Exploring the Undocumented PROC SQL _METHOD Option
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Abstract
The SQL Procedure contains many powerful and elegant language features for SQL users to take advantage of. This paper explores the _METHOD option as an applications development and tuning tool. Attendees will learn how to use this undocumented and powerful option to better understand and control how a query processes.

Introduction
PROC SQL supports a powerful “undocumented” option called _METHOD. Although undocumented features like the _METHOD option should be used with caution, SAS users may find this option to provide far greater value than risk. In fact, the _METHOD option is worth exploring because of the benefits related to gaining a better understanding of the processes during specific PROC SQL operations, including complex table joins and subqueries.

Application of the _METHOD Option
The PROC SQL _METHOD option can be used as an effective way to analyze a query process as well as for debugging purposes. Information from using the _METHOD option is displayed on the Log using a variety of codes. The codes and their corresponding descriptions associated with the _METHOD option appear in the table below.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQXCRTA</td>
<td>Create table as Select.</td>
</tr>
<tr>
<td>SQXSLCT</td>
<td>Select statement or clause.</td>
</tr>
<tr>
<td>SQXJSL</td>
<td>Step loop join (Cartesian).</td>
</tr>
<tr>
<td>SQXJM</td>
<td>Merge join operation.</td>
</tr>
<tr>
<td>SQXJNDX</td>
<td>Index join operation.</td>
</tr>
<tr>
<td>SQXJHSH</td>
<td>Hash join operation.</td>
</tr>
<tr>
<td>SQXSORT</td>
<td>Sort operation.</td>
</tr>
<tr>
<td>SQXSRC</td>
<td>Source rows from table.</td>
</tr>
<tr>
<td>SQXFIL</td>
<td>Rows filtration.</td>
</tr>
<tr>
<td>SQXSUMG</td>
<td>Summary stats (aggregates) with GROUP BY clause.</td>
</tr>
<tr>
<td>SQXSUMN</td>
<td>Summary stats with no GROUP BY clause.</td>
</tr>
</tbody>
</table>

In the following example a _METHOD option is specified to show the processing hierarchy in a two-way equi-join.

**SQL Code**

```sql
PROC SQL _METHOD;
   SELECT MOVIES.TITLE, RATING, ACTOR_LEADING
   FROM MOVIES, ACTORS
   WHERE MOVIES.TITLE = ACTORS.TITLE;
QUIT;
```
Results

NOTE: SQL execution methods chosen are:

sqxs1ct
sqxjhsh
sqxsnc( MOVIES )
sqxsnc( ACTORS )

Conclusion
The SQL Procedure's _METHOD option provides a powerful and elegant language feature for users to take advantage of to help better understand complex operations such as joins, subqueries, and other processes.

References


Lafler, Kirk Paul (2002). PROC SQL Programming Tips; Software Intelligence Corporation, Spring Valley, CA, USA.

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