(For IBM only) E IT Fundamentals - IBM Graduate Program Ed 1

Oracle Siebel CRM

DURATION	MODULES	COURSE CODE
4 Days	**5 Lectures**	**—**

Course Overview

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What You Will Learn

Introduction to RDBMS

- Objectives
- Overview of Database management system
- Oracle Database 12c: Focus Areas
- Oracle Database 12c
- Relational and Object Relational Database Management Systems
- Data Storage on Different Media
- Relational Database Concept
- Definition of a Relational Database
- Data Models
- Entity Relationship Model
- Entity Relationship Modeling Conventions
- Relating Multiple Tables
- Relational Database Terminology
- Human Resources (HR) application
- Tables Used in This Course
- Tables Used in the Course
- Using SQL to Query Your Database
- How SQL Works
- SQL Statements Used in the Course
- Development Environments for SQL
- Introduction to Oracle Live SQL
- Oracle Database Documentation
- Additional Resources

- Select Statement
- HR Application Scenario
- Basic SELECT Statement
- Selecting All Columns
- Selecting Specific Columns
- Selecting from DUAL
- Writing SQL Statements
- Column Heading Defaults
- Arithmetic Expressions
- Using Arithmetic Operators
- Operator Precedence
- Defining a Null Value
- Null Values in Arithmetic Expressions
- Defining a Column Alias
- Using Column Aliases
- Concatenation Operator
- Literal Character Strings
- Using Literal Character Strings
- Alternative Quote (q) Operator
- Duplicate Rows
- Displaying Table Structure
- Using the DESCRIBE Command
- Limit rows
- Limiting Rows by Using a Selection
- Limiting Rows That Are Selected
- Using the WHERE Clause
- Character Strings and Dates
- Comparison Operators
- Using Comparison Operators
- Range Conditions Using the BETWEEN Operator
- Using the IN Operator
- Pattern Matching Using the LIKE Operator
- Combining Wildcard Symbols
- Using NULL Conditions
- Defining Conditions Using Logical Operators
- Using the AND Operator
- Using the OR Operator
- Using the NOT Operator
- Rules of Precedence
- Using the ORDER BY Clause
- Sorting
- SQL Row Limiting Clause
- Using SQL Row Limiting Clause in a Query
- SQL Row Limiting Clause: Example
- Substitution Variables
- Using the Single-Ampersand Substitution Variable

- Character and Date Values with Substitution Variables
- Specifying Column Names, Expressions, and Text
- Using the Double-Ampersand Substitution Variable
- Using the Ampersand Substitution Variable in SQL*Plus
- Using the DEFINE Command
- Using the VERIFY Command
- Joins
- Why Join?
- Obtaining Data from Multiple Tables
- Types of Joins
- Joining Tables Using SQL:1999 Syntax
- Creating Natural Joins
- Retrieving Records with Natural Joins
- Creating Joins with the USING Clause
- Joining Column Names
- Retrieving Records with the USING Clause
- Qualifying Ambiguous Column Names
- Using Table Aliases with the USING Clause
- Creating Joins with the ON Clause
- Retrieving Records with the ON Clause
- Creating Three-Way Joins
- Applying Additional Conditions to a Join
- Joining a Table to Itself
- Self-Joins Using the ON Clause
- Nonequijoins
- Retrieving Records with Nonequijoins
- Returning Records with No Direct Match Using OUTER Joins
- INNER Versus OUTER Joins
- LEFT OUTER JOIN
- RIGHT OUTER JOIN
- FULL OUTER JOIN
- Cartesian Products
- Generating a Cartesian Product
- Creating Cross Joins
- Sub Queries
- Using a Subquery to Solve a Problem
- Subquery Syntax
- Using a Subquery
- Rules and Guidelines for Using Subqueries
- Types of Subqueries
- Single-Row Subqueries
- Executing Single-Row Subqueries
- Using Group Functions in a Subquery
- HAVING Clause with Subqueries
- What Is Wrong with This Statement?
- No Rows Returned by the Inner Query

- Multiple-Row Subqueries
- Using the ANY Operator in Multiple-Row Subqueries
- Using the ALL Operator in Multiple-Row Subqueries
- Multiple-Column Subqueries
- Multiple-Column Subquery: Example
- Null Values in a Subquery
- Data Manipulation Language
- HR Application Scenario
- Data Manipulation Language
- Adding a New Row to a Table
- INSERT Statement Syntax
- Inserting New Rows
- Inserting Rows with Null Values
- Inserting Special Values
- Inserting Specific Date and Time Values
- Creating a Script
- Copying Rows from Another Table
- Changing Data in a Table
- UPDATE Statement Syntax
- Updating Rows in a Table
- Updating Two Columns with a Subquery
- Updating Rows Based on Another Table
- Removing a Row from a Table
- DELETE Statement
- Deleting Rows from a Table
- Deleting Rows Based on Another Table
- TRUNCATE Statement
- Database Transactions
- Database Transactions: Start and End
- Advantages of COMMIT and ROLLBACK Statements
- Explicit Transaction Control Statements
- Rolling Back Changes to a Marker
- Implicit Transaction Processing
- State of Data Before COMMIT or ROLLBACK
- State of Data After COMMIT
- Committing Data
- State of Data After ROLLBACK
- State of Data After ROLLBACK: Example
- Statement-Level Rollback
- Read Consistency
- Implementing Read Consistency
- FOR UPDATE Clause in a SELECT Statement
- FOR UPDATE Clause: Examples
- LOCK TABLE Statement
- Data Definition Language
- HR Application Scenario

- Database Objects
- Naming Rules for Tables and Columns
- CREATE TABLE Statement
- Creating Tables
- Data Types
- Datetime Data Types
- DEFAULT Option
- Including Constraints
- Constraint Guidelines
- Defining Constraints
- Defining Constraints: Example
- NOT NULL Constraint
- UNIQUE Constraint
- PRIMARY KEY Constraint
- FOREIGN KEY Constraint
- FOREIGN KEY Constraint: Keywords
- CHECK Constraint
- CREATE TABLE: Example
- Violating Constraints
- Creating a Table Using a Subquery
- ALTER TABLE Statement
- Adding a Column
- Modifying a Column
- Dropping a Column
- SET UNUSED Option
- Read-Only Tables
- Dropping a Table
- Controlling User Access
- Privilege Types
- REVOKE Statement
- TRUNCATE TABLE Statement
- Oracle Database Architecture
- Oracle Server
- Database Structures
- Oracle Memory Structures
- Process Structure
- Database files
- Tablespace and undo segments
- System and SysAux TableSpaces
- Performing Data Backups
- Backups..
- Oracle Secure Backup
- User managed Backup
- Terminology
- Summary

Working with HTML and Scripts

- Objectives
- Introduction to HTML
- HTML and Markup Languages
- Creating an HTML Document
- Creating Links and Media Tags
- Text Structure and Highlighting
- HTML Forms
- HTML Form Components
- Creating HTML Tables
- Advanced HTML
- About CSS
- CSS
- Frames
- About CSS
- CSS Syntax
- Style Sheets in HTML Pages
- Custom Selectors
- Style Tag Properties
- Style : Background
- Background Example
- Style: Text
- Style : Text
- Font
- CSS Border
- Example : Aligning with Border
- Outline
- Margin
- CSS Padding
- CSS Properties
- List
- Table Set
- Dimension
- JavaScript
- Course Objectives
- What is JavaScript
- Features of JavaScript
- Advantage of JavaScript
- Java vs JavaScript
- What do you need for JavaScript
- Where can I Put JavaScript code
- Use <Script> Tag
- Script Attributes
- First JavaScript Code
- Generate Dynamic HTML code using JavaScript

- Java Script from External Files
- Hiding JavaScript from old or JavaScript Disabled browser
- Data Types
- Primitive Data Types
- Composite Data Types
- Data Type Conversion...
- Variables in JavaScript
- Scope of a Variable
- Interacting with the user..
- Alert()
- Example...
- Prompt()
- Example of Prompt()
- Confirm ()
- Example for confirm ()
- Building Blocks of JavaScript
- JavaScript Operators
- Shortcut Assignment Operator
- Comparison Operator
- Logical Operators...
- Conditional Operator
- + Operator with Strings
- Type of operator
- Control Structures...
- Conditional Constructs
- If Construct
- Switch Statement
- Loops
- While Statement
- Do-while loop
- For loop
- Function
- Invoking a function
- Passing Arguments to a Function
- Return Value from a function
- Recursion function
- Event Handling
- Introduction to Forms
- Form Inputs
- Event Handlers
- What is Event Handling?
- Event Driven Programs
- JavaScript Handling of Events
- Events and Event Handling...
- Events and Event Handling (2)
- Event and Event Handling...

- Events Code...
- Event and Event Handling....
- Events ...
- Event Handling
- Use cases...
- Exception Handling
- Context
- Context of Exception Handling...
- Exception Handling
- When Exception Handling Should Be Used
- The Basics of JavaScript Exception Handling
- Try Blocks
- Throwing an Exception
- Catching an Exception
- JavaScript Objects
- Objects
- JavaScript Objects
- Creating an Object
- Example...
- Methods and Properties of an Object
- Creating Object with User defined function
- Manipulating Objects
- Predefined Object Hierachy
- Predefined Window Property
- Predefined JavaScript Objects
- String Object
- String Methods
- String Methods...
- Array Object
- Associative Array
- Array Properties
- Array Methods
- Date Object
- Example: Date Object
- Math Object
- RegExp Object
- Boolean Object
- HTML DOM Objects
- Advanced JavaScript
- Cookies
- Why Cookies
- Creating Cookies
- Encoding Cookie Value
- Example...
- Form Validation
- Example for Form Validation

- Output...
- Animation
- Timing Events
- SetTimeOut ()
- ClearTimeOut ()
- VBScript
- Differences...
- Example Script
- Syntax
- First VBScript
- Comments
- Data Types
- Dim Statement
- Array Variable
- Inputs..
- Constant
- Comparison between Operators
- Use Conditional Statements
- Syntax for if
- Select Case
- Conditional Construct
- Looping through Code..
- Syntax for loop
- In contrast for loops
- Procedures
- Example of Procedure
- Contrast with...
- Advanced VB Script
- Advanced VBScript
- Linking VBScript with Objects
- Inbuilt objects
- RegExp
- VbScript and Forms
- Event Handling
- Event Object
- Err Object
- Using onError
- Generating Custom Errors
- Error Handling
- Cookies
- Example of Cookies
- Summary

Working with Servers and Applications

- Objectives

- XML
- Introduction to XML
- What is XML?
- What XML is Not!
- HTML But Better…
- An Example in HTML
- The Same Thing in XML
- The Business Connection
- Validating with Document Type Definitions
- Basic Document Structure
- Example XML Document (1 of 6)
- Example XML Document (2 of 6)
- Example XML Document (3 of 6)
- Example XML Document (4 of 6)
- Example XML Document (5 of 6)
- Example XML Document (6 of 6)
- Differences with HTML
- Other Important Points
- Document Type Definitions
- What is DTD?
- Well-Formed vs. Valid Document
- Internal vs. External DTD
- Building blocks of XML
- Declaring Elements in DTD
- Declaring Attributes in DTD
- Entities in DTD
- Internal Entities in DTD
- External Entities in DTD
- HTML=XML+DTD+XSL
- “Bigger” Example
- Why use the DTD?
- Links
- Introduction to Namespaces
- The Problem
- The Solution: Namespaces!
- Namespace Binding Syntax
- Example Document (1 of 3)
- Example Document (2 of 3)
- Example Document (3 of 3)
- Important Points
- Using Namespaces with DTDs
- Parameter Entity Trick: Step 1
- Parameter Entity Trick: Step 2
- Parameter Entity Trick: Step 3
- Parameter Entity Trick: Step 4
- Add Namespace Information to Existing, Un-prefixed Documents

- Use New Prefix with Same DTD
- Useful Links
- XML Programming Models
- API in XML
- Document Object Model – DOM
- The SAX Interface (Simple API for XML)
- JDOM Model
- Java API for XML
- Web Application Architecture
- J2EE Architecture
- Two Tier History
- Java 2 Platform Enterprise Edition(J2EE)
- J2EE
- J2EE Features
- Java: Foundation for J2EE
- J2EE Components & Services
- J2EE Tiers
- J2EE Application Model
- Enterprise Java Beans (EJBs)
- States and Persistence
- Example of EJB Application
- Example EJB Application
- Web Application
- Web Application Technologies
- Uniform Resource Locator
- Web Applications
- Web Application Elements
- Execution of Common Gateway Interface Programs
- Advantages and Disadvantages of CGI Programs
- Java on the web, JSP
- Java on the Web
- Java Servlets: Architecture
- A First Java Servlet
- HTTP Methods
- JavaServer Pages Technology
- How a JSP Is Processed
- Comparison of Servlets and JSP Components
- Servlet and JSP Component Collaboration
- Model, View, and Controller
- MVC in a Java EE Web Application
- Java EE Containers
- Java EE–Compliant Application Servers
- Java Web Application Development Process
- Essential Structure of a WAR File
- Web Context Root and Alias Mapping
- Deployment Descriptors (DD)

- Java Server Pages
- HelloWorld Servlet
- HelloWorld JSP
- How a JSP Page Is Processed
- JSP Compilation
- JSP Page Class Loading
- JSP Page Servlet Instance
- JSP Page Initialization
- JSP Page Service
- Web Services
- Web Services – Definition from W3C
- Service Oriented Architectures
- Web Services – Architectural Extensions
- The Complete Web Services "Stack"
- The Wire Stack
- The Description Stack
- The Discovery Stack
- The technology so far
- What is XML
- How to work on XML
- Simple Object Access Protocol
- SOAP Encoding
- Web Service Description Language
- Web Service Introspection Language
- UDDI
- Summary

Overview Of Cloud Computing and Cloud Technologies.

- Objectives
- Introduction to Cloud Computing
- Definition of Cloud Computing
- SaaS, PaaS and IaaS
- Public Clouds and Private Clouds
- What Are the Challenges Enterprises Face?
- Oracle Cloud Computing
- Oracle Cloud Computing Strategy
- Software as a Service
- Oracle Applications
- Oracle SaaS Applications
- Oracle On Demand
- Infrastructure as a Service
- Features of IaaS
- Oracle Cloud Computing
- Iaas
- Oracle Cloud Storage

- Oracle Cloud Network
- Enterprise Workload as Support
- Infrastructure as a Service
- Platform as a Service (PaaS)
- Why Enterprise Private PaaS
- Oracle Cloud Platform for PaaS
- Private PaaS Lifecycle
- Enterprise Evolution To Cloud
- Application Grid and Database Grid: Dynamic Capacity Adjustment
- Key Database Capabilities for Cloud
- Key Fusion Middleware Capabilities for Cloud
- Key Enterprise Manager Capabilities for Cloud
- Various Cloud Service Provider
- Introduction to Docker
- Introduction to Kubernetes
- Kubernetes
- Why Use Kubernetes
- DevOps
- CI/CD Automation
- Context of Agility in Cloud
- Agility and Cloud Service management
- Devops and Agile
- Devops and Cloud
- Hybridizing Cloud
- Mosaic in OCI
- Integration behind deployments
- Oracle Engineered System for Enterprise Applications
- The Power to Data Center
- Business Agility Releases
- Developer Perspective of a Solution
- Oracle Optimized Cloud Portfolio
- Summary

Using OCI Console

- Objectives
- OCI Architecture
- Core Concepts
- OCI Components
- Compartments
- OCI Services
- Platform Services
- Compute Service
- Infrastructure Services
- Networking Service
- Types of Networks
- Identity Access Management

- What is a Policy
- Database as Service
- OCI Security
- Keys Management
- IAM Service
- Walkthrough and Explore Services
- Navigating through Services
- Platform Services
- OCI Cloud Shell
- Cloud Shell
- Switching Regions
- OCI Marketplace
- Explore OCI Market Place
- OCI MarketPlace
- Summary