum occurrences of periodic groups is generated on group level.

If this parameter is left blank (default), the maximum occurrences is generated for each element in the group.

Edit mask

The Natural edit mask. See the description of the DISPLAY statement in the **Natural Reference documentation** for further details.

Alphabetic characters in the Natural edit mask are converted to upper-case if the Predict parameter Upper/lower case has been set to Y. See the section Defaults in the **Predict Administration documentation**.

EDIT Line Options

The following additional EDIT line options are available for fields. Standard options are described in the section EDIT Line Options.

EDIT Veri.

Enter Y in this field to call the Predict Link Editor to edit the verification list of the field. Up to 50 verifications can be linked to a field via *Is verified by VE*.

This editor can also be invoked by:

- Selecting L (link children with association VE) in the Field Maintenance Menu.
- Entering command LINK ELEMENT VERIFICATION Field ID File ID.

See the section Editors in Predict in the **Predict Reference documentation**.

MORE Attr.

Enter Y in this field to define additional attributes. The attributes that can be defined depend on the field type. See Defining More Attributes of Fields.