SAFR - Scalable Architecture for Financial Reporting
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Logic Text Diagrams
SAFR Workbench 4.15.000

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Note
Before using this information and the product it supports, read the information in "Appendix: Notices" on page 17.

Fourth Edition

This edition applies to version 4, release 15, modification 000 of SAFR Workbench (part of SAFR product number 6949-17P) and to all subsequent releases and modifications until otherwise indicated in new editions.

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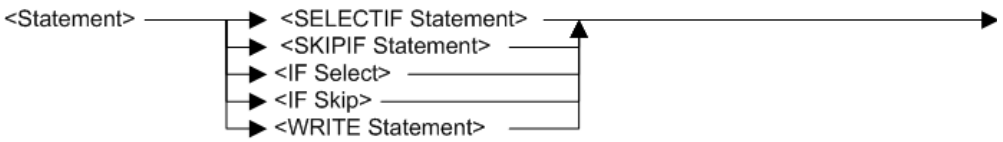
Chapter 1. Logic text: summary diagrams

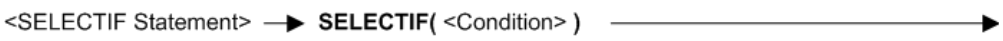
Logic text diagrams 1: Extract Record Filter

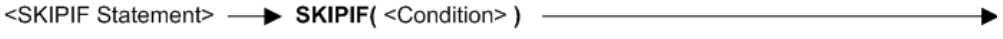
How the syntax works

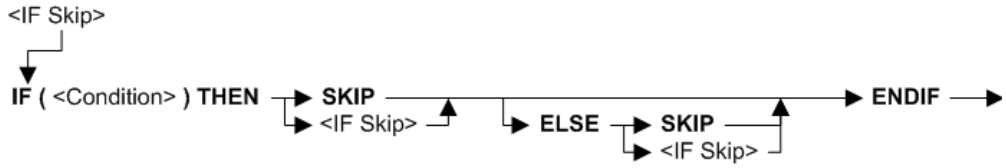
<text> Indicates a reference to another part of this syntax.
TEXT Indicates a keyword or punctuation (case does not matter)

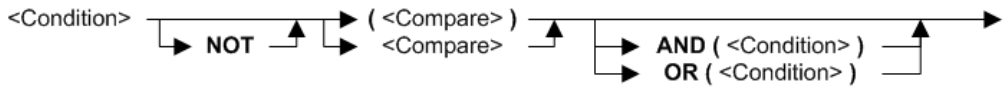
Complete syntax diagrams for Extract Record Filter



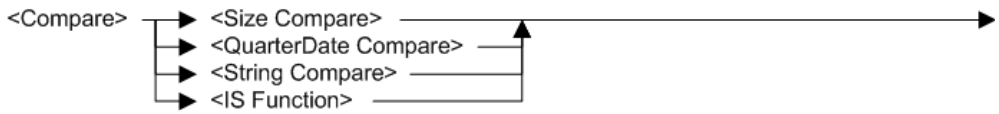


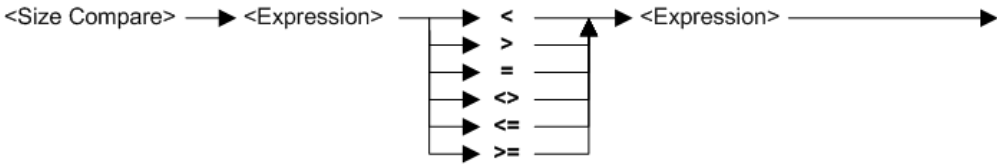


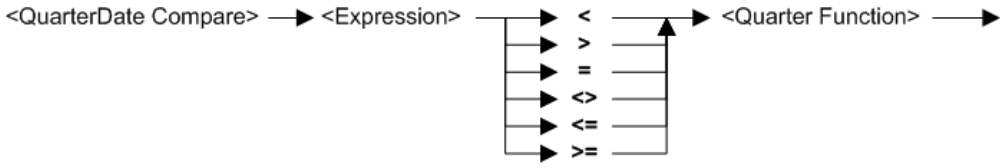


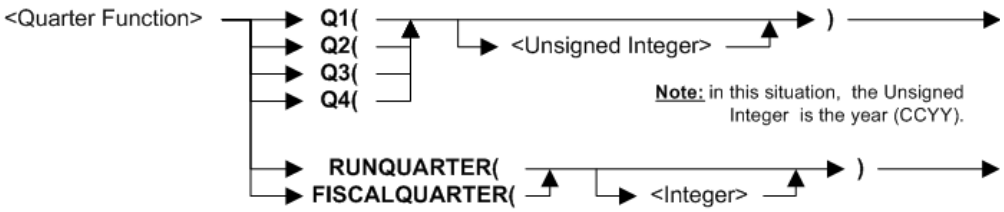


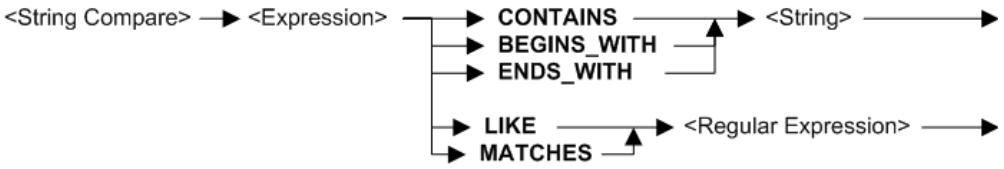
Note: it is recommended to put parentheses "(" ")" around <Compare> text, as long as this does not duplicate parentheses around conditions.





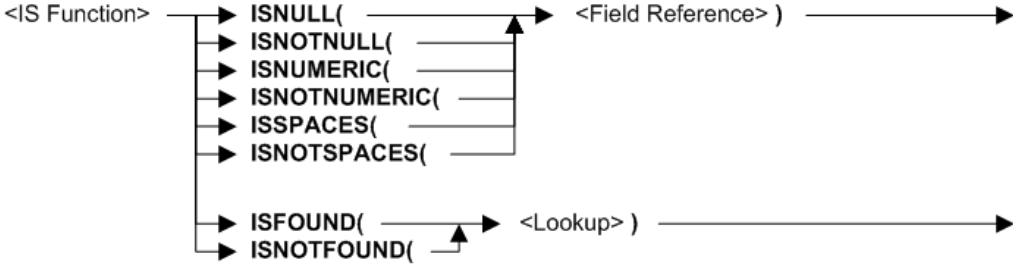


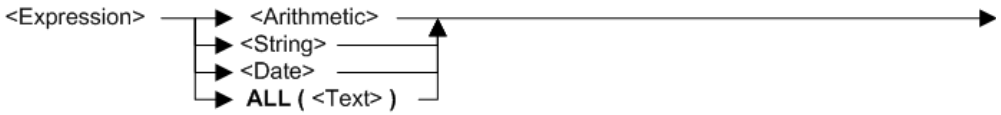


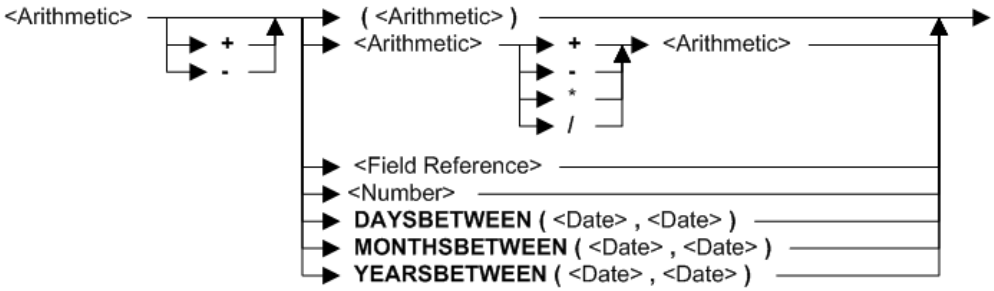


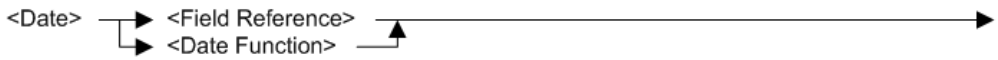
Note: <Regular Expression> uses these meanings:

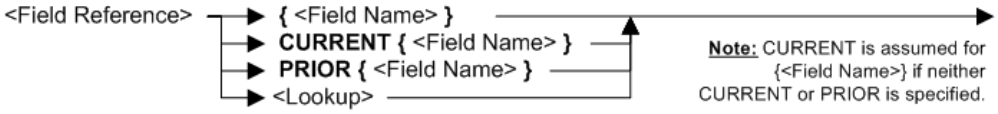
- **^** means the start of a string
- **$** means the end of a string
- . (fullstop) means any single character
- * (asterisk)means any zero or more characters

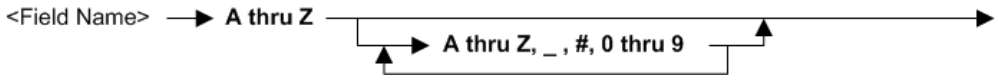


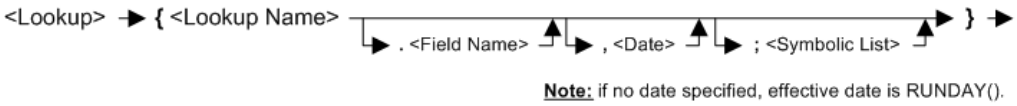

<Expression>
<Arithmetic>
<String>
<Date>
ALL (<Text>)

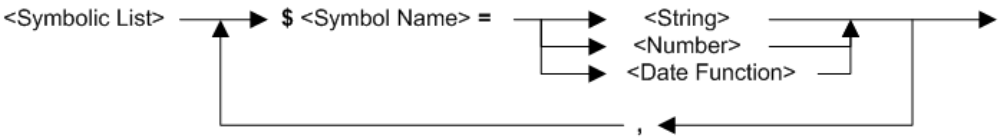

<Arithmetic>
+
-
(<Arithmetic>)
<Arithmetic>
+
-
*
/
<Arithmetic>
<Field Reference>
<Number>
DAYSBETWEEN (<Date> , <Date>)
MONTHSBETWEEN (<Date> , <Date>)
YEARSBETWEEN (<Date> , <Date>)

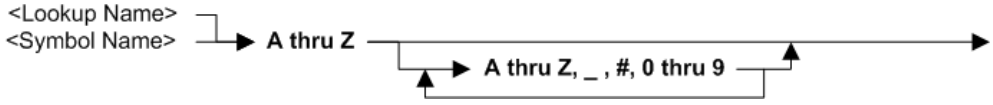

<Date>
<Field Reference>
<Date Function>

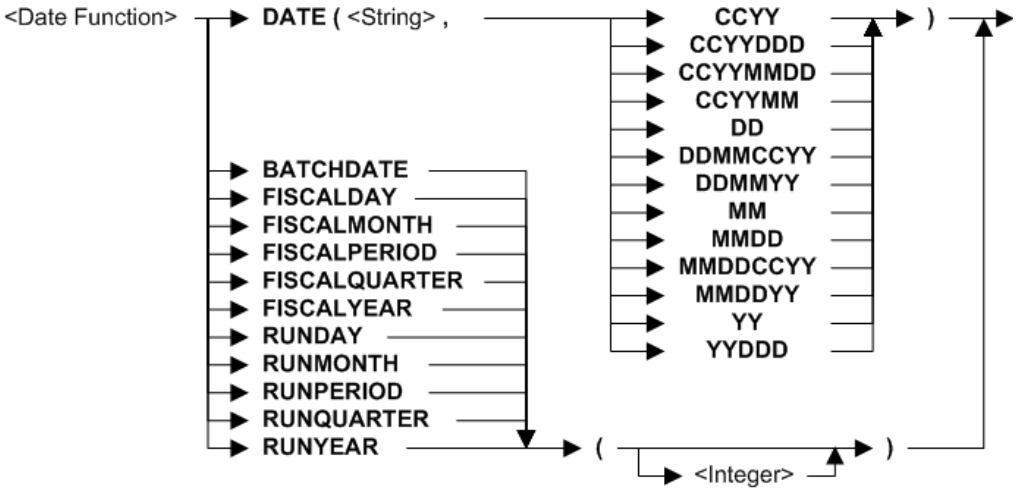

<Field Reference>
{ <Field Name> }
CURRENT { <Field Name> }
PRIOR { <Field Name> }
<Lookup>
Note: CURRENT is assumed for {<Field Name>} if neither CURRENT or PRIOR is specified.


<Field Name>
A thru Z
A thru Z, _ , #, 0 thru 9

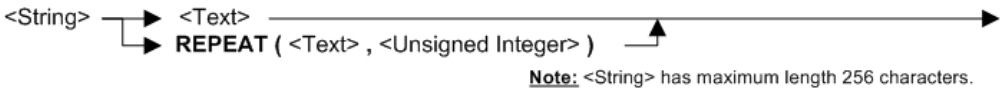

<Lookup>
{ <Lookup Name>
. <Field Name>
, <Date>
; <Symbolic List>
}
Note: if no date specified, effective date is RUNDAY().


<Symbolic List>
$ <Symbol Name> =
<String>
<Number>
<Date Function>
,

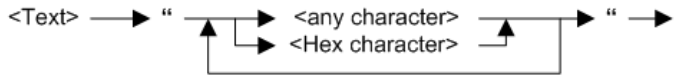

<Lookup Name>
<Symbol Name>
A thru Z
A thru Z, _ , #, 0 thru 9

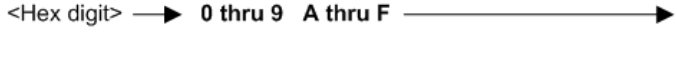


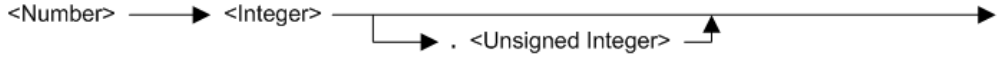
Note: In this situation, <Integer> means the number of units to add or subtract from the current value.

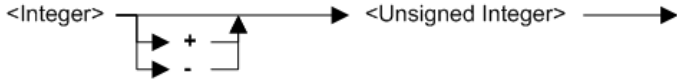


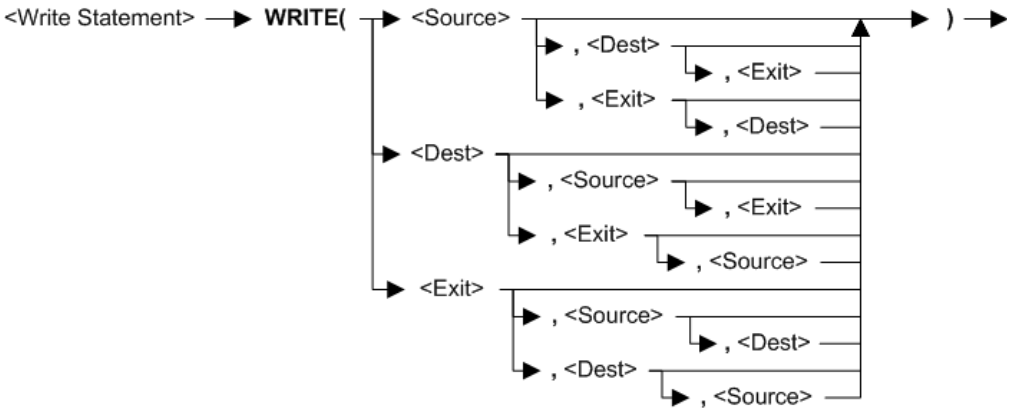
Note: <String> has maximum length 256 characters.

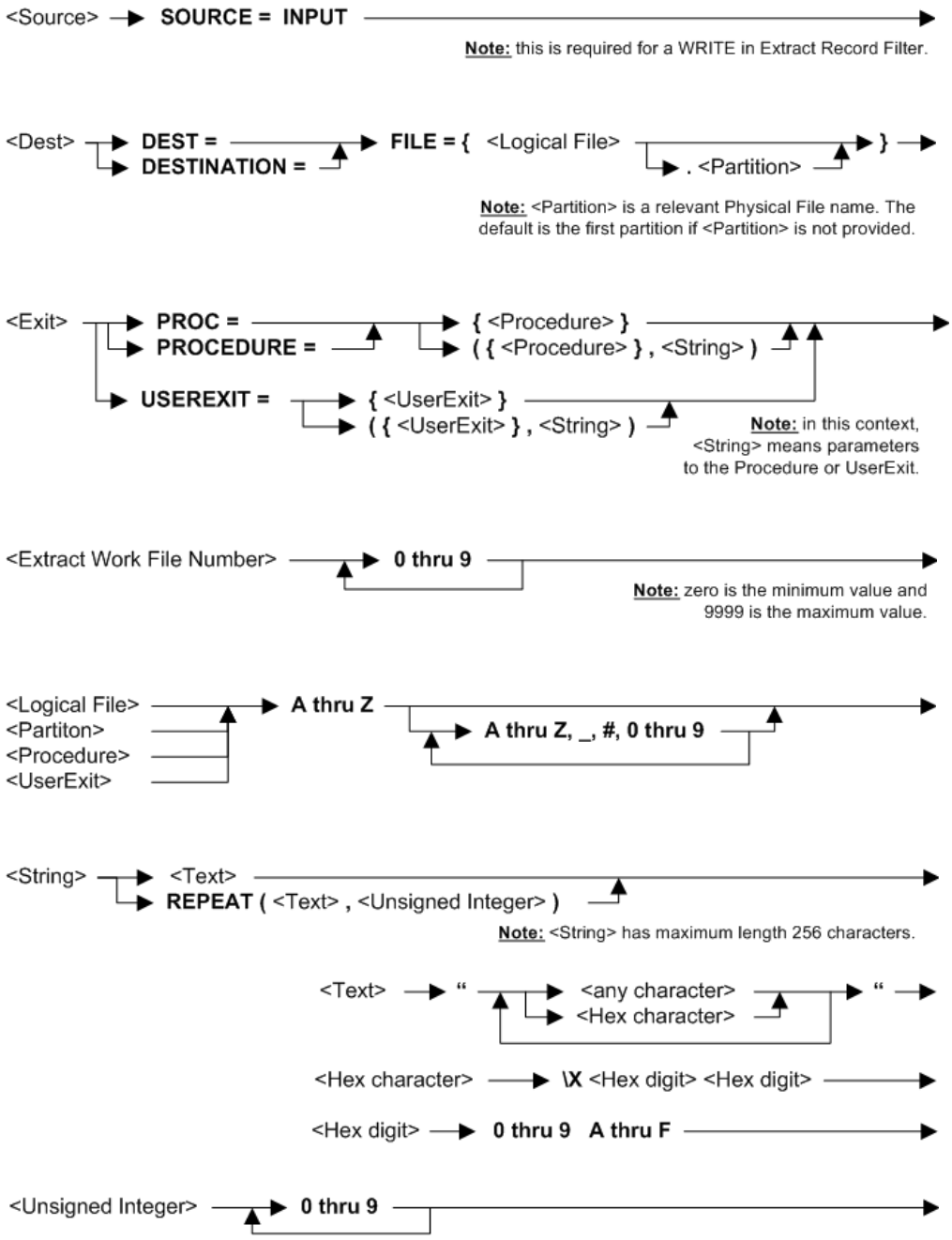










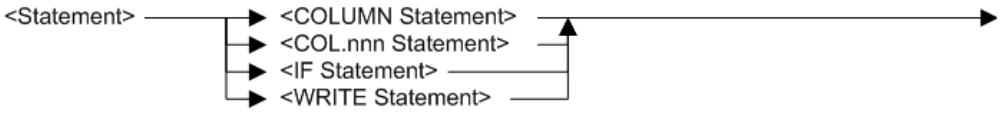


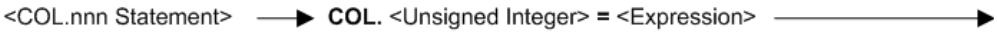
Logic text diagrams 2: Extract Column Assignment

How the syntax works

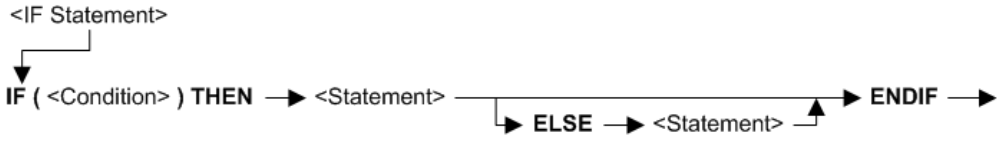
<text>	Indicates a reference to another part of this syntax.
TEXT	Indicates a keyword or punctuation (case does not matter)

Complete syntax diagrams for Extract Column Assignment

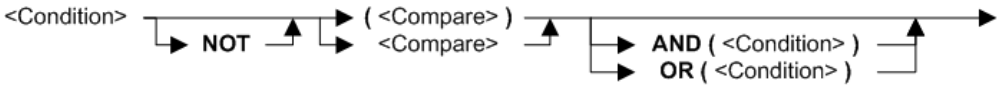




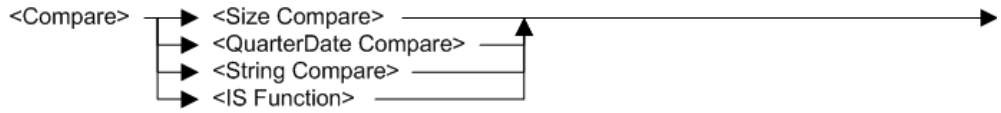
Note: in this situation, <Unsigned Integer> is a column number. That number can be any column number (in the view).

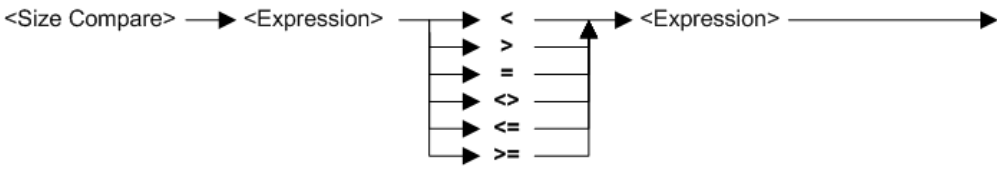


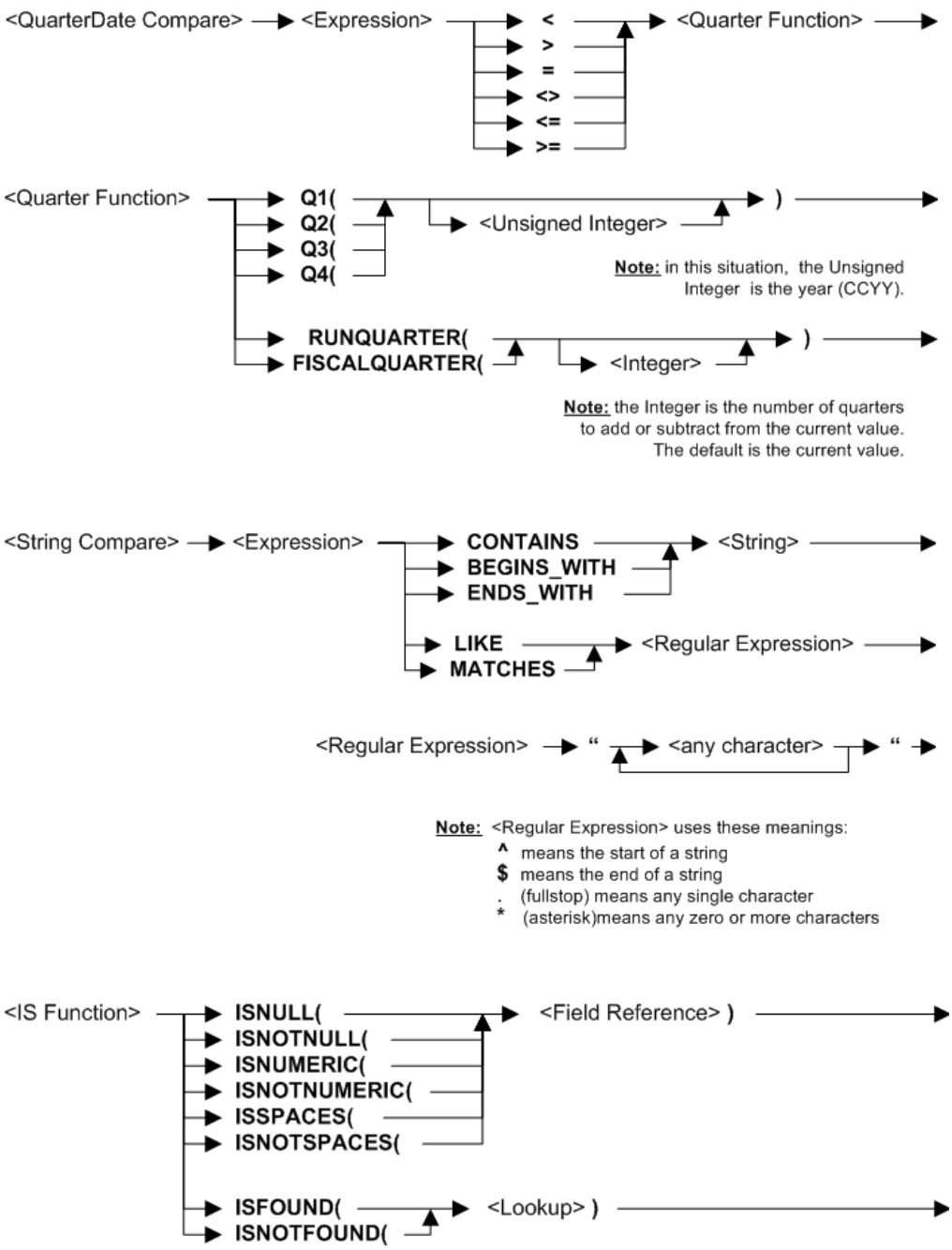
Note: it is recommended to put parentheses "(" ")" around conditions.



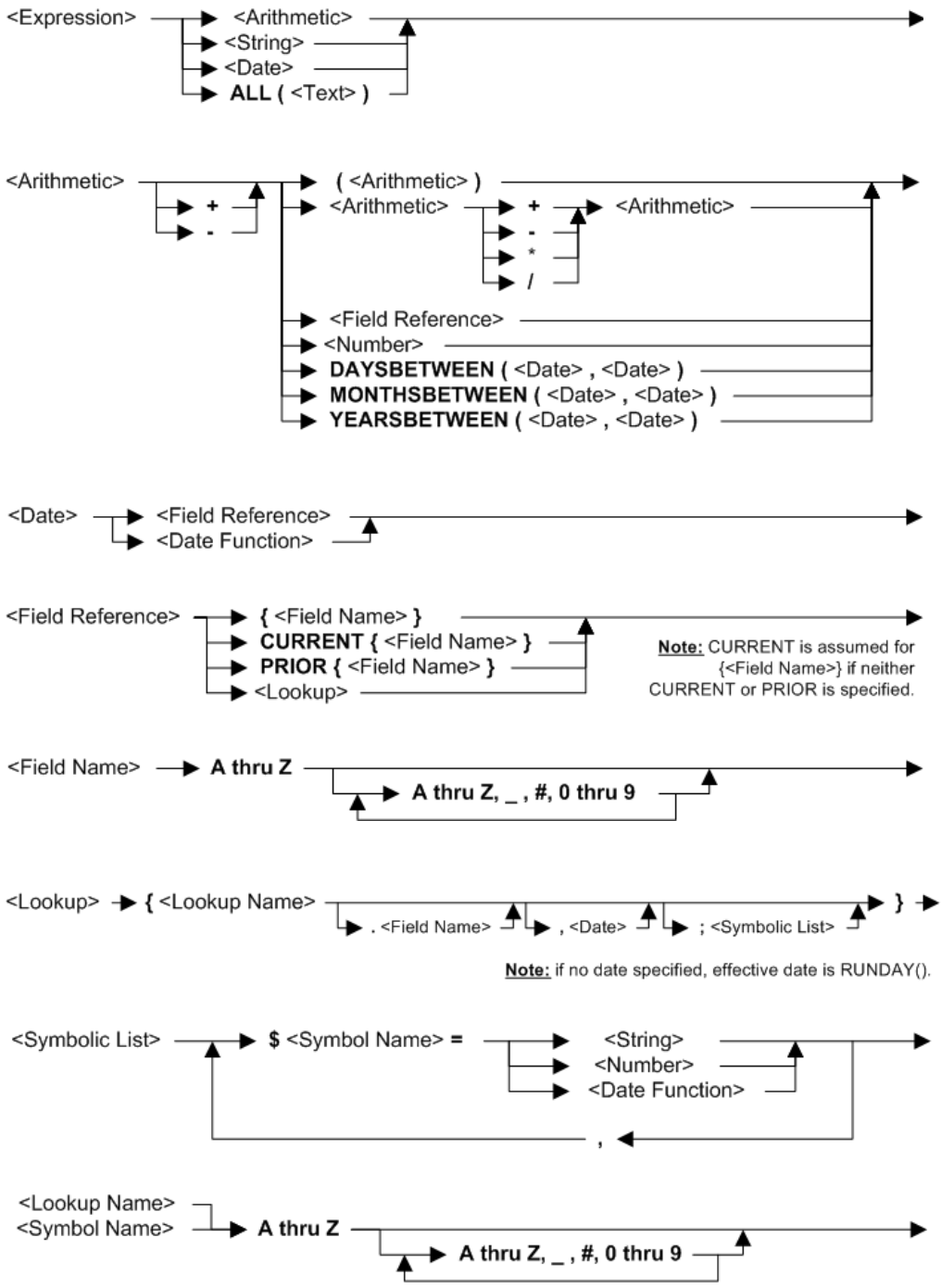
Note: it is recommended to put parentheses "(" ")" around <Compare> text, as long as this does not duplicate parentheses around conditions.

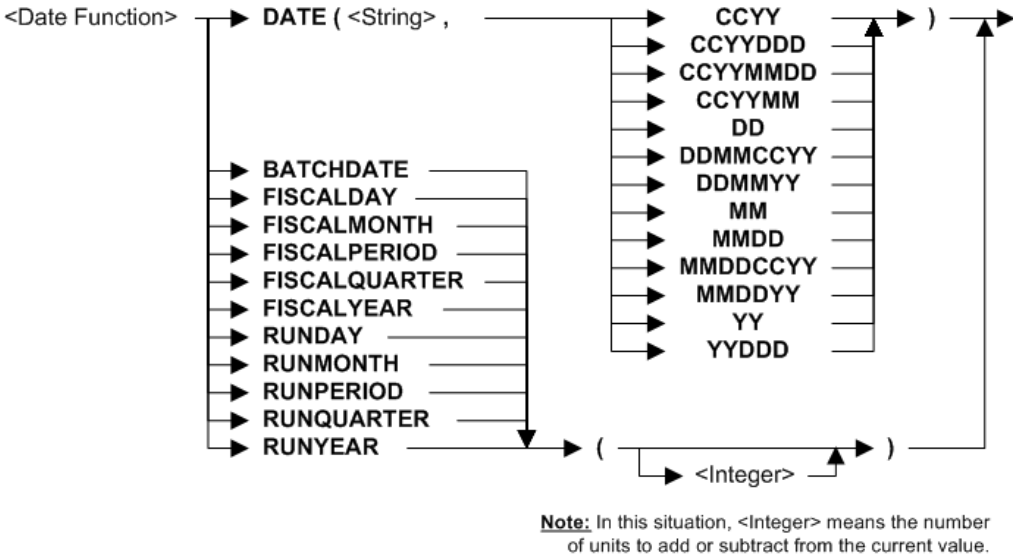




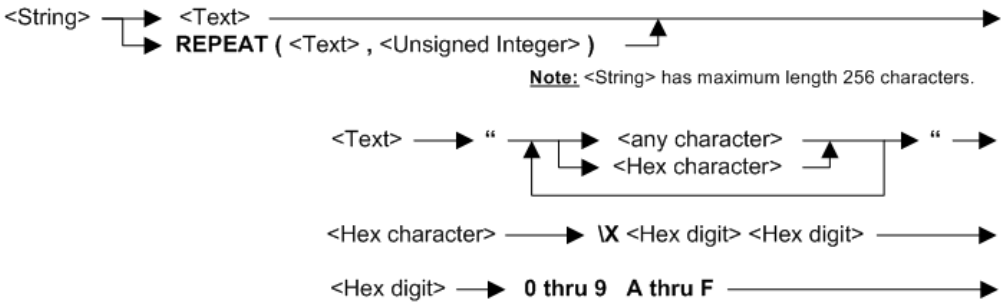

<QuarterDate Compare>
<Expression>
<
>
=
<>
<=
>=
<Quarter Function>
<Quarter Function>
Q1(
Q2(
Q3(
Q4(
<Unsigned Integer>
)
Note: in this situation, the Unsigned Integer is the year (CCYY).
RUNQUARTER(
FISCALQUARTER(
<Integer>
)
Note: the Integer is the number of quarters to add or subtract from the current value. The default is the current value.
<String Compare>
<Expression>
CONTAINS
BEGINS_WITH
ENDS_WITH
<String>
LIKE
MATCHES
<Regular Expression>
<Regular Expression>
“
<any character>
“
Note: <Regular Expression> uses these meanings:
^ means the start of a string
$ means the end of a string
. (fullstop) means any single character
* (asterisk)means any zero or more characters

<IS Function>
ISNULL(
ISNOTNULL(
ISNUMERIC(
ISNOTNUMERIC(
ISSPACES(
ISNOTSPACES(
<Field Reference>)
ISFOUND(
ISNOTFOUND(
<Lookup>)

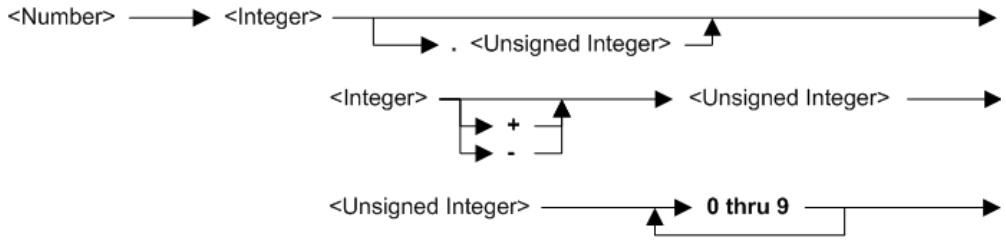

<Expression>
<Arithmetic>
<String>
<Date>
ALL (<Text>)
<Arithmetic>
+
-
(<Arithmetic>)
<Arithmetic>
+
-
*
/
<Arithmetic>
<Field Reference>
<Number>
DAYSBETWEEN (<Date> , <Date>)
MONTHSBETWEEN (<Date> , <Date>)
YEARSBETWEEN (<Date> , <Date>)
<Date>
<Field Reference>
<Date Function>
<Field Reference>
{ <Field Name> }
CURRENT { <Field Name> }
PRIOR { <Field Name> }
<Lookup>
Note: CURRENT is assumed for {<Field Name>} if neither CURRENT or PRIOR is specified.
<Field Name>
A thru Z
A thru Z, _ , #, 0 thru 9
<Lookup>
{ <Lookup Name>
. <Field Name>
, <Date>
; <Symbolic List>
}
Note: if no date specified, effective date is RUNDAY().
<Symbolic List>
$ <Symbol Name> =
<String>
<Number>
<Date Function>
,
<Lookup Name>
<Symbol Name>
A thru Z
A thru Z, _ , #, 0 thru 9

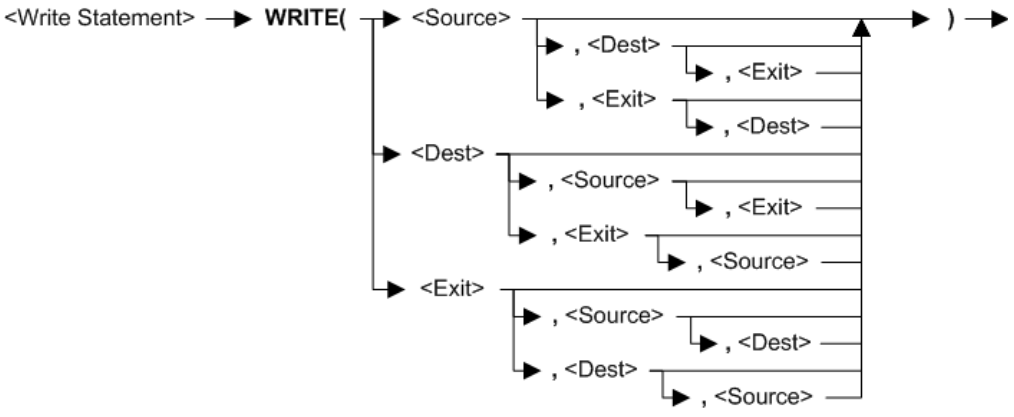


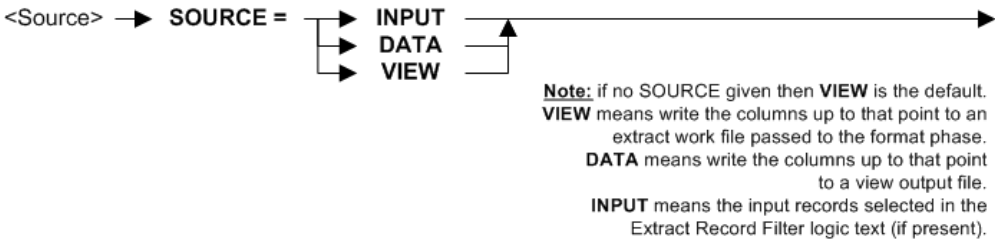
Note: In this situation, <Integer> means the number of units to add or subtract from the current value.

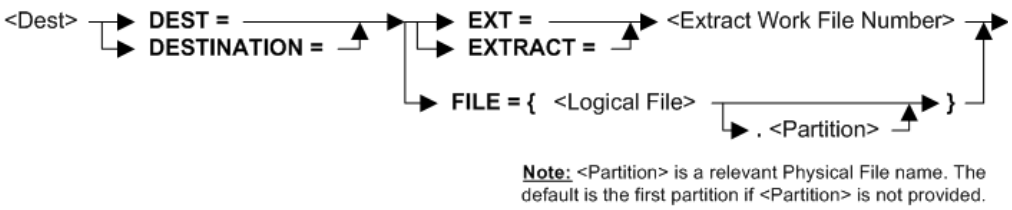


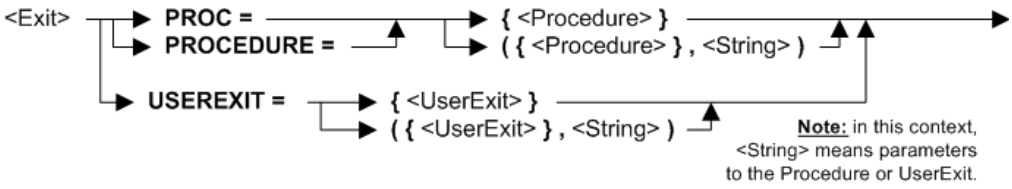
Note: <String> has maximum length 256 characters.

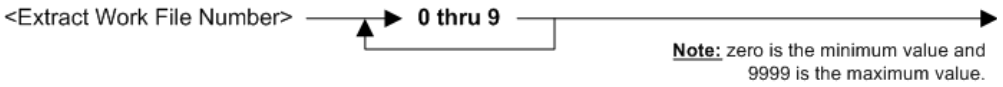


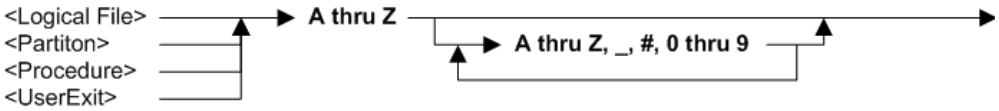


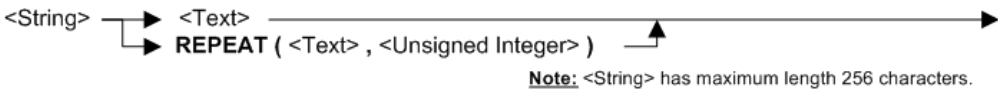

<Source>
SOURCE =
INPUT
DATA
VIEW
Note: if no SOURCE given then VIEW is the default.
VIEW means write the columns up to that point to an extract work file passed to the format phase.
DATA means write the columns up to that point to a view output file.
INPUT means the input records selected in the Extract Record Filter logic text (if present).

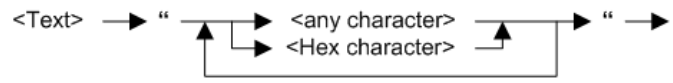

<Dest>
DEST =
DESTINATION =
EXT =
EXTRACT =
<Extract Work File Number>
FILE = { <Logical File> }
. <Partition>
Note: <Partition> is a relevant Physical File name. The default is the first partition if <Partition> is not provided.


<Exit>
PROC =
PROCEDURE =
{ <Procedure> }
({ <Procedure> } , <String>)
USEREXIT =
{ <UserExit> }
({ <UserExit> } , <String>)
Note: in this context, <String> means parameters to the Procedure or UserExit.

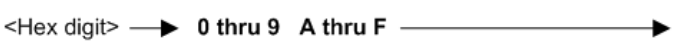

<Extract Work File Number>
0 thru 9
Note: zero is the minimum value and 9999 is the maximum value.

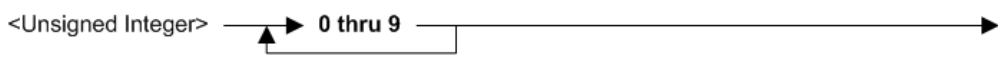

<Logical File>
<Partiton>
<Procedure>
<UserExit>
A thru Z
A thru Z, _, #, 0 thru 9


<String>
<Text>
REPEAT (<Text> , <Unsigned Integer>)
Note: <String> has maximum length 256 characters.


<Text>
“
<any character>
<Hex character>
“

<Hex character>
\X <Hex digit> <Hex digit>


<Hex digit>
0 thru 9 A thru F

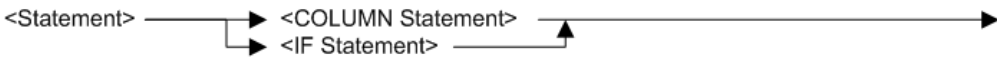

<Unsigned Integer>
0 thru 9

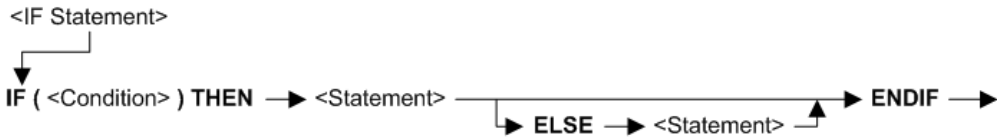
Logic text diagrams 3: Format Column Calculation

How the syntax works

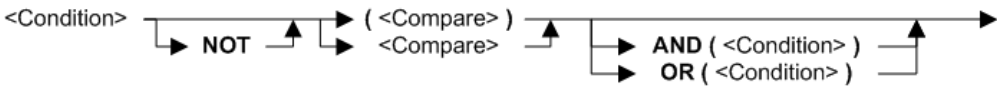
<text> Indicates a reference to another part of this syntax.
TEXT Indicates a keyword or punctuation (case does not matter)

Complete syntax diagrams for Format Column Calculation

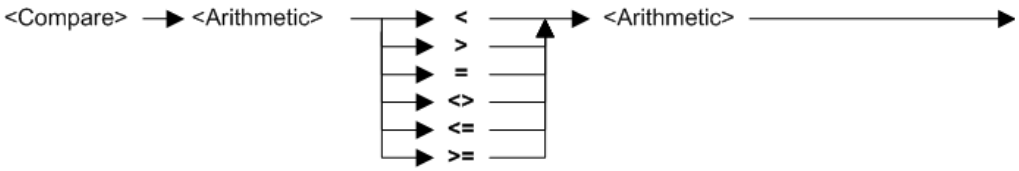


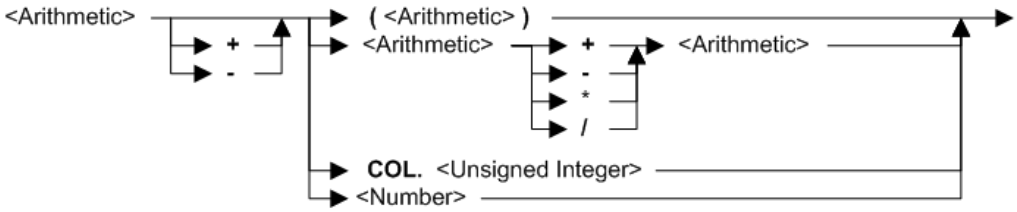


Note: it is recommended to put parentheses "(" ")" around conditions.

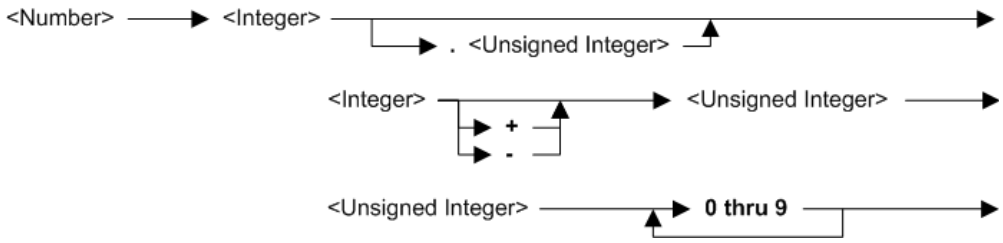


Note: it is recommended to put parentheses "(" ")" around <Compare> text, as long as this does not duplicate parentheses around conditions.





Note: in this situation, <Unsigned Integer> is a column number. That number must be between 1 and the current column number (inclusive).

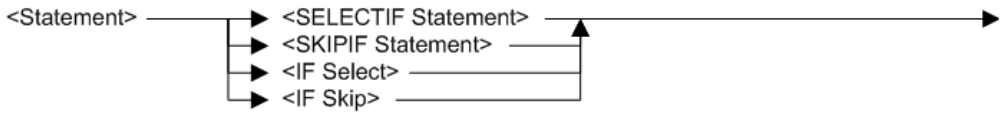


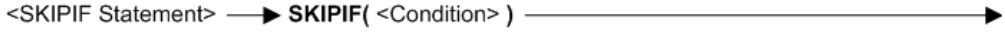
Logic text diagrams 4: Format Record Filter

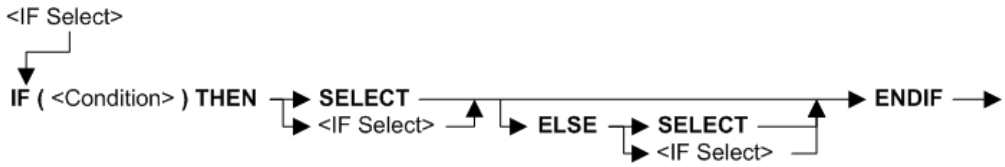
How the syntax works

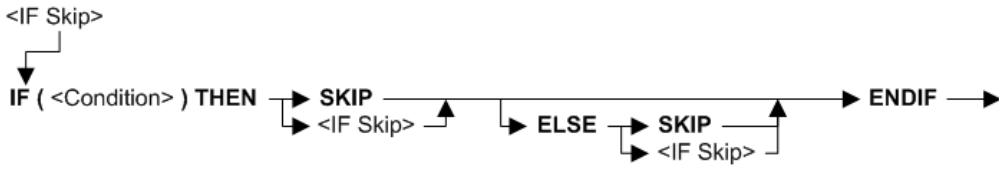
<text>	Indicates a reference to another part of this syntax.
TEXT	Indicates a keyword or punctuation (case does not matter)

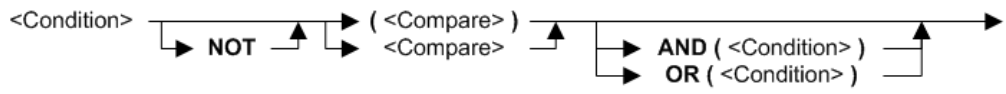
Complete syntax diagrams for Format Record Filter



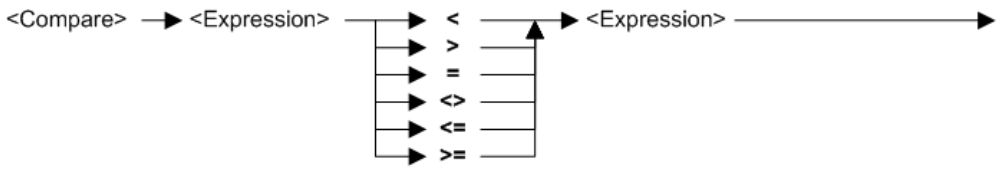


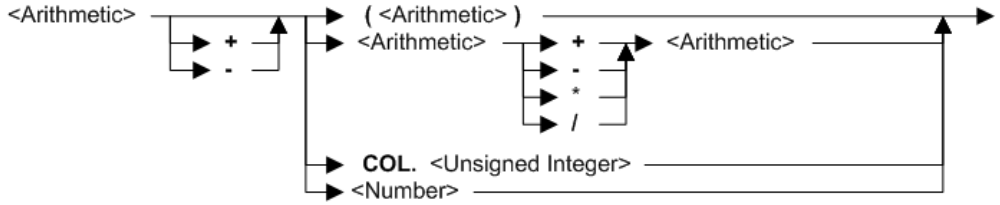




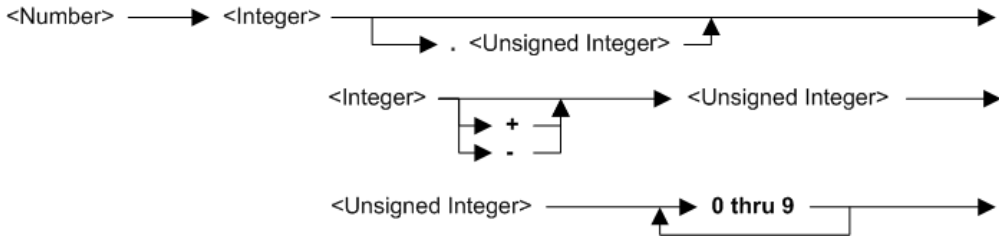


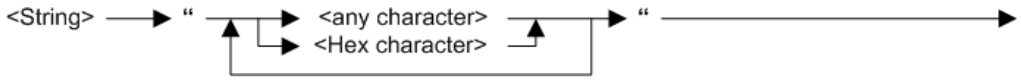
Note: it is recommended to put parentheses "(" ")" around <Compare> text, as long as this does not duplicate parentheses around conditions.



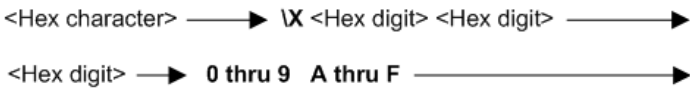


Note: in this situation, <Unsigned Integer> is a column number. That number can be any column number (in the view).





Note: <String> has maximum length 256 characters.



Chapter 2. Rules for all logic text

Rules	Notes

Extra blanks between keywords and expressions have no effect.	For example, these IF statements are all the same:
	`IF ({field1}={field2}) THEN COLUMN= {field1} ENDIF`
	
	`IF ({field1} = {field2}) THEN COLUMN = {field1} ENDIF`
	
	`IF ({field1} = {field2}) THEN COLUMN = {field1} ENDIF`
	
	`IF ({field1} = {field2})THEN COLUMN = {field1} ENDIF`
	
	`IF ({field1} = {field2}) THEN COLUMN = {field1} ENDIF`
	
	WARNING: Extra blanks change text strings, for example "ABC" and "A B C" are different strings.

Logic text can continue on the next line. A backslash (\) is optional at line end.	In previous versions of SAFR, a backslash (\) was required in order to continue a line of logic text on the next line. This backslash is no longer required. The backslash is still allowed for backwards compatibility. This means the following statements are the same:
	`IF ({FIELD1} >= 2)\ THEN COLUMN = {FIELD1} ENDIF`
	
	`IF ({FIELD1} >= 2) THEN COLUMN = {FIELD1} ENDIF`

The **case of keywords** has no effect.	For example, these IF statements are all the same:
	`IF ({FIELD1} >= COL.2) THEN COLUMN = {FIELD1} ELSE COLUMN = COL.2 ENDIF`
	
	`if ({field1} >= col.2) then column = {field1} else column = col.2 endif`
	
	`If ({Field1} >= Col.2) Then Column = {Field1} Else Column = Col.2 Endif`
	
	WARNING: Case changes text strings, for example "ABC" and "abc" are different strings.

Rules	Notes

After a single quote everything on that line is a **comment**	Examples are:
	`' Make col the larger of field1 & col.2`
	`IF ({FIELD1} >= COL.2)`
	`  THEN COLUMN = {FIELD1} ENDIF`
	`COLUMN = {field3}  ' Rest is comment (OK).`
	
	WARNING: comments to the left of keywords result in hiding the keywords, for example:
	`IF ({field1} = {field2})THEN`
	`  COLUMN = {field1}`
	`' This comment hides keyword:  ENDIF`

Use **curly brackets { }** to enclose **input fields** or names of metadata from the SAFR Workbench (such as a lookup path, logical file, physical file).	Examples are:
	`{shipping_date}`
	`{product_category}`
	`{CA_Sales_2009_Logical_File}`
	`{Products_Logical_File}`
	`{Products_USA_File}`
	`{Lookup_Sales_to_Product_Category}`

Keyboard shortcuts for all logic text screens

See topic "**What are the keyboard shortcuts?**"

To find that topic in a PDF, see chapter "**Cross reference of topics and PDF files**".

Appendix: Notices

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