

# INTRODUCTION OF .NET

CODE: (NET-4M)

## 1. THE COMMON LANGUAGE RUNTIME (C.L.R.)

- a. ARCHITECTURE AND SERVICES CLR
- b. .NET INTERMEDIATE LANGUAGE (IL)
- c. JUST-IN-TIME (JIT) COMPILATION AND CLS

## 2. .NET FRAMEWORK CLASS LIBRARY

- a. SYSTEM NAMESPACE
- b. SYSTEM.OBJECT NAMESPACE
- c. SYSTEM.COLLECTION NAMESPACE
- d. SYSTEM.TYPE
- e. EXCEPTION

## 3. LANGUAGE FUNDAMENTALS

- a. DATA TYPES AND CONTROL CONSTRUCTS AND INITIALIZING VARIABLES
- b. DECLARING REFERENCE TYPES VALUE AND CHARACTERS AND STRINGSUNICODE
- c. C.T.S TYPE
- d. TYPED LOCAL VARIABLES IMPLICITLY
- e. CONDITIONAL SYNTAX
- f. C# OPERATORS
- g. SYNTAX LOOPING
- i. ARRAY
- j. STRUCTURE

## **4. OBJECT ORIENTED PROGRAMMING CONCEPTS**

- a. CLASSES AND OBJECTS
- b. INHERITANCE
- c. ENCAPSULATION AND ABSTRACTION
- d. POLYMORPHISM

## **5. COLLECTION**

- a. ARRAY LIST
- b. HASH TABLE
- c. QUEUE
- d. STACK COLLECTION INTERFACE
- e. ENUMERABLE INTERFACE
- f. ENUMERATOR INTERFACE
- g. DICTIONARY ENUMERABLE INTERFACE
- h. DICTIONARY ENTRY STRUCTURE
- i. BOXING VS. UNBOXING

## **6. FILE HANDLING**

- a. SYSTEM.IO NAMESPACE
- b. STREAM READER AND STREAM WRITE CLASS AND DIRECTORY
- c. OBJECT FILE
- d. OBJECT PATH
- e. READING AND WRITING A FILE

## **7. EXCEPTION HANDLING**

- a. INTRODUCTION OF EXCEPTION
- b. FINALLYBILT
- c. THROW KEYWORD
- d. CUSTOMIZES MESSAGE ASSIGNMENT
- e. CUSTOM EXCEPTION

## **8. FORM AND CONTROL**

- a. BUILDING WINDOWS FORM APPLICATION
- b. PROGRAMMING FORMS AND CONTROL
- c. DESIGN WINDOWS USER INTERLACES CONSTRUCTING MDI INTERFACE
- d. IMPLEMENTING MDI PARENT AND CHILD FORMS
- e. IMPLEMENTING MENU STRIP, TOOL STRIP, STATUS TRIP,
- f. RICH TEXT BOX, TOOL TIP, ERROR PROVIDER ETC.
- g. CREATING CUSTOM CONTROL

## **9. EVOLUTION OF ADO.NET**

- a. ADO.NET WORKS AND HOW IT DIFFERS FROM ADO.
- b. EVOLUTION OF ADO TO ADO.NET

## **10. ADO.NET AND ITS ARCHITECTURE**

- a. CONNECTION OBJECT
- b. COMMAND OBJECT
- c. DATA READER OBJECT
- d. DATA ADAPTER OBJECT
- e. DATASET CONCURRENCY AND THE DISCONNECTED DATA ARCHITECTURE
- f. WHEN TO USE THE DATASET PROVIDER

## **11. WHAT IS ASP.NET, AN INTRODUCTION**

## **12. INTRODUCING WEB FORMS**

- a. WHAT IS WEB FORM
- b. WRITING YOUR FIRST WEB FORMS PAGE

## **13. INTRODUCTION TO HTML CONTROL**

- a. HTML CONTROL CLASS
- b. IMPLEMENTING THE CONTROLS

## **14. WEB FORMS CONTROLS**

- a. SERVER CONTROL
- b. NAVIGATION CONTROL
- c. STANDARD CONTROL
- d. INTRODUCTION TO USER CONTROLS
- e. EXPOSING USER CONTROL PROPERTIES
- f. ENCAPSULATING EVENTS IN A USER CONTROL

## **15. MASTER PAGE**

- a. MASTER PAGES (WORK VS. HOW)
- b. CONTENT PLACEHOLDERS
- c. CONTENT PAGES
- d. ADVANTAGES OF MASTER PAGES

## **16. QUERY WINDOW**

- a. FOUNDATION STATEMENTS OF T-SQL
- b. STARTED WITH SELECT STATEMENT
- c. ADDING DATA WITH THE INSERT STATEMENT
- d. CHANGING WHAT YOU'VE GOT WITH THE UPDATE STATEMENT
- e. DELETE STATEMENT

## **17. JOINS**

- a. INNER JOINS
- b. OUTER JOINS
- c. CROSS JOINS

## **18. THE UNION**

## 19. THE CREATE STATEMENT

- a. CREATE DATABASE
- b. CREATE TABLE

## 20. THE ALTER STATEMENT

- a. ALTER DATABASE
- b. ALTER TABLE

## 21. THE DROP STATEMENT

## 22. CONSTRAINTS

- a. TYPES OF CONSTRAINTS
- b. DOMAIN CONSTRAINTS
- c. ENTITY CONSTRAINTS
- d. REFERENTIAL INTEGRITY CONSTRAINTS
- e. CONSTRAINT NAMING
- f. CONSTRAINTSKEY
- g. PRIMARY KEY CONSTRAINTS
- h. FOREIGN KEY CONSTRAINTS
- i. UNIQUE CONSTRAINTS
- j. CHECK CONSTRAINTS
- k. DEFAULT CONSTRAINTS
- l. DISABLING CONSTRAINTS

## 23. RULES

- a. DEFAULTS
- b. DETERMINING WHICH TABLES AND DATATYPES USE A GIVEN RULE OR DEFAULT
- c. TRIGGERS FOR DATA INTEGRITY
- d. CHOOSING WHAT TO USE

## 24. ADDING MORE TO OUR QUERIES

- a. WHAT IS A SUBQUERY
- b. BUILDING A NESTED SUBQUERY
- c. CORRELATED SUBQUERIES
- d. CORRELATED SUBQUERIES IN THE WHERE CLAUSE
- e. DEALING WITH NULL DATA — THE ISNULL FUNCTION DERIVED TABLES
- f. EXISTS OPERATOR
- g. USING EXISTS IN OTHER WAYS
- h. MIXING DATATYPES: CAST AND CONVERT

## 25. UNDERSTANDING INDEXES

- a. DATA IS ACCESSED IN SQL SERVER
- b. CREATING, ALTERING, AND DROPPING INDEXES
- c. CREATE INDEX STATEMENT

## 26. VIEWS

- a. SIMPLE VIEWS
- b. VIEWS AS FILTERS
- c. MORE COMPLEX VIEWS
- d. EDITING VIEWS WITH T-SQL
- e. DROPPING VIEWS

## 27. STORED PROCEDURES

- a. BASIC SYNTAX
- b. CHANGING STORED PROCEDURES WITH ALTER
- c. DROPPING SPROCS

- d. HANDLING ERRORS

## 28. TRANSACTIONS

- a. BEGIN TRAN
- b. COMMIT TRAN
- c. ROLLBACK TRAN
- d. SAVE TRAN

## 29. TRIGGERS

- a. WHAT IS A TRIGGER
- b. FOR|AFTER VS. THE INSTEAD OF CLAUSE
- c. WITH APPEND
- d. FOR REPLICATIONNOT
- e. USING TRIGGERS FOR DATA INTEGRITY RULES
- f. DEALING WITH REQUIREMENTS SOURCED FROM OTHER TABLES
- g. USING TRIGGERS TO CHECK THE DELTA OF AN UPDATE
- h. USING TRIGGERS FOR CUSTOM ERROR MESSAGES
- i. OTHER TRIGGER ISSUES
- j. TRIGGERS CAN BE NESTED
- k. TRIGGERS CAN BE RECURSIVE
- l. DROPPING TRIGGERS