**Cursors**

1. Execute the query using cursor, table variable, and temp table

CURSOR: 1) Declaration-

Graphical user interface, text, application, email

Description automatically generated

2)Open-

Graphical user interface, text, application, email

Description automatically generated

3)Fetching row by row-

Graphical user interface, application

Description automatically generated

Graphical user interface, text, application

Description automatically generated

A screenshot of a computer

Description automatically generated

4) Fetching all the rows-

Graphical user interface, application, Word

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, application

Description automatically generated

5)Closing and Deallocation-

A screenshot of a computer

Description automatically generated

2. Run execution plan and compare differences in performance (Cursor,Table Variable,Temp Table)A screenshot of a computer

Description automatically generated with medium confidence

A screenshot of a computer

Description automatically generated with medium confidence



A screenshot of a computer

Description automatically generated with medium confidence

1. Report on method used:

The method of Temp Tables looks easier because, when there is a read only access privilege on a table, the Temp Tables can be used which exists within a session temporarily and the data can be manipulated over there without disturbing the data of the original table. For most of the common operations where we work on entire rows, the Temp Table can be used with a good execution plan. The Temp Tables are considered as ‘zero maintenance.’

Table Variable is similar to Temp Table as it is also accessible within the session that created them. However, unlike the Temp Tables, these exist within the current batch. An advantage with Table Variables is that these can have indexes. Also, the optimizer when Table Variable is used estimates as only 1 row being returned and provides the execution plan based on it, which could be inefficient when there are large volumes of data. Therefore, the Table Variable is suitable for small to medium size of data sets.

The Cursors are useful in processes like ETL or backups as they perform updates one row at a time or based on the logic, it can process loop over a predetermined number of rows one at a time. It takes more resources and affects performance when there are large number of rows within a loop as it executes each row separately every time until the loop ends. Cursors can be particularly useful in Data Consistency checks which needs to be checked in serial manner.