Szkolenie: Oracle
Oracle Database: SQL and PL/SQL Fundamentals

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<th>FORMA SZKOLENIA</th>
<th>MATERIAŁY SZKOLENIOWE</th>
<th>CENA</th>
<th>CZAS TRWANIA</th>
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<td>Stacjonarne</td>
<td>Cyfrowe</td>
<td>7450 PLN NETTO*</td>
<td>5 dni</td>
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<td>Stacjonarne</td>
<td>Tablet CTAB</td>
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* (+VAT zgodnie z obowiązującą stawką w dniu wystawienia faktury)

LOKALIZACJE
Kraków - ul. Tatarska 5, II piętro, godz. 9:00 - 16:00
Warszawa - ul. Bielska 17, godz. 9:00 - 16:00

DOSTĘPNE TERMINY
2019-09-09   | 5 dni   | Warszawa
2019-10-14   | 5 dni   | Kraków

Cel szkolenia:

This **Oracle Database: SQL and PL/SQL Fundamentals** training delivers the fundamentals of SQL and PL/SQL along with the benefits of the programming languages using Oracle Database technology. You’ll explore the concepts of relational databases.

**Learn To:**

- Write queries against single and multiple tables, manipulate data in tables and create database objects.
- Use single row functions to customize output.
- Invoke conversion functions and conditional expressions.
- Use group functions to report aggregated data.
- Create PL/SQL blocks of application code that can be shared by multiple forms, reports and data management applications.
- Develop anonymous PL/SQL blocks, stored procedures and functions.
- Declare identifiers and trap exceptions.
- Use DML statements to manage data.
- Use DDL statements to manage database objects.
Declare PL/SQL Variables.
Conditionally control code flow (loops, control structures).
Describe stored procedures and functions.
Retrieve row and column data from tables.

Plan szkolenia:

- Introduction
  - Overview of Oracle Database 12c and related products
  - Overview of relational database management concepts and terminologies
  - Introduction to SQL and its development environments
  - The HR schema and the tables used in this course
  - Oracle Database documentation and additional resources

- Retrieve Data using the SQL SELECT Statement
  - List the capabilities of SQL SELECT statements
  - Generate a report of data from the output of a basic SELECT statement
  - Use arithmetic expressions and NULL values in the SELECT statement
  - Invite Column aliases
  - Concatenation operator, literal character strings, alternative quote operator, and the DISTINCT keyword
  - Display the table structure using the DESCRIBE command

- Restricted and Sorted Data
  - Write queries with a WHERE clause to limit the output retrieved
  - Describe the comparison operators and logical operators
  - Describe the rules of precedence for comparison and logical operators
  - Usage of character string literals in the WHERE clause
  - Write queries with an ORDER BY clause
  - Sort the output in descending and ascending order
  - Substitution Variables

- Usage of Single-Row Functions to Customize Output
  - List the differences between single row and multiple row functions
  - Manipulate strings using character functions
  - Manipulate numbers with the ROUND, TRUNC, and MOD functions
  - Perform arithmetic with date data
  - Manipulate dates with the DATE functions

- Conversion Functions and Conditional Expressions
  - Describe implicit and explicit data type conversion
Describe the TO_CHAR, TO_NUMBER, and TO_DATE conversion functions

Nesting multiple functions

Apply the NVL, NULLIF, and COALESCE functions to data

Usage of conditional IF THEN ELSE logic in a SELECT statement

Aggregated Data Using the Group Functions

Usage of the aggregation functions in SELECT statements to produce meaningful reports

Describe the AVG, SUM, MIN, and MAX function

How to handle Null Values in a group function?

Divide the data in groups by using the GROUP BY clause

Exclude groups of date by using the HAVING clause

Display Data From Multiple Tables

Write SELECT statements to access data from more than one table

Join Tables Using SQL:1999 Syntax

View data that does not meet a join condition by using outer joins

Join a table to itself by using a self join

Create Cross Joins

Usage of Subqueries to Solve Queries

Use a Subquery to Solve a Problem

Single-Row Subqueries

Group Functions in a Subquery

Multiple-Row Subqueries

Use the ANY and ALL Operator in Multiple-Row Subqueries

Use the EXISTS Operator

SET Operators

Describe the SET operators

Use a SET operator to combine multiple queries into a single query

Describe the UNION, UNION ALL, INTERSECT, and MINUS Operators

Use the ORDER BY Clause in Set Operations

Data Manipulation

Add New Rows to a Table

Change the Data in a Table

Use the DELETE and TRUNCATE Statements

How to save and discard changes with the COMMIT and ROLLBACK statements

Implement Read Consistency

Describe the FOR UPDATE Clause

DDL Statements to Create and Manage Tables
○ Categorize Database Objects
○ Create Tables
○ Describe the data types
○ Understand Constraints
○ Create a table using a subquery
○ How to alter a table?
○ How to drop a table?

○ Other Schema Objects
○ Create, modify, and retrieve data from a view
○ Perform Data manipulation language (DML) operations on a view
○ How to drop a view?
○ Create, use, and modify a sequence
○ Create and drop indexes
○ Create and drop synonyms

○ Introduction to PL/SQL
○ PL/SQL Overview
○ List the benefits of PL/SQL Subprograms
○ Overview of the Types of PL/SQL blocks
○ Create a Simple Anonymous Block
○ Generate the Output from a PL/SQL Block

○ PL/SQL Identifiers
○ List the different Types of Identifiers in a PL/SQL subprogram
○ Usage of the Declarative Section to Define Identifiers
○ Use of variables to store data
○ Scalar Data Types
○ %TYPE Attribute
○ Bind Variables
○ Sequences in PL/SQL Expressions

○ Write Executable Statements
○ Basic PL/SQL Block Syntax Guidelines
○ How to comment code?
○ SQL Functions in PL/SQL
○ Data Type Conversion
○ Nested Blocks
○ Operators in PL/SQL

○ Interaction with the Oracle Server
- SELECT Statements in PL/SQL to Retrieve data
- Data Manipulation in the Server Using PL/SQL
- The SQL Cursor concept
- Learn to use SQL Cursor Attributes to Obtain Feedback on DML
- How to save and discard transactions?

- Control Structures
  - Conditional processing Using IF Statements
  - Conditional processing Using CASE Statements
  - Simple Loop Statement
  - While Loop Statement
  - For Loop Statement
  - The Continue Statement

- Usage of Composite Data Types
  - PL/SQL Records
  - The %ROWTYPE Attribute
  - Insert and Update with PL/SQL Records
  - Associative Arrays (INDEX BY Tables)
  - INDEX BY Table Methods
  - INDEX BY Table of Records

- Explicit Cursors
  - Understand Explicit Cursors
  - Declare the Cursor
  - How to open the Cursor?
  - Fetching data from the Cursor
  - How to close the Cursor?
  - Cursor FOR loop
  - Explicit Cursor Attributes
  - FOR UPDATE Clause and WHERE CURRENT Clause

- Exception Handling
  - What are Exceptions?
  - Handle Exceptions with PL/SQL
  - Trap Predefined Oracle Server Errors
  - Trap Non-Predefined Oracle Server Errors
  - Trap User-Defined Exceptions
  - Propagate Exceptions
  - RAISE_APPLICATION_ERROR Procedure
Stored Procedures and Functions

- What are Stored Procedures and Functions?
- Differentiate between anonymous blocks and subprograms
- Create a Simple Procedure
- Create a Simple Procedure with IN parameter
- Create a Simple Function
- Execute a Simple Procedure
- Execute a Simple Function

Wymagania:

Recommended Related Training Courses:

- Using Java - for PL/SQL and Database Developers
- Oracle Database: SQL Tuning for Developers

Poziom trudności

Certyfikaty:

Uczestnicy szkoleń otrzymają zaświadczenie o ukończeniu kursu sygnowane przez firmę Oracle.

Prowadzący:

Autoryzowany wykładowca Oracle.