

# Introduction to Proc SQL

The SQL procedure is the Base SAS implementation of Structured Query Language. PROC SQL is part of Base SAS software, and you can use it with any SAS data set (table). Often, PROC SQL can be an alternative to other SAS procedures or the DATA step.

PROC SQL enables you to perform the following tasks:

- generate reports
- generate summary statistics
- retrieve data from tables or views
- combine data from tables or views
- create tables, views, and indexes
- update the data values in PROC SQL tables
- update and retrieve data from database management system (DBMS) tables
- modify a PROC SQL table by adding, modifying, or dropping columns

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# Table

A PROC SQL table is the same as a SAS data file. PROC SQL tables consist of rows and columns. The rows correspond to observations in SAS data files, and the columns correspond to variables.

SQL Term	SAS Term	Data Processing Term
table	SAS data file	file
row	observation	record
column	variable	field



## Queries

Queries retrieve data from a table or view. A query returns a query result, which consists of rows and columns from a table.

## Views

PROC SQL views do not actually contain data as tables do. Rather, a PROC SQL view contains a stored SELECT statement or query. The query executes when you use the view in a SAS procedure or DATA step.

## Null Values

According to the ANSI standard for SQL, a missing value is called a null value. It is not the same as a blank or zero value. However, to be compatible with the rest of SAS, PROC SQL treats missing values the same as blanks or zero values, and considers all three to be null values.

