**PL/SQL Control Structures**

1. **What are control structures in PL/SQL? Explain the IF-THEN and LOOP control structures.**

Control structures in PL/SQL are programming constructs that manage the flow of execution of statements based on conditions or repetition. They allow PL/SQL programs to make decisions, repeat actions, and control the sequence in which code runs, enabling complex logic beyond simple SQL queries.

**IF-THEN Control Structure**

The IF-THEN structure allows conditional execution of code blocks. It evaluates a specified condition and executes a block of statements only if that condition is true. It can also include optional ELSE or ELSIF clauses to handle alternative conditions, enabling decision-making within the program.

**LOOP Control Structure**

The LOOP control structure enables repeated execution of a block of statements. It continues to execute the statements until explicitly terminated by an exit condition. Variants like WHILE loops and FOR loops provide additional control over the repetition based on conditions or a fixed number of iterations.

**2. How do control structures in PL/SQL help in writing complex queries?**

Control structures in PL/SQL help in writing complex queries by allowing the implementation of procedural logic such as decision-making, looping, and conditional execution within the database. This enables developers to perform dynamic and flexible operations that go beyond the capabilities of standard SQL, such as processing multiple rows iteratively, applying different actions based on varying conditions, and controlling the flow of data manipulation. As a result, control structures enhance the ability to handle complex business rules, improve code maintainability, and reduce the need for multiple separate queries or application-side logic