

„PL/SQL - Oracle – basic training ”

Course description:

PL/SQL training - Oracle – basic training is addressed to beginners who in the future want to target complex programming operations in Oracle PL / SQL database environment. This course is dedicated to computer programmers, end users and administrators. This training includes full knowledge of PL / SQL programming language, from the scratch to the advanced programming languages. This course runs an Oracle database expert with many years of experience.

Aims of training: Getting to know PL / SQL procedural language. Creating procedures, functions, and database packages. Creating overloaded functions in the package in order to increase flexibility. Handling errors and exceptions in the operation of the program. Creating triggers Support for large BLOB and CLOB objects.

Training program:

1. Introduction to PL/SQL

- What is PL/SQL
- PL/SQL block structure
- SQL Developer

2. Declaring variables and their support

- Variable types
- Scalable data types
- Complex data types
- Variable types of the % type attribute
- Large objects (LOB)
- Initialization and handling of variables in PL / SQL
- Bind variables

3. Writing executable statements

- Simple executable blocks
- SQL functions in PL/SQL
- Nested blocks and variable scope

- Data type conversions
- PL/SQL operators
- Programming tips

4. Data operations

- SQL statements in PL / SQL
- Downloading, inserting, modifying, and deleting data from the database
- Transaction management
- What is an SQL cursor and what is its attributes

5. Control structures

- Conditional statements
- Loops
- Handling NULL values

6. Complex data types

- Record types
- Array types (collections)
- Object types

7. Cursors in PLSQL language

- Explicit cursor declaration and definition
- Downloading data and closing the cursor
- Attributes of explicit cursor
- FOR cursor loop
- FOR UPDATE clause
- WHERE CURRENT OF clause

8. Exception handling

- Defining PL / SQL exceptions
- Predefined and non-predefined exceptions
- Exception propagation in nested blocks
- RAISE_APPLICATION_ERROR procedure

9. Procedures and functions

- Creating, modifying and deleting
- IN, OUT and IN OUT type parameters
- Calling and handling errors

10. Database packages

- When and why should you use them
- Package components (specification, body)
- Private and public items of the package
- Calling program from the package
- Overloading functions and stored procedures
- The procedure that is run when you first refer to the package
- Packet variables and cursor declarations
- Support for data collection and record type variables
- Hint for NOCOPY compiler

11. Handling triggers

- Types of triggers and their functions
- Creating, modifying, and deleting database triggers
- Support for OLD and NEW values
- System triggers

12. Manipulating large objects

- What is a LOB (Large Object)
- Managing large object

Methodology:

- PowerPoint mini lectures
- working on computers (each participant works on a separate computer)
- mini training videos

Organizational information:

Number of training hours: 21 hours / 3 days

Time of training 9:15-16:15

Place of training: Łódź, Piotrkowska 125 – KM Studio - trainings