

INTRODUCTION OF JAVA

CODE: (JAVA-4M)

1. INTRODUCTION TO JAVA VIRTUAL MACHINE

- a. JAVA VIRTUAL MACHINE ARCHITECTURE
- b. CLASS LOADING PROCESS BY CLASS LOADERS
- c. ROLE OF JUST IN TIME COMPILER (JIT)
- d. DATA TYPES, VARIABLES AND ARRAYS
- e. OPERATORS
- f. CONTROL STATEMENTS
- g. OBJECT ORIENTED PARADIGMS
- h. THE THREE OOP PRINCIPLES (ENCAPSULATION, INHERITANCE AND POLYMORPHISM)

2. JAVA CLASSES AND OOP IMPLEMENTATION

- a. CLASS FUNDAMENTALS
- b. COMMAND LINE ARGUMENTS
- c. DECLARATION OF OBJECTS
- d. OVERLOADING AND OVERRIDING OF METHODS
- e. UNDERSTANDING OF ACCESS CONTROLS
- f. USING FINAL TO PREVENT OVERRIDING & INHERITANCE
- g. GARBAGE COLLECTION

3. MULTITHREADED PROGRAMMING

- a. THE JAVA THREAD MODEL
- b. CREATING A THREAD
- c. SYNCHRONIZATION

4. MANAGING INPUT & OUTPUT IN JAVA

- a. INTRODUCTION TO I/O STREAMS
- b. FILE HANDLING

5. INTRODUCTION TO APPLLET

- a. APPLLET BASICS
- b. APPLLET ARCHITECTURE AND SKELETON
- c. SIMPLE APPLLET DISPLAY METHODS

6. INTRODUCTION TO SWING

- a. INTRODUCTION TO JAVA FOUNDATION CLASSES
- b. JFC SWING QUICK REFERENCE

7. DATABASE PROGRAMMING

- a. INTRODUCTION TO JDBC
- b. JDBC DRIVERS
- c. STATEMENTS
- d. SCROLLABLE & UPDATABLE RESULT SET

8. INTRODUCTION TO JAVA- J2EE COMPONENTS

- a. WEB COMPONENTS
- b. BUSINESS COMPONENTS

9. J2EE CONTAINERS

- a. CONTAINER TYPES
- b. CONTAINER SERVICES

10. MVC ARCHITECTURE

- a. MVC OVERVIEW

11. JAVA SERVELET

- a. ADVANTAGES OF SERVELETS
- b. REQUEST AND RESPONSE
- c. SERVELET LIFECYCLE
- d. PACKING & DEPLOYMENT
- e. EVENT LISTENER

12. JAVA SERVER PAGES

- a. JSP ARCHITECTURE, ELEMENTS, OBJECTS
- b. CUSTOM TAGS

13. JSTL

- a. INTRODUCTION
- b. CORE TAGS, XML TAGS, SQL TAGS

14. JAVA BEANS

- a. BEANS INTRODUCTION

- b. PROPERTIES
- c. METHODS
- d. EVENTS
- i. BEAN BUILDER

15. ENTERPRISE JAVA BEANS

- a. ARCHITECTURE
- b. TYPES OF EJB

16. SESSION BEANS

- a. STATEMENT MANAGEMENT
- b. TYPES, STATELESS, STATEFULL, LIFECYCLE
- c. PERSISTENCE, LIFE CYCLE, TYPES

17. ENTITY BEANS

- PERSISTENCE, LIFE CYCLE, TYPES

FRAMEWORKS

HIBERNATE

INTRODUCTION TO HIBERNATE 3.0

HIBERNATE ARCHITECTURE

INTRODUCTION TO HIBERNATE QUERY LANGUAGE

STRUTS

INTRODUCTION TO THE APACHE STRUTS

STRUTS ARCHITECTURE

STRUTS1 VS STRUTS2.

HOW STRUTS WORKS?
INTRODUCTION TO THE STRUTS CONTROLLER
INTRODUCTION TO THE STRUTS ACTION CLASS

JAVA SERVER FACES (JSF)

- UNDERSTANDING JSF
- ADVANTAGES OF JSF
- CUSTOM GUI CONTROLS
- EVENT HANDLING
- MANAGED BEANS

AJAX

WHAT IS AJAX?
ROLE OF AJAX IN ENHANCING USER EXPERIENCE
AJAX CODE LIBRARIES AND TOOLS
SPRING
INTRODUCTION TO THE SPRING FRAMEWORK
INSTALLING SPRING FRAMEWORK
INHERITANCE IN SPRING
CALLING CONSTRUCTOR IN SPRING
INIT METHOD IN SPRING
BEAN LIFE CYCLE IN SPRING