

## SQL Functions used in GuardDraw Expressions

Database: **Oracle 8i**

When building expressions with GuardDraw V5 using an ODBC connection to an Oracle 8i database, please refer to the present document or your Oracle 8i documentation.

### Operators

- || Concatenation
- ' Text delimiter
- + Addition
- Subtraction

### String Functions

- ASCII(char)** Returns the ASCII (0-255) value of the first character in the string "str". Example: ASCII('ascii') returns 97 (ASCII value for 'a').
- CHR(number)** Returns the character for which the ASCII code is "number." Example: CHR(10) returns a line feed.
- INITCAP(str)** Returns "str" with first letter of each word capitalized. Example: INITCAP('mary smith') will return 'Mary Smith'.
- INSTR(str1, str2), or INSTR(str1, str2, start)** Returns the position of "str2" in "str1" starting at position "start" (optional). Example: INSTR('000034;Mary;SMITH',';') will return position 7.
- LENGTH(str)** Returns the number of characters in "str". Example: LEN('Mary') returns 5.
- LOWER(str)** Returns the string "str" with all characters converted to lower case. Example: LOWER('Mary') will return 'mary'.
- LPAD (char1,n ) or LPAD(char1,n,char)** Returns the string "char1", left padded with "n" occurrences of "char" or spaces. Example: LPAD('123',5,'0') will return '00000123'.
- LTRIM(str) or LTRIM(str, chars)** Removes the initial characters in "str" up to the first character not in "chars". "Chars" defaults to a space character. Example: LTRIM('00000123','0') will return '123'.
- RPAD (char1,n ) or RPAD(char1,n,char)** Returns the string "char1", right padded with "n" occurrences of "char" or spaces. Example: RPAD('123',5,'0') will return '12300000'.
- RTRIM(str) or RTRIM(str,chars)** Removes final characters in "str" until the last character not in "chars". Chars defaults to a space. Example: RTRIM('Mary ') will return 'Mary'.
- SUBSTR(char,m) or SUBSTR(char, m, n)** Returns a sub-string of "char", beginning at character "m", "n" characters long (if "n" is omitted, to the end of "char"). Example: SUBSTR('00012345',4,3) will return '123'.
- UPPER(str)** Converts the characters of "str" to upper case. Example: UPPER('Mary') will return 'MARY'.

### Numeric Functions

- CEIL(n)** Returns the smallest integer greater than or equal to "n". Example: CEIL(99.8) returns 100.
- FLOOR(n)** Returns the largest integer equal to or less than "n". Example: FLOOR(99.8) returns 99.
- MOD(m,n)** Returns remainder of "m" divided by "n". Example: MOD(12,10) will return 2.
- ROUND(n)** or **ROUND(n, m)** Returns "n" rounded to "m" decimal places; "m" defaults to 0. Example: ROUND(99.8) returns 100.
- TRUNC(n)** or **TRUNC(n, m)** Returns "n" truncated to "m" decimal places; "m" defaults to 0. Example: TRUNC(99.8) returns 99.

### Date and Time Functions

- ADD\_MONTHS(d,n)** Returns date "d" plus "n" months. Example: ADD\_MONTHS(Creation\_Date, 6) will return a date value which is 6 months later than d.
- LAST\_DAY(d)** Returns the last day of the month of date "d". Example: LAST\_DAY(SYSDATE) will return the last day of the current month.
- MONTHS\_BETWEEN(d, e)** Returns the number of month by which date "e" preceeds date "d". Example: MONTHS\_BETWEEN(Print\_Date, Creation\_Date) will return the number of months during which the card record was created but not printed.
- NEXT\_DAY(d, day)** Returns the date of the first day of the week named by "day" that is equal to or later than the date "d".
- SYSDATE** Returns the current system date and time.

### Conversion Functions

- TO\_CHAR(n)** or **TO\_CHAR(n, num\_fmt)** Converts "n" to a char value in the format specified by "num\_fmt". If "num\_fmt" is omitted, "n" is converted to a char value exactly long enough to hold the significant digits.
- TO\_CHAR(d)** or **TO\_CHAR(d, date\_fmt)** Converts "d" to a char value in the format specified by "date\_fmt". If "date\_fmt" is omitted, "d" is converted into default date format, "DD-MON-YY".
- TO\_DATE(char)** or **TO\_DATE(Char, date\_fmt)** Converts "char", which is a character value containing a date value in the format specified by "date\_fmt", into a date value. If "date\_fmt" is omitted, "char" must be in default date format, "DD-MON-YY".
- TO\_NUMBER(chr)** or **TO\_NUMBER(chr,n\_fmt)** Converts "chr", which is a character value containing a number in the format specified by the optional "n\_fmt", into a number value.

Numeric Format	Example	Numeric Format Function
9	9999	Number of "9"s determines length of returned character.

0	'0999'	Prefixes value with leading zeroes.
\$	\$9999	Prefixes value with dollar sign.
B	B9999	Returns zero value as blank, instead of "0".
MI	9999MI	Returns "-" after negative values.
S	S9999	Returns "+" for positive values and "-" for negative values.
PR	9999PR	Returns negative values in <angle brackets>.
D	99D99	Returns the decimal character.
,	9,999	Returns a comma in this position.
.	99.99	Returns a period in this position.
EEEE	9.999EEEE	Returns value in scientific notation. fmt must contain exactly four "E"s.

#### Date Format

Date Format	Value Returned
CC	Century
YYYY	Year
YYY or YY or Y	Last 3, 2, or 1 digit(s) of year. Century defaults to current
YEAR	Year spelled out
Q	Quarter of year (1,2,3,4; JAN-MAR=1)
MM	Month of year (01-12; JAN=01)
MONTH	Month name, padded with blanks to 9 characters.
MON	Name of month, abbreviated (JAN, FEB,etc.).
WW or W	Week of year (01-52) or month (1-5)
DDD or DD or D	Day of year (1-366) or month (1-31) or week (1-7).
DAY	Name of day, blank-padded to 9 characters.
DY	Name of day, 3-lettter abbreviation.
-,.,:	Punctuation is reproduced in the result.
"...text..."	Quoted string is reproduced in the result.