**SQL Cursors**

1. **What is a cursor in PL/SQL? Explain the difference between implicit and explicit cursors.**

A cursor in PL/SQL is a database object used to retrieve, process, and navigate through multiple rows returned by a query one row at a time. It acts as a pointer to the result set, allowing you to fetch and manipulate each row individually within a PL/SQL block.

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| **Aspect** | **Implicit Cursor** | **Explicit Cursor** |
| **Definition** | Automatically created by Oracle for single-row SQL statements (like SELECT INTO). | Manually declared by the programmer for queries returning multiple rows. |
| **Control** | Limited control; Oracle manages opening, fetching, and closing. | Full control over opening, fetching, and closing the cursor. |
| **Use case** | Simple queries that return only one row. | Complex queries that return multiple rows and need row-by-row processing. |
| **Syntax** | No declaration needed; automatically handled. | Requires declaration, opening, fetching, and closing explicitly. |

**2. When would you use an explicit cursor over an implicit one?**

* Your query returns **multiple rows** that need to be processed one at a time.
* You need **fine control** over cursor operations like opening, fetching, and closing.
* You want to **manipulate or loop through each row** of the result set.
* You need to perform **complex logic on each fetched row** within the PL/SQL block.

Implicit cursors are convenient for simple, single-row queries, but explicit cursors are necessary for handling multi-row query results with detailed control.