按不同的使用环境，SAS 一共有七大类函数：

一，常规函数 ；二，windows 环境下函数；三，OpenVMS 虚拟内存环境下函数；四，z/OS 操作环境下函数，五，宏语言函数；六，多国语言函数，七，其他函数

第一类函数常规函数最常用，数量也最多，这里依次列出所有的常规函数。Character 字符函数

函数名称	功能
ANYALNUM Function	Searches a character string for an alphanumeric character, and returns the first position at which the character is found.
ANYALPHA Function	Searches a character string for an alphabetic character, and returns the first position at which the character is found.
ANYCNTRL Function	Searches a character string for a control character, and returns the first position at which that character is found.
ANYDIGIT Function	Searches a character string for a digit, and returns the first position at which the digit is found.
ANYFIRST Function	Searches a character string for a character that is valid as the first character in a SAS variable name under VALIDVARNAME=V7, and returns the first position at which that character is found.
ANYGRAPH Function	Searches a character string for a graphical character, and returns the first position at which that character is found.
ANYLOWER Function	Searches a character string for a lowercase letter, and returns the first position at which the letter is found.
ANYNAME Function	Searches a character string for a character that is valid in a SAS variable name under VALIDVARNAME=V7, and returns the first position at which that character is found.
ANYPRINT Function	Searches a character string for a printable character, and returns the first position at which that character is found.
ANYPUNCT Function	Searches a character string for a punctuation character, and returns the first position at which that character is found.
ANYSPACE Function	Searches a character string for a white-space character (blank, horizontal and vertical tab, carriage return, line feed, and form feed), and returns the first position at which that character is found.
ANYUPPER	Searches a character string for an uppercase letter, and returns the

Function	first position at which the letter is found.
ANYXDIGIT Function	Searches a character string for a hexadecimal character that represents a digit, and returns the first position at which that character is found.
BYTE Function	Returns one character in the ASCII or the EBCDIC collating sequence.
CALL CATS Routine	Removes leading and trailing blanks, and returns a concatenated character string.
CALL CATT Routine	Removes trailing blanks, and returns a concatenated character string.
CALL CATX Routine	Removes leading and trailing blanks, inserts delimiters, and returns a concatenated character string.
CALL COMPCOST Routine	Sets the costs of operations for later use by the COMPGED function
CALL MISSING Routine	Assigns missing values to the specified character or numeric variables.
CALL SCAN Routine	Returns the position and length of the nth word from a character string.
CAT Function	Does not remove leading or trailing blanks, and returns a concatenated character string.
CATQ Function	Concatenates character or numeric values by using a delimiter to separate items and by adding quotation marks to strings that contain the delimiter.
CATS Function	Removes leading and trailing blanks, and returns a concatenated character string.
CATT Function	Removes trailing blanks, and returns a concatenated character string.
CATX Function	Removes leading and trailing blanks, inserts delimiters, and returns a character string.
CHAR Function	Returns a single character from a specified position in a character string.
CHOOSEC Function	Returns a character value that represents the results of choosing from a list of arguments.

CHOOSEN Function	Returns a numeric value that represents the results of choosing from a list of arguments.
COALESCEC Function	Returns the first non-missing value from a list of character arguments.
COLLATE Function	Returns a character string in ASCII or EBCDIC collating sequence.
COMPARE Function	Returns the position of the leftmost character by which two strings differ, or returns 0 if there is no difference.
COMPBL Function	Removes multiple blanks from a character string.
COMPGED Function	Returns the generalized edit distance between two strings.
COMPLEV Function	Returns the Levenshtein edit distance between two strings.
COMPRESS Function	Returns a character string with specified characters removed from the original string.
COUNT Function	Counts the number of times that a specified substring appears within a character string.
COUNTC Function	Counts the number of characters in a string that appear or do not appear in a list of characters.
COUNTW Function	Counts the number of words in a character string.
DEQUOTE Function	Removes matching quotation marks from a character string that begins with a quotation mark, and deletes all characters to the right of the closing quotation mark.
FIND Function	Searches for a specific substring of characters within a character string.
FINDC Function	Searches a string for any character in a list of characters.
FINDW Function	Returns the character position of a word in a string, or returns the number of the word in a string.
FIRST Function	Returns the first character in a character string.
IFC Function	Returns a character value based on whether an expression is true,

false, or missing.

INDEX Function	Searches a character expression for a string of characters, and returns the position of the string's first character for the first occurrence of the string.
INDEXC Function	Searches a character expression for any of the specified characters, and returns the position of that character.
INDEXW Function	Searches a character expression for a string that is specified as a word, and returns the position of the first character in the word.
LEFT Function	Left-aligns a character string.
LENGTH Function	Returns the length of a non-blank character string, excluding trailing blanks, and returns 1 for a blank character string.
LENGTHC Function	Returns the length of a character string, including trailing blanks.
LENGTHM Function	Returns the amount of memory (in bytes) that is allocated for a character string.
LENGTHN Function	Returns the length of a character string, excluding trailing blanks.
LOWCASE Function	Converts all letters in an argument to lowercase.
MD5 Function	Returns the result of the message digest of a specified string.
MISSING Function	Returns a numeric result that indicates whether the argument contains a missing value.
NLITERAL Function	Converts a character string that you specify to a SAS name literal.
NOTALNUM Function	Searches a character string for a non-alphanumeric character, and returns the first position at which the character is found.
NOTALPHA Function	Searches a character string for a nonalphabetic character, and returns the first position at which the character is found.
NOTCNTRL Function	Searches a character string for a character that is not a control character, and returns the first position at which that character is found.
NOTDIGIT	Searches a character string for any character that is not a digit, and

Function	returns the first position at which that character is found.
NOTFIRST Function	Searches a character string for an invalid first character in a SAS variable name under VALIDVARNAME=V7, and returns the first position at which that character is found.
NOTGRAPH Function	Searches a character string for a non-graphical character, and returns the first position at which that character is found.
NOTLOWER Function	Searches a character string for a character that is not a lowercase letter, and returns the first position at which that character is found.
NOTNAME Function	Searches a character string for an invalid character in a SAS variable name under VALIDVARNAME=V7, and returns the first position at which that character is found.
NOTPRINT Function	Searches a character string for a nonprintable character, and returns the first position at which that character is found.
NOTPUNCT Function	Searches a character string for a character that is not a punctuation character, and returns the first position at which that character is found.
NOTSPACE Function	Searches a character string for a character that is not a white-space character (blank, horizontal and vertical tab, carriage return, line feed, and form feed), and returns the first position at which that character is found.
NOTUPPER Function	Searches a character string for a character that is not an uppercase letter, and returns the first position at which that character is found.
NOTXDIGIT Function	Searches a character string for a character that is not a hexadecimal character, and returns the first position at which that character is found.
NVALID Function	Checks the validity of a character string for use as a SAS variable name.
PROPCASE Function	Converts all words in an argument to proper case.
QUOTE Function	Adds double quotation marks to a character value.
RANK Function	Returns the position of a character in the ASCII or EBCDIC collating sequence.
REPEAT Function	Returns a character value that consists of the first argument repeated n+1 times.

REVERSE Function	Reverses a character string.
RIGHT Function	Right aligns a character expression.
SCAN Function	Returns the nth word from a character string.
SOUNDEX Function	Encodes a string to facilitate searching.
SPEDIS Function	Determines the likelihood of two words matching, expressed as the asymmetric spelling distance between the two words.
STRIP Function	Returns a character string with all leading and trailing blanks removed.
SUBPAD Function	Returns a substring that has a length you specify, using blank padding if necessary.
SUBSTR (left of =) Function	Replaces character value contents.
SUBSTR (right of =) Function	Extracts a substring from an argument.
SUBSTRN Function	Returns a substring, allowing a result with a length of zero.
TRANSLATE Function	Replaces specific characters in a character string.
TRANSTRN Function	Replaces all occurrences of a substring found in a character string, allowing a zero-length replacement string.
TRANWRD Function	Replaces or removes all occurrences of a substring in a character string.
TRIM Function	Removes trailing blanks from a character string, and returns one blank if the string is missing.
TRIMN Function	Removes trailing blanks from character expressions, and returns a string with a length of zero if the expression is missing.
UPCASE Function	Converts all letters in an argument to uppercase.
VERIFY	Returns the position of the first character in a string that is not in any

Function   of several other strings.

日期和时间函数   Date and Time

CALL IS8601_CONVERT Routine	Converts an ISO 8601 interval to datetime and duration values, or converts datetime and duration values to an ISO 8601 interval.
DATDIF Function	Returns the number of days between two dates.
DATE Function	Returns the current date as a SAS date value.
DATEJUL Function	Converts a Julian date to a SAS date value.
DATEPART Function	Extracts the date from a SAS datetime value.
DATETIME Function	Returns the current date and time of day as a SAS datetime value.
DAY Function	Returns the day of the month from a SAS date value.
DHMS Function	Returns a SAS datetime value from date, hour, minute, and second values.
HMS Function	Returns a SAS time value from hour, minute, and second values.
HOLIDAY Function	Returns a SAS date value of a specified holiday for a specified year.
HOUR Function	Returns the hour from a SAS time or datetime value.
INTCINDEX Function	Returns the cycle index when a date, time, or datetime interval and value are specified.
INTCK Function	Returns the count of the number of interval boundaries between two dates, two times, or two datetime values.
INTCYCLE Function	Returns the date, time, or datetime interval at the next higher seasonal cycle when a date, time, or datetime interval is specified.
INTFIT Function	Returns a time interval that is aligned between two dates.
INTFMT Function	Returns a recommended SAS format when a date, time, or datetime interval is specified.
INTGET Function	Returns a time interval based on three date or datetime values.
INTINDEX Function	Returns the seasonal index when a date, time, or datetime interval and value are specified.

INTNX Function	Increments a date, time, or datetime value by a given time interval, and returns a date, time, or datetime value.
INTSEAS Function	Returns the length of the seasonal cycle when a date, time, or datetime interval is specified.
INTSHIFT Function	Returns the shift interval that corresponds to the base interval.
INTTEST Function	Returns 1 if a time interval is valid, and returns 0 if a time interval is invalid.
JULDATE Function	Returns the Julian date from a SAS date value.
JULDATE7 Function	Returns a seven-digit Julian date from a SAS date value.
MDY Function	Returns a SAS date value from month, day, and year values.
MINUTE Function	Returns the minute from a SAS time or datetime value.
MONTH Function	Returns the month from a SAS date value.
NWKDOM Function	Returns the date for the nth occurrence of a weekday for the specified month and year.
QTR Function	Returns the quarter of the year from a SAS date value.
SECOND Function	Returns the second from a SAS time or datetime value.
TIME Function	Returns the current time of day as a numeric SAS time value.
TIMEPART Function	Extracts a time value from a SAS datetime value.
TODAY Function	Returns the current date as a numeric SAS date value.
WEEK Function	Returns the week-number value.
WEEKDAY Function	From a SAS date value, returns an integer that corresponds to the day of the week.
YEAR Function	Returns the year from a SAS date value.
YRDIF Function	Returns the difference in years between two dates.
YYQ Function	Returns a SAS date value from year and quarter year values.

描述统计函数 Descriptive Statistics

CMISS Function	Counts the number of missing arguments.
CSS Function	Returns the corrected sum of squares.

CV Function	Returns the coefficient of variation.
EUCLID Function	Returns the Euclidean norm of the non-missing arguments.
GEOMEAN Function	Returns the geometric mean.
GEOMEANZ Function	Returns the geometric mean, using zero fuzzing.
HARMEAN Function	Returns the harmonic mean.
HARMEANZ Function	Returns the harmonic mean, using zero fuzzing.
IQR Function	Returns the interquartile range.
KURTOSIS Function	Returns the kurtosis.
LARGEST Function	Returns the kth largest non-missing value.
LPNORM Function	Returns the Lp norm of the second argument and subsequent non-missing arguments.
MAD Function	Returns the median absolute deviation from the median.
MAX Function	Returns the largest value.
MEAN Function	Returns the arithmetic mean (average).
MEDIAN Function	Returns the median value.
MIN Function	Returns the smallest value.
MISSING Function	Returns a numeric result that indicates whether the argument contains a missing value.
N Function	Returns the number of non-missing numeric values.
NMISS Function	Returns the number of missing numeric values.
ORDINAL	Returns the kth smallest of the missing and nonmissing values.

Function

PCTL Function	Returns the percentile that corresponds to the percentage.
RANGE Function	Returns the range of the nonmissing values.
RMS Function	Returns the root mean square of the nonmissing arguments.
SKEWNESS Function	Returns the skewness of the nonmissing arguments.
SMALLEST Function	Returns the kth smallest nonmissing value.
STD Function	Returns the standard deviation of the nonmissing arguments.
STDERR Function	Returns the standard error of the mean of the nonmissing arguments.
SUM Function	Returns the sum of the nonmissing arguments.
SUMABS Function	Returns the sum of the absolute values of the non-missing arguments.
USS Function	Returns the uncorrected sum of squares of the nonmissing arguments.
VAR Function	Returns the variance of the nonmissing arguments.

数学函数 Mathematical

ABS Function	Returns the absolute value.
AIRY Function	Returns the value of the Airy function.
BETA Function	Returns the value of the beta function.
CALL LOGISTIC Routine	Applies the logistic function to each argument.
CALL SOFTMAX	Returns the softmax value.

Routine	
CALL STDIZE Routine	Standardizes the values of one or more variables.
CALL TANH Routine	Returns the hyperbolic tangent.
CNONCT Function	Returns the noncentrality parameter from a chi-square distribution.
COALESCE Function	Returns the first non-missing value from a list of numeric arguments.
CONSTANT Function	Computes machine and mathematical constants.
DAIRY Function	Returns the derivative of the AIRY function.
DEVIANCE Function	Returns the deviance based on a probability distribution.
DIGAMMA Function	Returns the value of the digamma function.
ERF Function	Returns the value of the (normal) error function.
ERFC Function	Returns the value of the complementary (normal) error function.
EXP Function	Returns the value of the exponential function.
FACT Function	Computes a factorial.
FNONCT Function	Returns the value of the noncentrality parameter of an F distribution.
GAMMA Function	Returns the value of the gamma function.
GCD Function	Returns the greatest common divisor for one or more integers.
IBESSEL	Returns the value of the modified Bessel function.

Function	
JBESSEL Function	Returns the value of the Bessel function.
LCM Function	Returns the least common multiple.
LGAMMA Function	Returns the natural logarithm of the Gamma function.
LOG Function	Returns the natural (base e) logarithm.
LOG1PX Function	Returns the log of 1 plus the argument.
LOG10 Function	Returns the logarithm to the base 10.
LOG2 Function	Returns the logarithm to the base 2.
LOGBETA Function	Returns the logarithm of the beta function.
MOD Function	Returns the remainder from the division of the first argument by the second argument, fuzzed to avoid most unexpected floating-point results.
MODZ Function	Returns the remainder from the division of the first argument by the second argument, using zero fuzzing.
MSPLINT Function	Returns the ordinate of a monotonicity-preserving interpolating spline.
SIGN Function	Returns the sign of a value.
SQRT Function	Returns the square root of a value.
TNONCT Function	Returns the value of the noncentrality parameter from the Student's t distribution.
TRIGAMMA Function	Returns the value of the trigamma function.

分布密度函数、分布函数 Probability

CDF	Returns a value from a cumulative probability distribution.

Function	
LOGCDF Function	Returns the logarithm of a left cumulative distribution function.
LOGPDF Function	Returns the logarithm of a probability density (mass) function.
LOGSDF Function	Returns the logarithm of a survival function.
PDF Function	Returns a value from a probability density (mass) distribution.
POISSON Function	Returns the probability from a Poisson distribution.
PROBBETA Function	Returns the probability from a beta distribution.
PROBBNML Function	Returns the probability from a binomial distribution.
PROBBNRM Function	Returns a probability from a bivariate normal distribution.
PROBCHI Function	Returns the probability from a chi-square distribution.
PROBF Function	Returns the probability from an F distribution.
PROBGAM Function	Returns the probability from a gamma distribution.
PROBHYPR Function	Returns the probability from a hypergeometric distribution.
PROBMC Function	Returns a probability or a quantile from various distributions for multiple comparisons of means.
PROBNEGB Function	Returns the probability from a negative binomial distribution.
PROBNORM Function	Returns the probability from the standard normal distribution.
PROBT Function	Returns the probability from a t distribution.
SDF	Returns a survival function.

Function

二进制逻辑操作符 Bitwise Logical Operations

BAND Function	Returns the bitwise logical AND of two arguments.
BLSHIFT Function	Returns the bitwise logical left shift of two arguments.
BNOT Function	Returns the bitwise logical NOT of an argument.
BOR Function	Returns the bitwise logical OR of two arguments.
BRSHIFT Function	Returns the bitwise logical right shift of two arguments.
BXOR Function	Returns the bitwise logical EXCLUSIVE OR of two arguments.

数组函数　Array

DIM Function	Returns the number of elements in an array.
HBOUND Function	Returns the upper bound of an array.
LBOUND Function	Returns the lower bound of an array.

字符串配对函数 Character String Matching

CALL PRXCHANGE Routine	Performs a pattern-matching replacement.
CALL PRXDEBUG Routine	Enables Perl regular expressions in a DATA step to send debugging output to the SAS log.
CALL PRXFREE Routine	Frees memory that was allocated for a Perl regular expression.
CALL PRXNEXT Routine	Returns the position and length of a substring that matches a pattern, and iterates over multiple matches within one string.
CALL	Returns the start position and length for a capture buffer.

PRXPOSN Routine	
CALL PRXSUBSTR Routine	Returns the position and length of a substring that matches a pattern.
PRXCHANGE Function	Performs a pattern-matching replacement.
PRXMATCH Function	Searches for a pattern match and returns the position at which the pattern is found.
PRXPAREN Function	Returns the last bracket match for which there is a match in a pattern.
PRXPARSE Function	Compiles a Perl regular expression (PRX) that can be used for pattern matching of a character value.
PRXPOSN Function	Returns a character string that contains the value for a capture buffer.

组合函数 Combinatorial

ALLCOMB Function	Generates all combinations of the values of n variables taken k at a time in a minimal change order.
ALLPERM Function	Generates all permutations of the values of several variables in a minimal change order.
CALL ALLCOMB Routine	Generates all combinations of the values of n variables taken k at a time in a minimal change order.
CALL ALLCOMBI Routine	Generates all combinations of the indices of n objects taken k at a time in a minimal change order.
CALL ALLPERM Routine	Generates all permutations of the values of several variables in a minimal change order.
CALL GRAYCODE Routine	Generates all subsets of n items in a minimal change order.
CALL LEXCOMB Routine	Generates all distinct combinations of the non-missing values of n variables taken k at a time in lexicographic order.

CALL LEXCOMBI Routine	Generates all combinations of the indices of n objects taken k at a time in lexicographic order.
CALL LEXPERK Routine	Generates all distinct permutations of the non-missing values of n variables taken k at a time in lexicographic order.
CALL LEXPERM Routine	Generates all distinct permutations of the non-missing values of several variables in lexicographic order.
CALL RANPERK Routine	Randomly permutes the values of the arguments, and returns a permutation of k out of n values.
CALL RANPERM Routine	Randomly permutes the values of the arguments.
COMB Function	Computes the number of combinations of n elements taken r at a time.
GRAYCODE Function	Generates all subsets of n items in a minimal change order.
LCOMB Function	Computes the logarithm of the COMB function; that is, the logarithm of the number of combinations of n objects taken r at a time.
LEXCOMB Function	Generates all distinct combinations of the non-missing values of n variables taken k at a time in lexicographic order.
LEXCOMBI Function	Generates all combinations of the indices of n objects taken k at a time in lexicographic order.
LEXPERK Function	Generates all distinct permutations of the non-missing values of n variables taken k at a time in lexicographic order.
LEXPERM Function	Generates all distinct permutations of the non-missing values of several variables in lexicographic order.
LFACT Function	Computes the logarithm of the FACT (factorial) function.
LPERM Function	Computes the logarithm of the PERM function; that is, the logarithm of the number of permutations of n objects, with the option of including r number of elements.
PERM	Computes the number of permutations of n items that are taken r at a

Function	time.

双曲线函数 Hyperbolic

ARCOSH Function	Returns the inverse hyperbolic cosine.
ARSINH Function	Returns the inverse hyperbolic sine.
ARTANH Function	Returns the inverse hyperbolic tangent.
COSH Function	Returns the hyperbolic cosine.
SINH Function	Returns the hyperbolic sine.
TANH Function	Returns the hyperbolic tangent.

宏函数 Macro

CALL EXECUTE Routine	Resolves the argument, and issues the resolved value for execution at the next step boundary.
CALL SYMPUT Routine	Assigns DATA step information to a macro variable.
CALL SYMPUTX Routine	Assigns a value to a macro variable, and removes both leading and trailing blanks.
RESOLVE Function	Returns the resolved value of the argument after it has been processed by the macro facility.
SYMEXIST Function	Returns an indication of the existence of a macro variable.
SYMGET Function	Returns the value of a macro variable during DATA step execution.
SYMGLOBL Function	Returns an indication of whether a macro variable is in global scope to the DATA step during DATA step execution.
SYMLOCAL Function	Returns an indication of whether a macro variable is in local scope to the DATA step during DATA step execution.

分位数函数 Quantile

BETAINV Function	Returns a quantile from the beta distribution.
CINV Function	Returns a quantile from the chi-square distribution.
FINV Function	Returns a quantile from the F distribution.
GAMINV Function	Returns a quantile from the gamma distribution.
PROBIT Function	Returns a quantile from the standard normal distribution.
QUANTILE Function	Returns the quantile from a distribution that you specify.
TINV Function	Returns a quantile from the t distribution.

搜索函数 Search

WHICHC Function	Searches for a character value that is equal to the first argument, and returns the index of the first matching value.
WHICHN Function	Searches for a numeric value that is equal to the first argument, and returns the index of the first matching value.

排序函数 Sort

CALL SORTC Routine	Sorts the values of character arguments.
CALL SORTN Routine	Sorts the values of numeric arguments.

外部例程 External Routines

CALL MODULE Routine	Calls an external routine without any return code.
MODULEC Function	Calls an external routine and returns a character value.
MODULEN Function	Calls an external routine and returns a numeric value.

三角函数 Trigonometric

ARCOS Function	Returns the arccosine.
ARSIN Function	Returns the arcsine.
ATAN Function	Returns the arc tangent.
ATAN2 Function	Returns the arc tangent of the ratio of two numeric variables.
COS Function	Returns the cosine.
SIN Function	Returns the sine.
TAN Function	Returns the tangent.

截断函数 Truncation

CEIL Function	Returns the smallest integer that is greater than or equal to the argument, fuzzed to avoid unexpected floating-point results.
CEILZ Function	Returns the smallest integer that is greater than or equal to the argument, using zero fuzzing.
FLOOR Function	Returns the largest integer that is less than or equal to the argument, fuzzed to avoid unexpected floating-point results.
FLOORZ Function	Returns the largest integer that is less than or equal to the argument, using zero fuzzing.
FUZZ Function	Returns the nearest integer if the argument is within 1E-12 of that integer.
INT Function	Returns the integer value, fuzzed to avoid unexpected floating-point results.
INTZ Function	Returns the integer portion of the argument, using zero fuzzing.
ROUND Function	Rounds the first argument to the nearest multiple of the second argument, or to the nearest integer when the second argument is omitted.
ROUNDE Function	Rounds the first argument to the nearest multiple of the second argument, and returns an even multiple when the first argument is halfway between the two nearest multiples.

| ROUNDZ Function | Rounds the first argument to the nearest multiple of the second argument, using zero fuzzing. |
| TRUNC Function | Truncates a numeric value to a specified number of bytes. |

变量控制函数 Variable Control

CALL LABEL Routine	Assigns a variable label to a specified character variable.
CALL SET Routine	Links SAS data set variables to DATA step or macro variables that have the same name and data type.
CALL VNAME Routine	Assigns a variable name as the value of a specified variable.

算术函数 Arithmetic

| DIVIDE | Returns the result of a division that handles special missing values for ODS output. |

返回数值函数 Numeric

| IFN Function | Returns a numeric value based on whether an expression is true, false, or missing. |

网络工具函数 Web Tools

HTMLDECODE Function	Decodes a string that contains HTML numeric character references or HTML character entity references, and returns the decoded string.
HTMLENCODE Function	Encodes characters using HTML character entity references, and returns the encoded string.
URLDECODE Function	Returns a string that was decoded using the URL escape syntax.
URLENCODE Function	Returns a string that was encoded using the URL escape syntax.

外部文件函数 External Files

| DCLOSE Function | Closes a directory that was opened by the DOPEN function. |
| DCREATE Function | Returns the complete pathname of a new, external directory. |

DINFO Function	Returns information about a directory.
DNUM Function	Returns the number of members in a directory.
DOPEN Function	Opens a directory, and returns a directory identifier value.
DOPTNAME Function	Returns directory attribute information.
DOPTNUM Function	Returns the number of information items that are available for a directory.
DREAD Function	Returns the name of a directory member.
DROPNOTE Function	Deletes a note marker from a SAS data set or an external file.
FAPPEND Function	Appends the current record to the end of an external file.
FCLOSE Function	Closes an external file, directory, or directory member.
FCOL Function	Returns the current column position in the File Data Buffer (FDB).
FDELETE Function	Deletes an external file or an empty directory.
FEXIST Function	Verifies the existence of an external file that is associated with a fileref.
FGET Function	Copies data from the File Data Buffer (FDB) into a variable.
FILEEXIST Function	Verifies the existence of an external file by its physical name.
FILENAME Function	Assigns or deassigns a fileref to an external file, directory, or output device.
FILEREF Function	Verifies whether a fileref has been assigned for the current SAS session.
FINFO Function	Returns the value of a file information item.

FNOTE Function	Identifies the last record that was read, and returns a value that the FPOINT function can use.
FOPEN Function	Opens an external file and returns a file identifier value.
FOPTNAME Function	Returns the name of an item of information about a file.
FOPTNUM Function	Returns the number of information items that are available for an external file.
FPOINT Function	Positions the read pointer on the next record to be read.
FPOS Function	Sets the position of the column pointer in the File Data Buffer (FDB).
FPUT Function	Moves data to the File Data Buffer (FDB) of an external file, starting at the FDB's current column position.
FREAD Function	Reads a record from an external file into the File Data Buffer (FDB).
FREWIND Function	Positions the file pointer to the start of the file.
FRLEN Function	Returns the size of the last record that was read, or, if the file is opened for output, returns the current record size.
FSEP Function	Sets the token delimiters for the FGET function.
FWRITE Function	Writes a record to an external file.
MOPEN Function	Opens a file by directory ID and member name, and returns either the file identifier or a 0.
PATHNAME Function	Returns the physical name of an external file or a SAS library, or returns a blank.
RENAME Function	Renames a member of a SAS library, an entry in a SAS catalog, an external file, or a directory.
SYSMSG Function	Returns error or warning message text from processing the last data set or external file function.
SYSRC Function	Returns a system error number.

金融函数 Financial

BLACKCLPRC Function	Calculates call prices for European options on futures, based on the Black model.
BLACKPTPRC Function	Calculates put prices for European options on futures, based on the Black model.
BLKSHCLPRC Function	Calculates call prices for European options on stocks, based on the Black-Scholes model.
BLKSHPTPRC Function	Calculates put prices for European options on stocks, based on the Black-Scholes model.
COMPOUND Function	Returns compound interest parameters.
CONVX Function	Returns the convexity for an enumerated cash flow.
CONVXP Function	Returns the convexity for a periodic cash flow stream, such as a bond.
DACCDB Function	Returns the accumulated declining balance depreciation.
DACCDBSL Function	Returns the accumulated declining balance with conversion to a straight-line depreciation.
DACCSL Function	Returns the accumulated straight-line depreciation.
DACCSYD Function	Returns the accumulated sum-of-years-digits depreciation.
DACCTAB Function	Returns the accumulated depreciation from specified tables.
DEPDB Function	Returns the declining balance depreciation.
DEPDBSL Function	Returns the declining balance with conversion to a straight-line depreciation.
DEPSL Function	Returns the straight-line depreciation.
DEPSYD Function	Returns the sum-of-years-digits depreciation.
DEPTAB Function	Returns the depreciation from specified tables.

DUR Function	Returns the modified duration for an enumerated cash flow.
DURP Function	Returns the modified duration for a periodic cash flow stream, such as a bond.
FINANCE Function	Computes financial calculations such as depreciation, maturation, accrued interest, net present value, periodic savings, and internal rates of return.
GARKHCLPRC Function	Calculates call prices for European options on stocks, based on the Garman-Kohlhagen model.
GARKHPTPRC Function	Calculates put prices for European options on stocks, based on the Garman-Kohlhagen model.
INTRR Function	Returns the internal rate of return as a fraction.
IRR Function	Returns the internal rate of return as a percentage.
MARGRCLPRC Function	Calculates call prices for European options on stocks, based on the Margrabe model.
MARGRPTPRC Function	Calculates put prices for European options on stocks, based on the Margrabe model.
MORT Function	Returns amortization parameters.
NETPV Function	Returns the net present value as a fraction.
NPV Function	Returns the net present value with the rate expressed as a percentage.
PVP Function	Returns the present value for a periodic cash flow stream (such as a bond), with repayment of principal at maturity.
SAVING Function	Returns the future value of a periodic saving.
YIELDP Function	Returns the yield-to-maturity for a periodic cash flow stream, such as a bond.

产生随机数函数 Random Number

CALL RANBIN Routine	Returns a random variate from a binomial distribution.
CALL RANCAU Routine	Returns a random variate from a Cauchy distribution.

CALL RANEXP Routine	Returns a random variate from an exponential distribution.
CALL RANGAM Routine	Returns a random variate from a gamma distribution.
CALL RANNOR Routine	Returns a random variate from a normal distribution.
CALL RANPOI Routine	Returns a random variate from a Poisson distribution.
CALL RANTBL Routine	Returns a random variate from a tabled probability distribution.
CALL RANTRI Routine	Returns a random variate from a triangular distribution.
CALL RANUNI Routine	Returns a random variate from a uniform distribution.
CALL STREAMINIT Routine	Specifies a seed value to use for subsequent random number generation by the RAND function.
NORMAL Function	Returns a random variate from a normal, or Gaussian, distribution.
RANBIN Function	Returns a random variate from a binomial distribution.
RANCAU Function	Returns a random variate from a Cauchy distribution.
RAND Function	Generates random numbers from a distribution that you specify.
RANEXP Function	Returns a random variate from an exponential distribution.
RANGAM	Returns a random variate from a gamma distribution.

Function

RANNOR Function	Returns a random variate from a normal distribution.
RANPOI Function	Returns a random variate from a Poisson distribution.
RANTBL Function	Returns a random variate from a tabled probability distribution.
RANTRI Function	Returns a random variate from a triangular distribution.
RANUNI Function	Returns a random variate from a uniform distribution.
UNIFORM Function	Returns a random variate from a uniform distribution.

SAS 文件 IO 函数 SAS File I/O

ATTRC Function	Returns the value of a character attribute for a SAS data set.
ATTRN Function	Returns the value of a numeric attribute for a SAS data set.
CEXIST Function	Verifies the existence of a SAS catalog or SAS catalog entry.
CLOSE Function	Closes a SAS data set.
CUROBS Function	Returns the observation number of the current observation.
DROPNOTE Function	Deletes a note marker from a SAS data set or an external file.
DSNAME Function	Returns the SAS data set name that is associated with a data set identifier.
ENVLEN Function	Returns the length of an environment variable.
EXIST Function	Verifies the existence of a SAS library member.
FETCH Function	Reads the next non-deleted observation from a SAS data set into the Data Set Data Vector (DDV).

FETCHOBS Function	Reads a specified observation from a SAS data set into the Data Set Data Vector (DDV).
GETVARC Function	Returns the value of a SAS data set character variable.
GETVARN Function	Returns the value of a SAS data set numeric variable.
IORCMSG Function	Returns a formatted error message for _IORC_.
LIBNAME Function	Assigns or deassigns a libref for a SAS library.
LIBREF Function	Verifies that a libref has been assigned.
NOTE Function	Returns an observation ID for the current observation of a SAS data set.
OPEN Function	Opens a SAS data set.
PATHNAME Function	Returns the physical name of an external file or a SAS library, or returns a blank.
POINT Function	Locates an observation that is identified by the NOTE function.
RENAME Function	Renames a member of a SAS library, an entry in a SAS catalog, an external file, or a directory.
REWIND Function	Positions the data set pointer at the beginning of a SAS data set.
SYSMSG Function	Returns error or warning message text from processing the last data set or external file function.
SYSRC Function	Returns a system error number.
VARFMT Function	Returns the format that is assigned to a SAS data set variable.
VARINFMT Function	Returns the informat that is assigned to a SAS data set variable.
VARLABEL Function	Returns the label that is assigned to a SAS data set variable.

VARLEN Function	Returns the length of a SAS data set variable.
VARNAME Function	Returns the name of a SAS data set variable.
VARNUM Function	Returns the number of a variable's position in a SAS data set.
VARTYPE Function	Returns the data type of a SAS data set variable.

特殊函数 Special

ADDR Function	Returns the memory address of a variable on a 32-bit platform.
ADDRLONG Function	Returns the memory address of a variable on 32-bit and 64-bit platforms.
CALL POKE Routine	Writes a value directly into memory on a 32-bit platform.
CALL POKELONG Routine	Writes a value directly into memory on 32-bit and 64-bit platforms.
CALL SLEEP Routine	For a specified period of time, suspends the execution of a program that invokes this CALL routine.
CALL SYSTEM Routine	Submits an operating environment command for execution.
DIF Function	Returns differences between an argument and its nth lag.
GETOPTION Function	Returns the value of a SAS system or graphics option.
INPUT Function	Returns the value that is produced when SAS converts an expression using the specified informat.
INPUTC Function	Enables you to specify a character informat at run time.
INPUTN Function	Enables you to specify a numeric informat at run time.
LAG Function	Returns values from a queue.
PEEK Function	Stores the contents of a memory address in a numeric variable on a 32-bit platform.
PEEKC Function	Stores the contents of a memory address in a character variable on a 32-bit platform.
PEEKCLONG Function	Stores the contents of a memory address in a character variable on 32-bit and 64-bit platforms.

PEEKLONG Function	Stores the contents of a memory address in a numeric variable on 32-bit and 64-bit platforms.
PTRLONGADD Function	Returns the pointer address as a character variable on 32-bit and 64-bit platforms.
PUT Function	Returns a value using a specified format.
PUTC Function	Enables you to specify a character format at run time.
PUTN Function	Enables you to specify a numeric format at run time.
SLEEP Function	For a specified period of time, suspends the execution of a program that invokes this function.
SYSGET Function	Returns the value of the specified operating environment variable.
SYSPARM Function	Returns the system parameter string.
SYSPROCESSID Function	Returns the process ID of the current process.
SYSPROCESSNAME Function	Returns the process name that is associated with a given process ID, or returns the name of the current process.
SYSPROD Function	Determines whether a product is licensed.
SYSTEM Function	Issues an operating environment command during a SAS session, and returns the system return code.
UUIDGEN Function	Returns the short or binary form of a Universal Unique Identifier (UUID).

变量信息函数 Variable Information

CALL VNEXT Routine	Returns the name, type, and length of a variable that is used in a DATA step.
VARRAY Function	Returns a value that indicates whether the specified name is an array.
VARRAYX Function	Returns a value that indicates whether the value of the specified argument is an array.
VFORMAT Function	Returns the format that is associated with the specified variable.
VFORMATD Function	Returns the decimal value of the format that is associated with the specified variable.
VFORMATDX Function	Returns the decimal value of the format that is associated with the value of the specified argument.

VFORMATN Function	Returns the format name that is associated with the specified variable.
VFORMATNX Function	Returns the format name that is associated with the value of the specified argument.
VFORMATW Function	Returns the format width that is associated with the specified variable.
VFORMATWX Function	Returns the format width that is associated with the value of the specified argument.
VFORMATX Function	Returns the format that is associated with the value of the specified argument.
VINARRAY Function	Returns a value that indicates whether the specified variable is a member of an array.
VINARRAYX Function	Returns a value that indicates whether the value of the specified argument is a member of an array.
VINFORMAT Function	Returns the informat that is associated with the specified variable.
VINFORMATD Function	Returns the decimal value of the informat that is associated with the specified variable.
VINFORMATDX Function	Returns the decimal value of the informat that is associated with the value of the specified variable.
VINFORMATN Function	Returns the informat name that is associated with the specified variable.
VINFORMATNX Function	Returns the informat name that is associated with the value of the specified argument.
VINFORMATW Function	Returns the informat width that is associated with the specified variable.
VINFORMATWX Function	Returns the informat width that is associated with the value of the specified argument.
VINFORMATX Function	Returns the informat that is associated with the value of the specified argument.
VLABEL Function	Returns the label that is associated with the specified variable.
VLABELX Function	Returns the label that is associated with the value of the specified argument.

VLENGTH Function	Returns the compile-time (allocated) size of the specified variable.
VLENGTHX Function	Returns the compile-time (allocated) size for the variable that has a name that is the same as the value of the argument.
VNAME Function	Returns the name of the specified variable.
VNAMEX Function	Validates the value of the specified argument as a variable name.
VTYPE Function	Returns the type (character or numeric) of the specified variable.
VTYPEX Function	Returns the type (character or numeric) for the value of the specified argument.
VVALUE Function	Returns the formatted value that is associated with the variable that you specify.
VVALUEX Function	Returns the formatted value that is associated with the argument that you specify.