Boost your SQL Performance

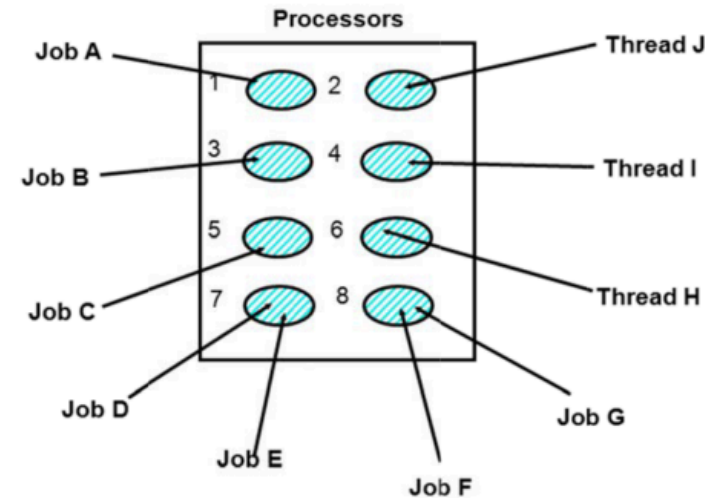Rudi van Helvoirt

25 september 2024

NETHERLANDS

Agenda

- Boost your SQL Performance when Running

- Boost your SQL Performance when Developing

Boost your SQL Performance when Running

N-way processing

✓ n Processors can work on several jobs or threads at one time without any special programming
✓ Memory is shared across all processors
✓ Database is shared across all jobs and all processors
✓ No one job is running on more than one processor

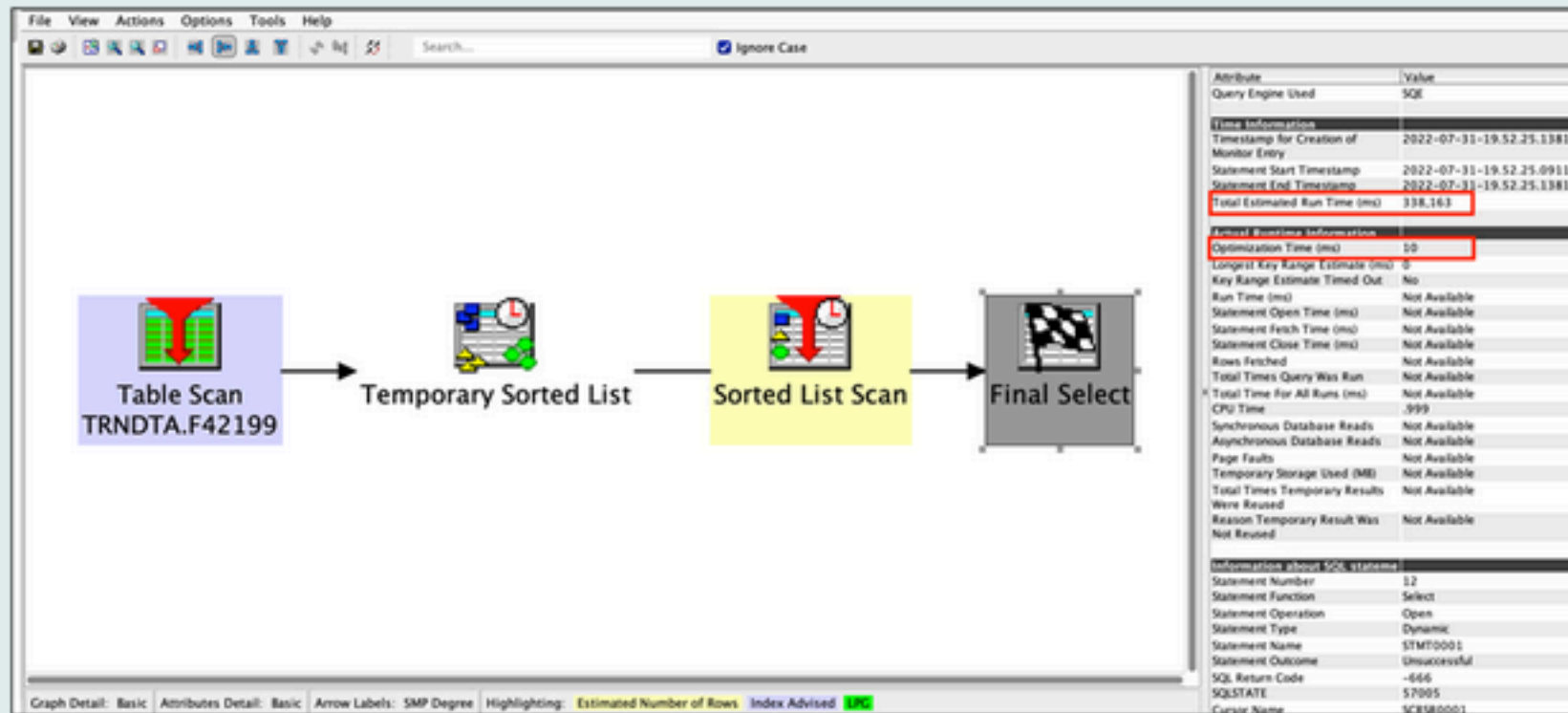# Boost your SQL Performance when Running

DB2 Symmetric MultiProcessing

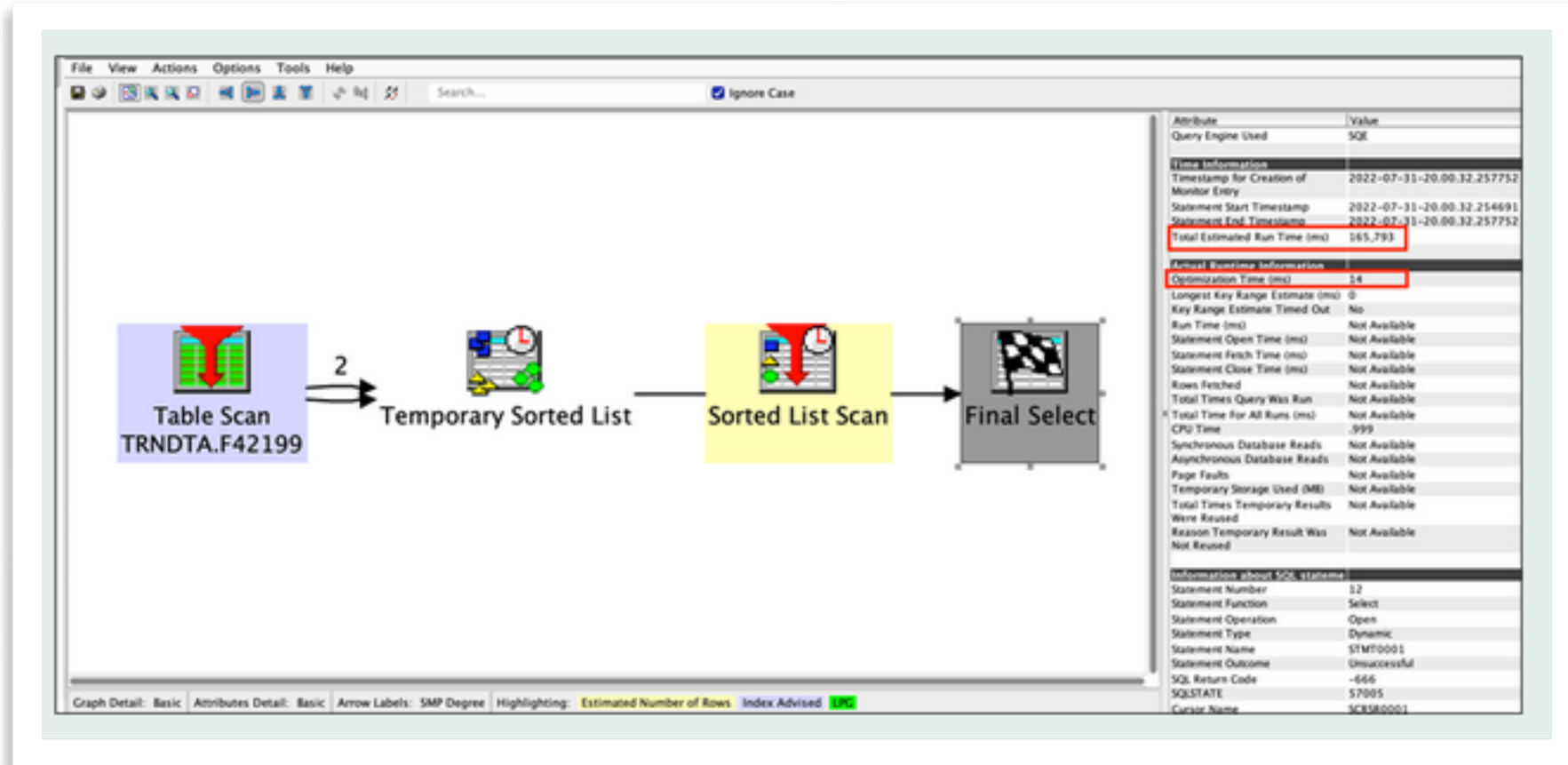[Getting Started with Db2 SMP](#)

[Db2 SMP MultiThreading](#)

[Introduction to DB2 Symmetric Multiprocessing for IBM i](#)

COMMON
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Boost your SQL Performance when Running

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Table 2. Table scan attributes

Data access method	Table scan
Description	Reads all the rows from the table and applies the selection criteria to each of the rows within the table. The rows in the table are processed in no guaranteed order, but typically they are processed sequentially.
Advantages	• Minimizes page I/O operations through asynchronous pre-fetching of the rows since the pages are scanned sequentially • Requests a larger I/O to fetch the data efficiently
Considerations	• All rows in the table are examined regardless of the selectivity of the query • Rows marked as deleted are still paged into memory even though none are selected. You can reorganize the table to remove deleted rows.
Likely to be used	• When expecting many rows returned from the table • When the number of large I/Os needed to scan is fewer than the number of small I/Os required to probe the table
Example SQL statement	```SELECT * FROM Employee WHERE WorkDept BETWEEN 'A01'AND 'E01' OPTIMIZE FOR ALL ROWS```
Database Monitor and Plan Cache record indicating use	QQRID 3000 - Table Scan
SMP parallel enabled	Yes
Also referred to as	Table Scan, Preload
Visual Explain icon	

common

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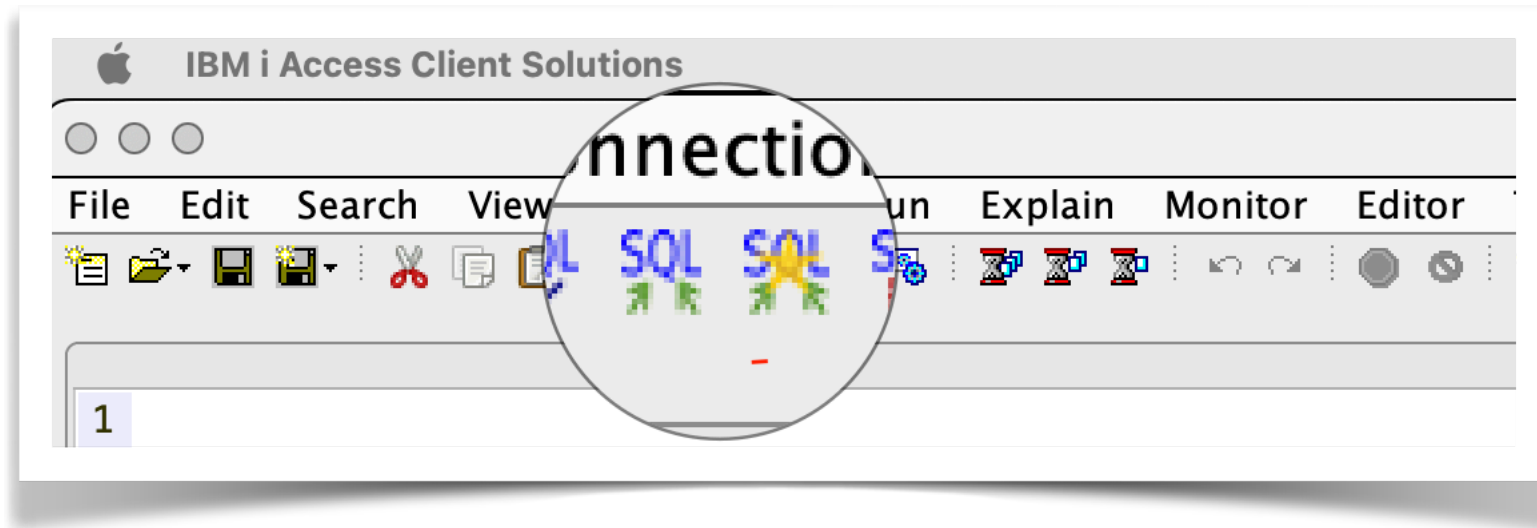
IBM i Access Client Solutions

Navigator for i

Visual Studio Code - Db2 for i Extension

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Boost your SQL Performance when Developing
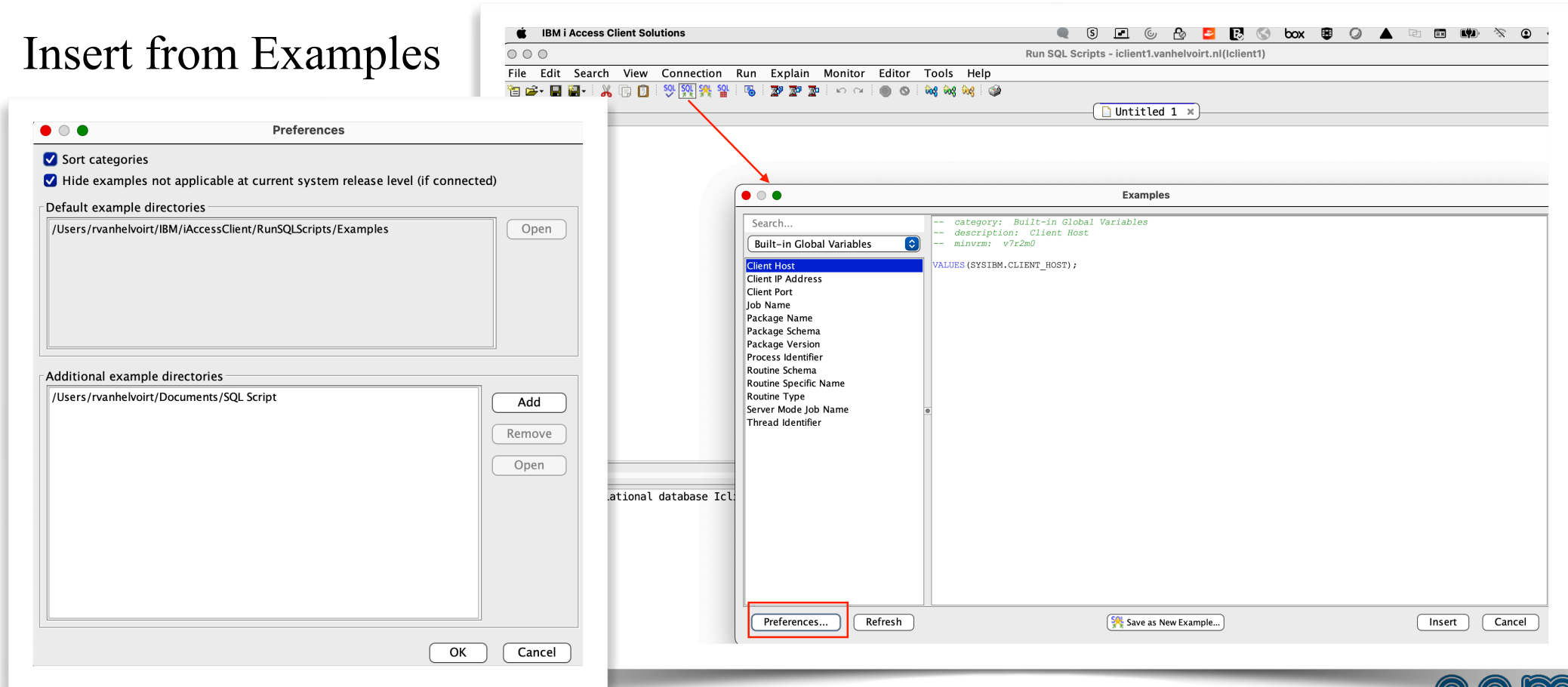
IBM i Access Client Solutions:

Insert from Examples/Save as New Example

Boost your SQL Performance when Developing
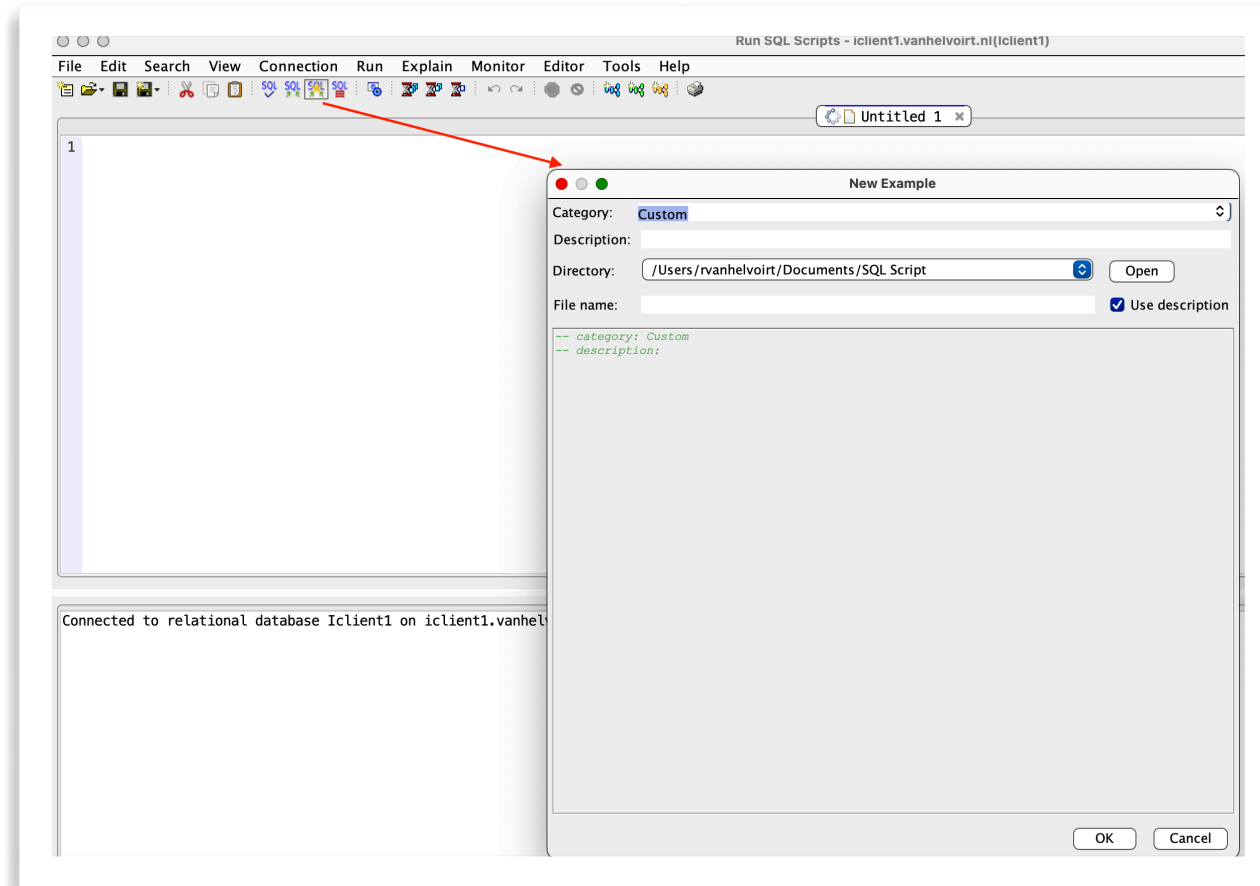
IBM i Access Client Solutions:

Insert from Examples

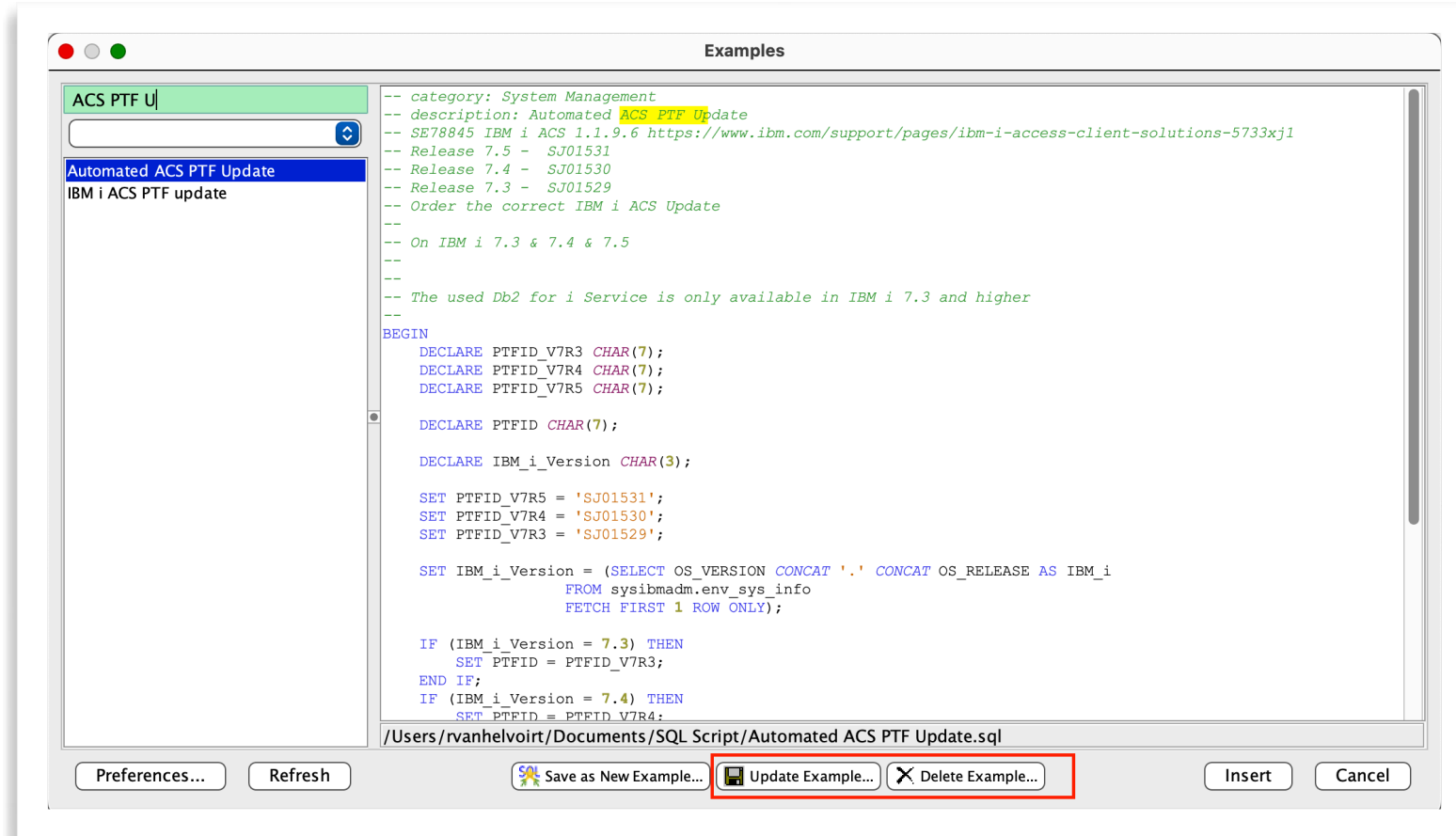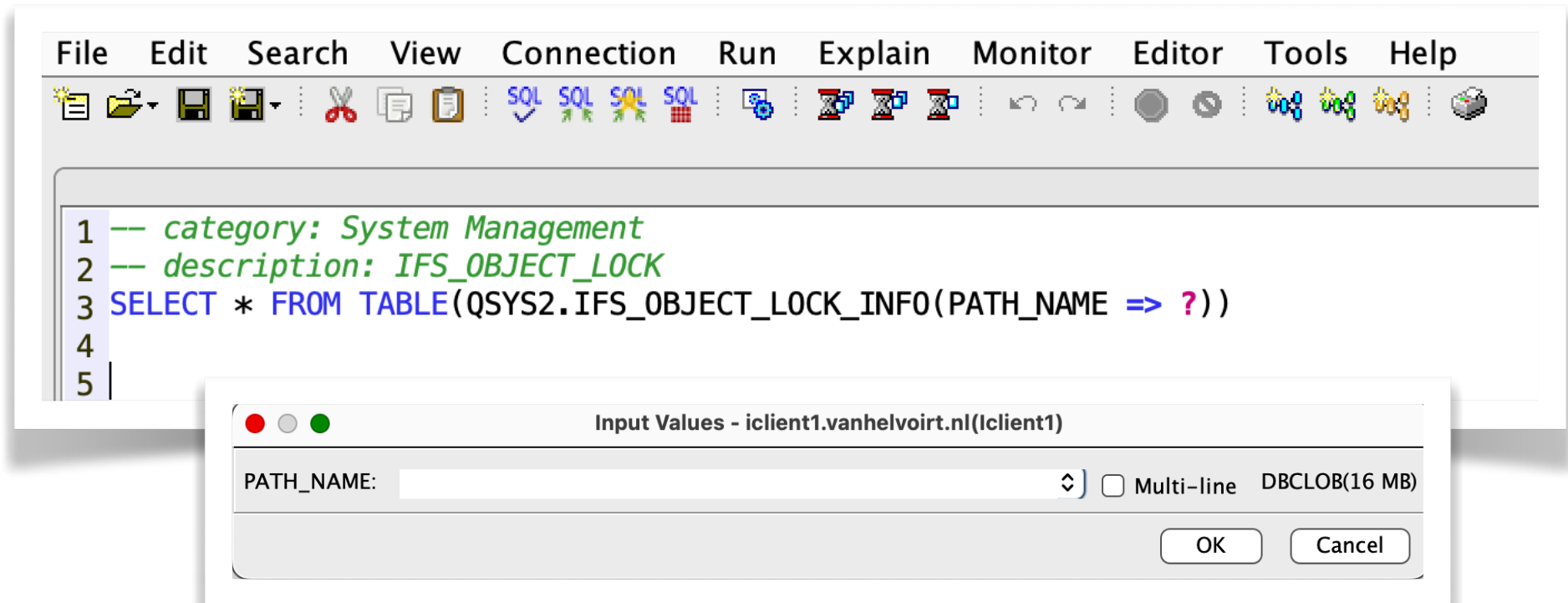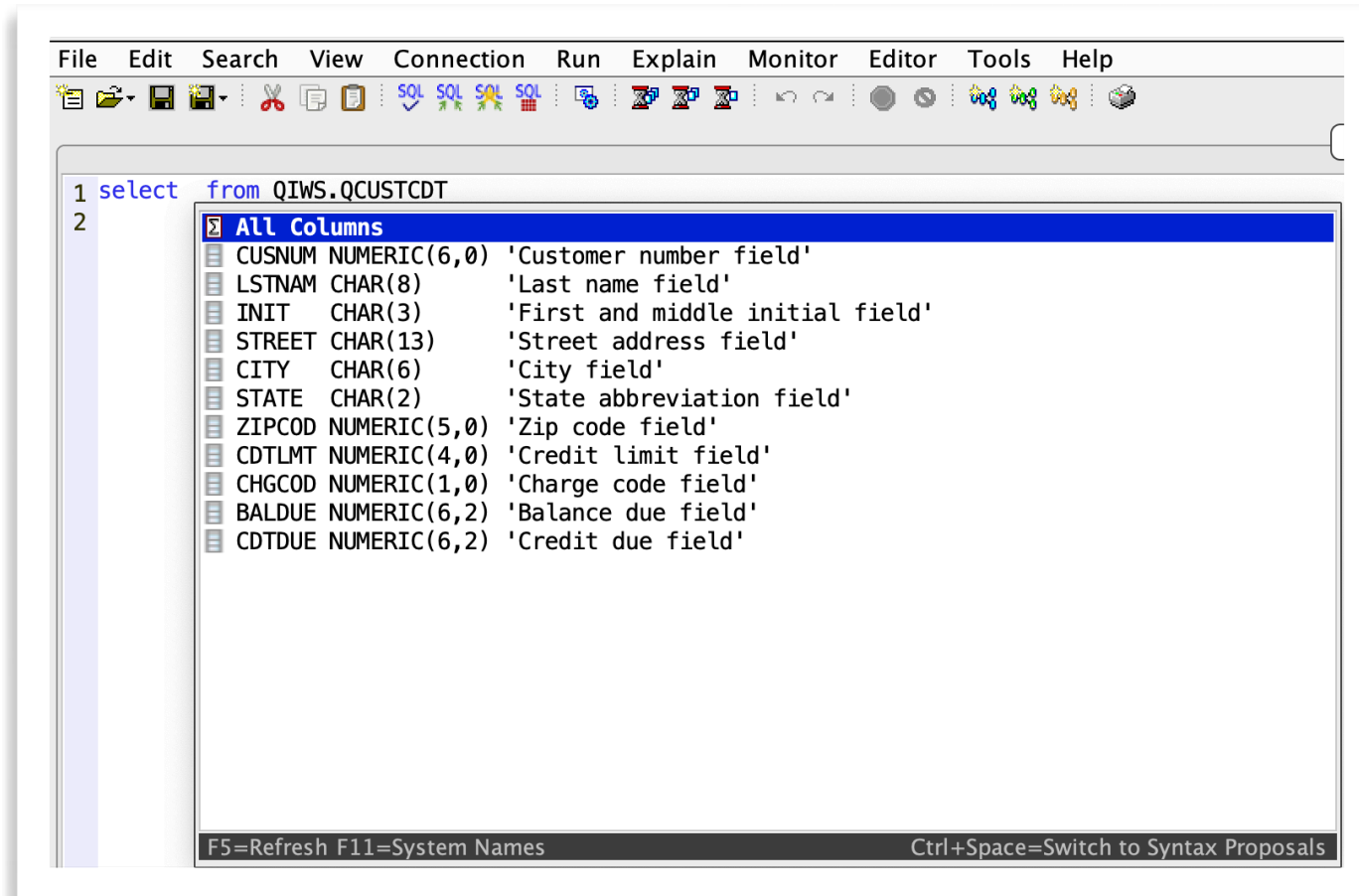# Boost your SQL Performance when Developing

IBM i Access Client Solutions:

Save as New Example
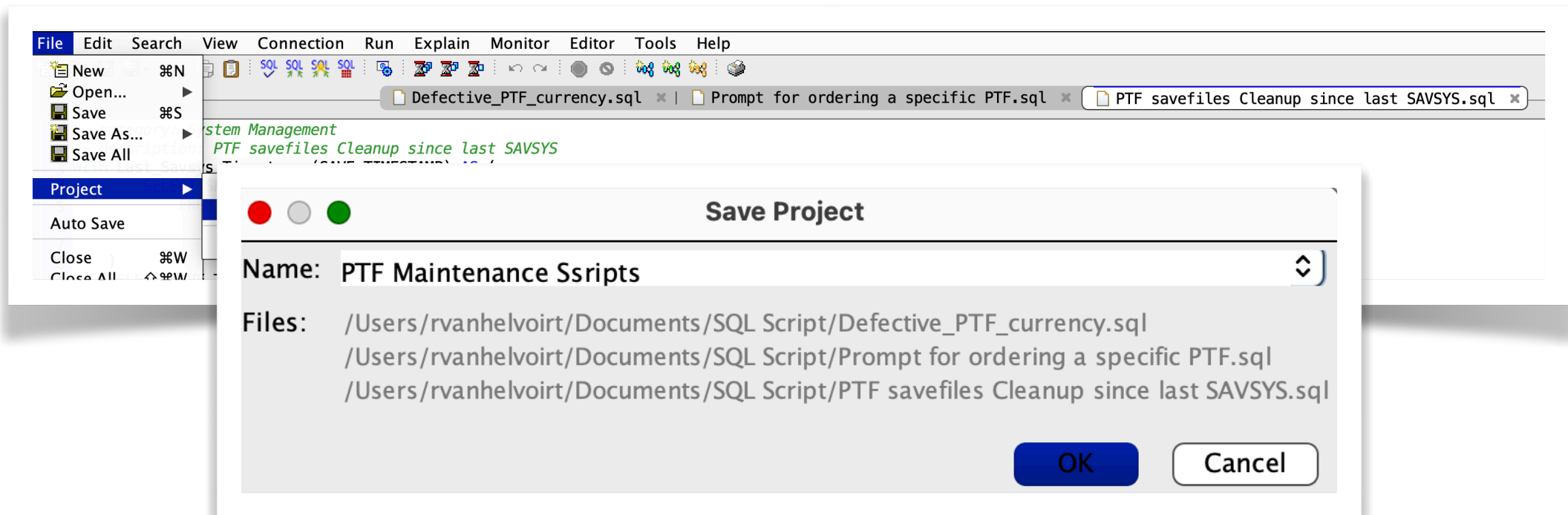
Boost your SQL Performance when Developing

IBM i Access Client Solutions:

New in 1.1.9.6

Boost your SQL Performance when Developing

IBM i Access Client Solutions:

Prompting

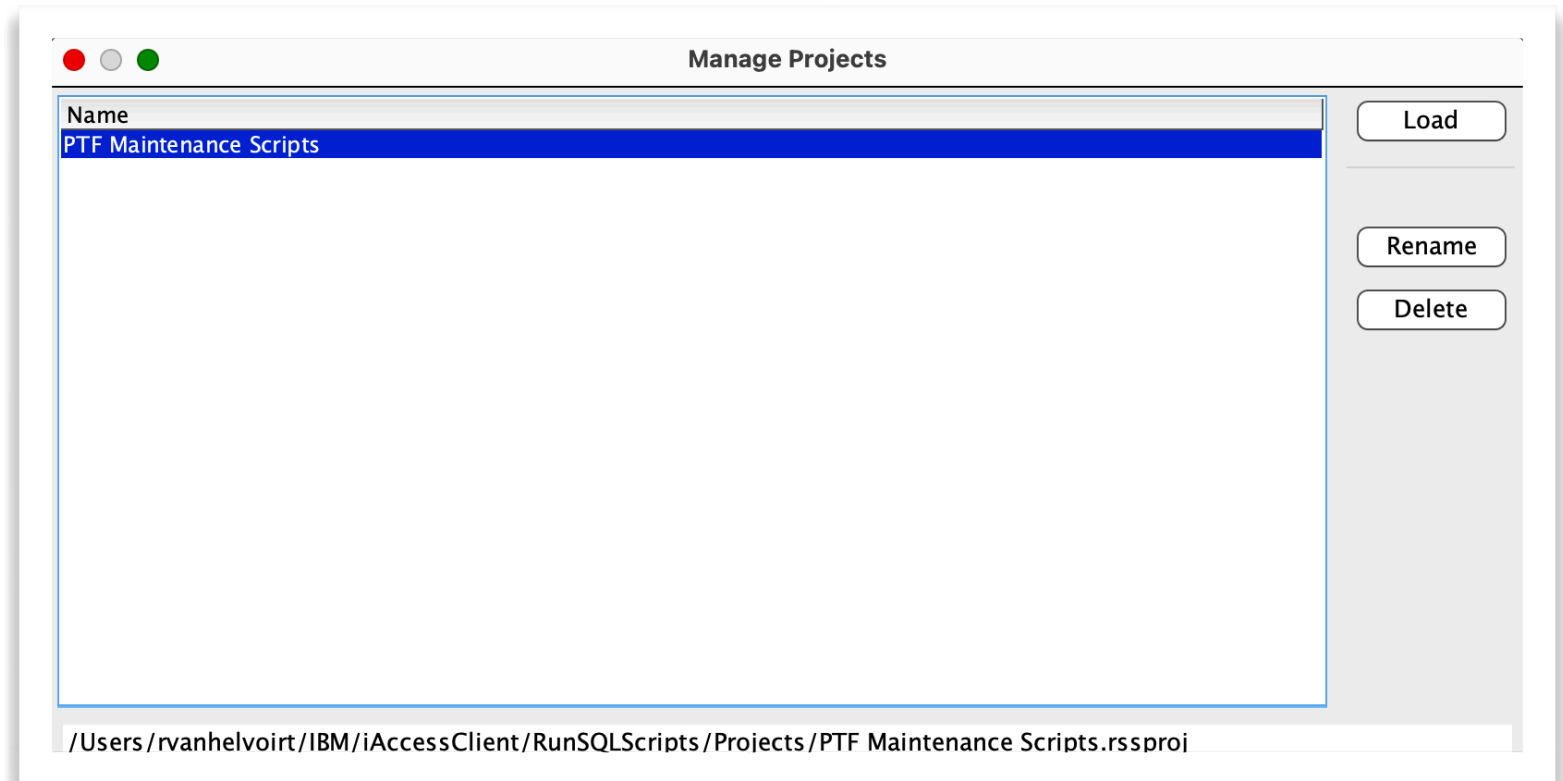# Boost your SQL Performance when Developing

IBM i Access Client Solutions:

Prompting

```
 1  -- category: System Management
 2  -- description: FTP2IBMCMD with Prompting
 3  set current schema = qrplobj;
 4  Create variable Case_Number char(11);
 5  Create variable IFS_File varchar(500);
 6
 7  Set qrplobj.Case_Number = :Enter_Case_Number_like_TSxxxxxxxxx;
 8  Set qrplobj.IFS_file = :Enter_IFS_file;
 9
10  CALL SYSTOOLS.LPRINTF('QMGTOOLS/FTP2IBMCMD INPUT(*IFS) CASENBR(''' CONCAT QRPLOBJ.Case_Number CONCAT ''') IFSFILE(''' CONCAT QRPLOBJ.IFS_File CONCAT ''')');
11
12  CALL qsys2.qcmdexc('QMGTOOLS/FTP2IBMCMD INPUT(*IFS) CASENBR(''' CONCAT QRPLOBJ.Case_Number CONCAT ''') IFSFILE(''' CONCAT QRPLOBJ.IFS_File CONCAT ''')');
13
```

Input Values - iclient1.vanhelvoirt.nl(Iclient1)

Enter_IFS_file: [_____] ☐ Multi-line VARCHAR(500)

[OK] [Cancel]

Boost your SQL Performance when Developing

IBM i Access Client Solutions:

Job Log

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Content Assist

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Content Assist

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Project (New in 1.1.9.6)

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IBM i Access Client Solutions:

Project (New in 1.1.9.6)

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Navigator for i (New in Q3 2024 September HTTP Group PTF

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Navigator for i

Boost your SQL Performance when Developing

Navigator for i - Visual Studio Code

Boost your SQL Performance when Developing

Visual Studio Code - Db2 for i Extension

Content Assist
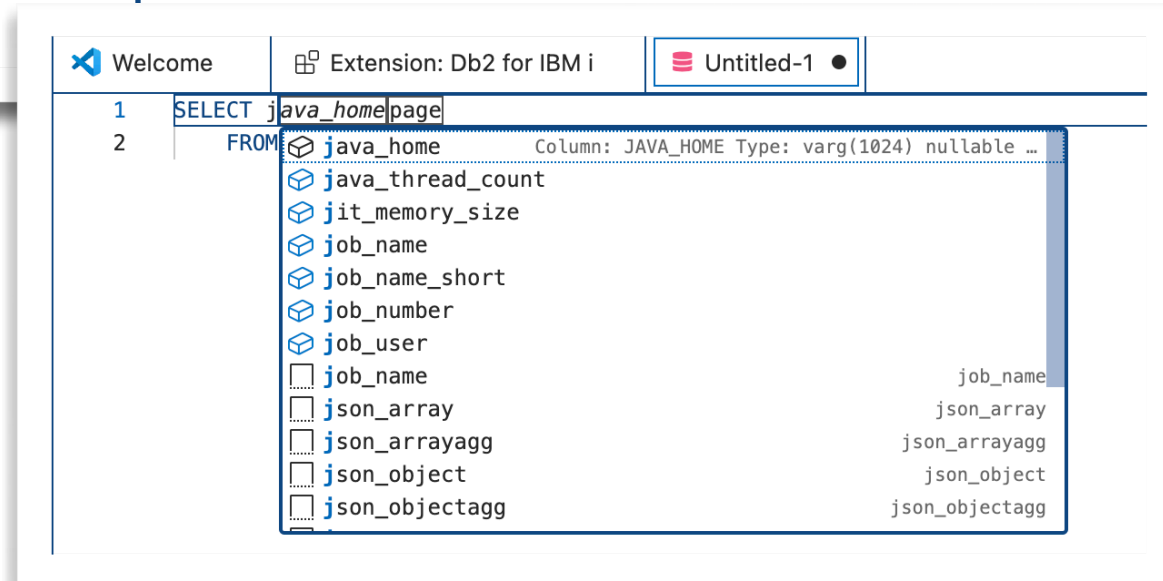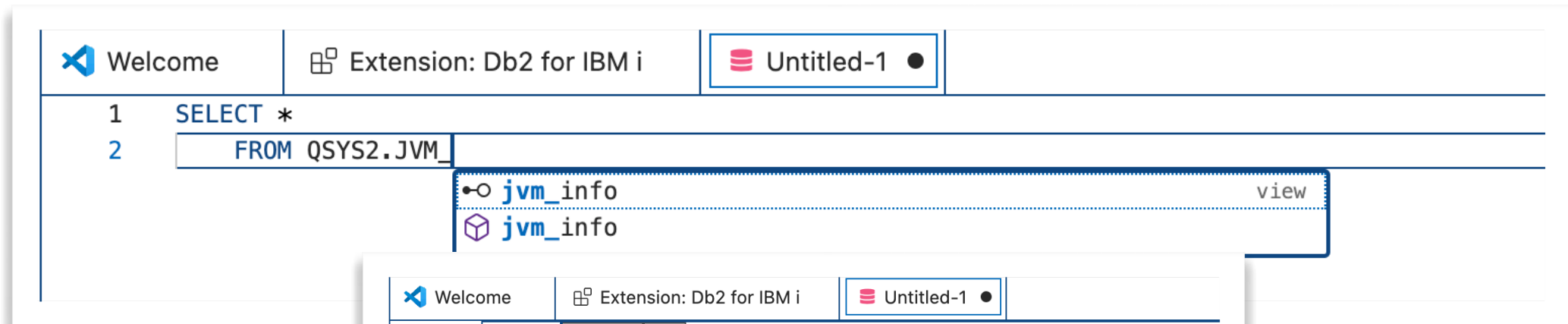
Boost your SQL Performance when Developing
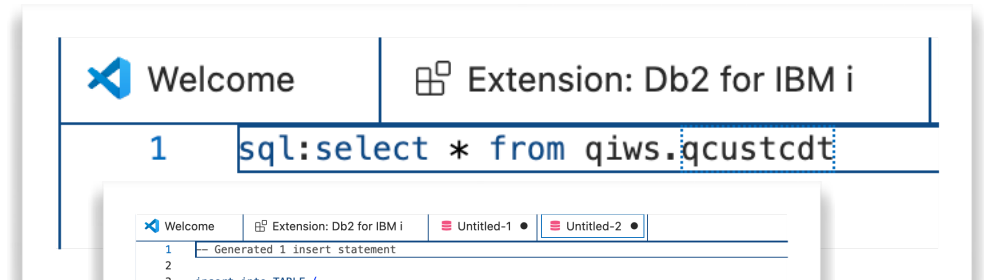
Visual Studio Code - Db2 for i Extension

SQL/JSON

Boost your SQL Performance when Developing

Visual Studio Code - Db2 for i Extension
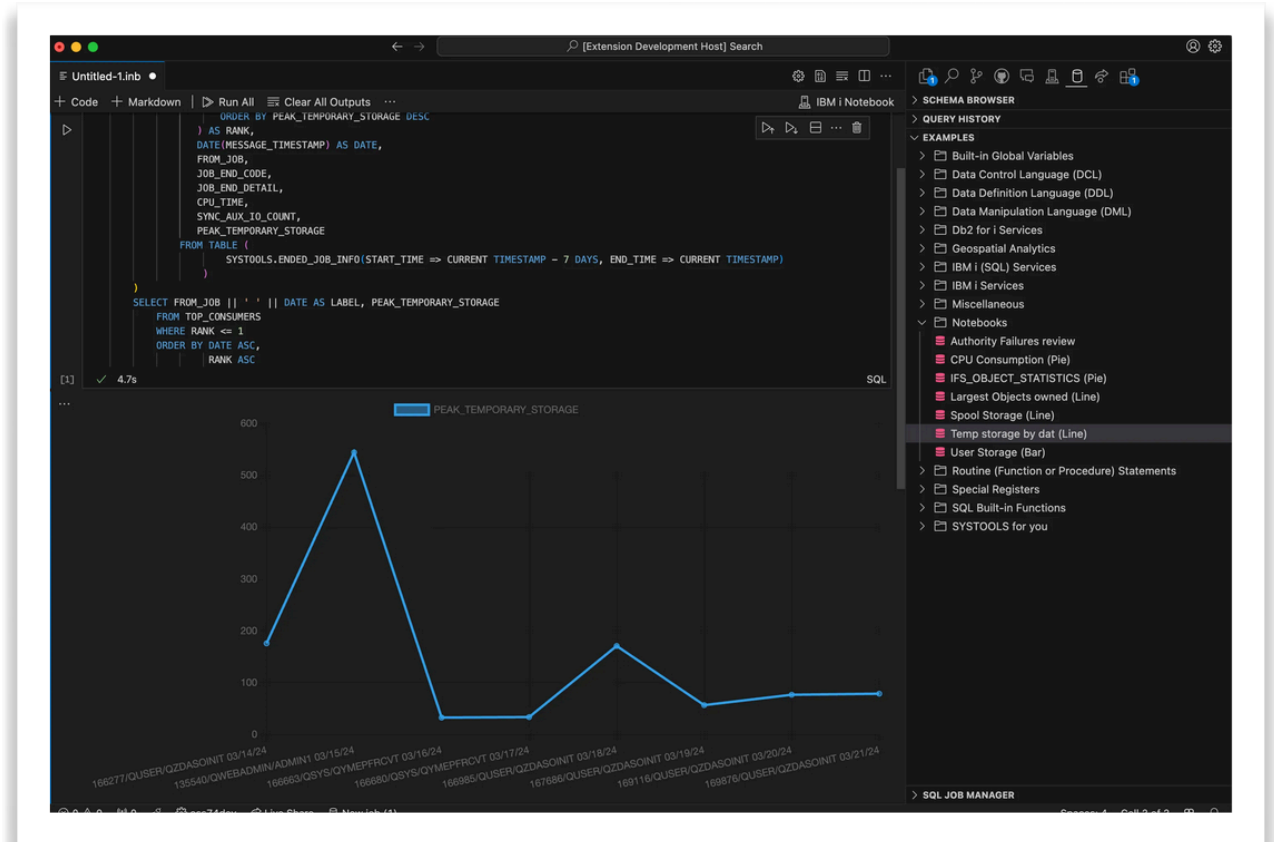
Db2 for i Extension documentation

SQL processors

SQL Job Manager

SQL Error Logging Facility (SELF)

Visual Explain

Notebooks

Thank you