5.sqlInSas

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0.0.1 Using SQL in Sas

SQL is typically used in the Prepare data and Analyze and report on data phases of the SAS programming process. SQL provides an alternative paradigm for processing and reporting on tabular data. Most database management systems use SQL as a common language to query, manipulate, and report on tables. Because of its widespread use and unique processing strengths, SQL can be used in SAS programs through a procedure, PROC SQL.

Using Structured Query Language (SQL) in SAS

- PROC SQL creates a report by default.
- The SELECT statement describes the query. List columns to include in the results after SELECT, separated by commas.
- The FROM clause lists the input table(s).
- The ORDER BY clause arranges rows based on the columns listed. The default order is ascending. Use DESC after a column name to reverse the sort sequence.
- PROC SQL ends with a QUIT statement.

```
PROC SQL;
SELECT col-name, col-name
      FROM input-table;
QUIT;
```

- Subsetting data:

```
WHERE expression
```

- Sorting data:

```
ORDER BY col-name <DESC>
```

- Creating output data:

```
CREATE TABLE table-name AS
```

- Deleting data:

```
DROP TABLE table-name;
```

CREATE TABLE *table-name* AS

```
proc sql;
create table work.myclass as
    select Name, Age, Height
        from pg1.class_birthdate
        where age > 14
        order by Height desc;
quit;
```

DROP TABLE *table-name*;

```
proc sql;
    drop table work.myclass;
quit;
```

0.0.2 Joining Tables in Sas

Joining Tables Using SQL in SAS

- An SQL inner join combines matching rows between two tables.
- The two tables to be joined are listed in the FROM clause.

FROM *from table1* **INNER JOIN** *table2*
ON *table1.column = table2.column*

- Assign an alias (or nickname) to a table in the FROM clause by adding the keyword AS and the alias of your choice. Then you can use the alias in place of the full table name to qualify columns in the other clauses of a query. Although the AS keyword is not required, it can make the code easier to understand.

FROM *table1* **AS** *alias1, table2* **AS** *alias2*

FROM *table1* AS *alias1* INNER JOIN *table2* AS *alias2*

```
proc sql;
select u.Name, Grade, Age, Teacher
    from pg1.class_update as u
        inner join pg1.class_teachers as t
        on u.Name=t.Name;
quit;
```

[ ]: