

Core Java Course Content

INTRODUCTION OF JAVA

55 Mins

- ❖ WHAT IS JAVA?
- ❖ HOW TO GET JAVA
- ❖ A FIRST JAVA PROGRAM
- ❖ COMPILING AND INTERPRETING APPLICATIONS
- ❖ THE JDK DIRECTORY STRUCTURE

NAMING CONVENTION, DATA TYPES AND VARIABLES

120 Mins

- ❖ PRIMITIVE DATATYPES ,DECLARATIONS
- ❖ VARIABLE NAMES,NAMING CONVENTION
- ❖ NUMERIC LITERALS,CHARACTER LITERALS
- ❖ STRING,STRING LITERALS
- ❖ ARRAYS,NON-PRIMITIVE DATATYPES,THE DOT OPERATOR

OPERATORS AND EXPRESSIONS

100 Mins

- ❖ EXPRESSIONS
- ❖ ASSIGNMENT OPERATOR
- ❖ ARITHMETIC OPERATORS
- ❖ RELATIONAL OPERATORS
- ❖ LOGICAL OPERATORS
- ❖ INCREMENT AND DECREMENT OPERATORS
- ❖ OPERATE-ASSIGN OPERATORS (+=, ETC.)
- ❖ THE CONDITIONAL OPERATOR
- ❖ IMPLICIT TYPE CONVERSIONS

CONTROL FLOW STATEMENTS

230 Mins

- ❖ STATEMENTS
- ❖ CONDITIONAL (IF) STATEMENTS
- ❖ DATA TYPES AND VARIABLES 3
- ❖ ADDING AN ELSE IF
- ❖ CONDITIONAL (SWITCH) STATEMENTS
- ❖ WHILE AND DO-WHILE LOOPS
- ❖ FOR LOOPS
- ❖ A FOR LOOP DIAGRAM
- ❖ ENHANCED FOR LOOP
- ❖ THE CONTINUE STATEMENT
- ❖ THE BREAK STATEMENT

ARRAYS

120 Mins

- ❖ INTRODUCTION OF ARRAYS
- ❖ TYPES OF ARRAYS
- ❖ OPERATION WITH ARRAYS

OBJECT-ORIENTED PROGRAMMING

140 Mins

- ❖ INTRODUCTION TO OBJECT-ORIENTED PROGRAMMING
- ❖ CLASSES AND OBJECTS

- ❖ FIELDS AND METHODS
- ❖ ENCAPSULATION
- ❖ ABSTRACTION
- ❖ INHERITANCE
- ❖ POLYMORPHISM

OBJECTS AND CLASSES

165 Mins

- ❖ DEFINING A CLASS
- ❖ CREATING AN OBJECT
- ❖ INSTANCE DATA AND CLASS DATA
- ❖ METHODS
- ❖ CONSTRUCTORS
- ❖ ACCESS MODIFIERS

JAVA CLASSES

60 Mins

- ❖ OBJECT CLASS
- ❖ STRING CLASS
- ❖ STRINGBUILDER AND STRINGBUFFER
- ❖ OTHER BUILT-IN CLASSES

KEYWORD AND PACKAGES

120 Mins

- ❖ STATIC, FINAL etc.
- ❖ STATIC IMPORTS
- ❖ INTRODUCTION TO PACKAGES
- ❖ DEFINING PACKAGES
- ❖ PACKAGE SCOPE

EXCEPTION HANDLING

180 Mins

- ❖ EXCEPTIONS OVERVIEW
- ❖ CATCHING EXCEPTIONS
- ❖ THE FINALLY BLOCK
- ❖ EXCEPTION METHODS
- ❖ DECLARING EXCEPTIONS
- ❖ DEFINING AND THROWING EXCEPTIONS
- ❖ ERRORS AND RUNTIME EXCEPTIONS

INPUT/OUTPUT STREAMS

60 Mins

- ❖ OVERVIEW OF STREAMS
- ❖ BYTES VS. CHARACTERS
- ❖ BINARY INPUT AND OUTPUT
- ❖ PRINTWRITER CLASS
- ❖ READING AND WRITING OBJECTS

INHERITANCE IN JAVA

240 Mins

- ❖ INHERITANCE IN JAVA
- ❖ TYPES OF INHERITANCE
- ❖ METHOD OVERRIDING
- ❖ THIS AND SUPER
- ❖ AGGREGATION AND COMPOSITION

INTERFACES AND ABSTRACT CLASSES

180 Mins

- ❖ INTRODUCTION TO INTERFACE
- ❖ IMPLEMENTING AND EXTENDING INTERFACES
- ❖ MULTIPLE INHERITANCE USING INTERFACE
- ❖ ABSTRACT CLASSES
- ❖ ABSTRACT CLASS Vs. INTERFACE

INTRODUCTION TO THREADS

120 Mins

- ❖ NON-THREADED APPLICATIONS
- ❖ THREADED APPLICATIONS
- ❖ CREATING THREADS
- ❖ THREAD STATES
- ❖ RUNNABLE THREADS
- ❖ COORDINATING THREADS
- ❖ INTERRUPTING THREADS
- ❖ RUNNABLE INTERFACE , THREADGROUPS

NETWORKING IN JAVA

120 Mins

- ❖ INTRODUCTION TO SOCKET PROGRAMMING
- ❖ CHAT SERVER

INNER CLASSES

180 Mins

- ❖ INNER CLASSES
- ❖ MEMBER CLASSES
- ❖ LOCAL CLASSES
- ❖ ANONYMOUS CLASSES
- ❖ INSTANCE INITIALIZERS
- ❖ STATIC NESTED CLASSES

WRAPPER CLASSES

90 Mins

- ❖ INTRODUCTION TO WRAPPER CLASSES
- ❖ USE OF WRAPPER CLASSES

ANNOTATIONS

90 Mins

- ❖ USES FOR META-DATA
- ❖ THE ANNOTATIONS MODEL
- ❖ ANNOTATION TYPES AND ANNOTATIONS
- ❖ BUILT-IN ANNOTATIONS
- ❖ ANNOTATIONS VS. DESCRIPTORS (XML)

GRAPHIC PROGRAMMING USING SWING

240 Mins

- ❖ JAVA FOUNDATION CLASSES
- ❖ CREATING A FRAME IN STRING
- ❖ CREATING COMPONENTS IS SWING
- ❖ SETTING LOOK AND FEEL OF SWING
- ❖ HANDLING EVENTS

DATABASE CONNECTIVITY

300 Mins

- ❖ OVERVIEW OF DATABASE
- ❖ WORKING WITH MYSQL DATABSE
- ❖ RESITERING THE DRIVER

- ❖ CONNECTING TO DATABASE
- ❖ DATA STORING AND RETRIEVING

COLLECTION FRAMEWORK

300 Mins

- ❖ THE COLLECTIONS FRAMEWORK
- ❖ THE SET INTERFACE
- ❖ SET IMPLEMENTATION CLASSES
- ❖ THE LIST INTERFACE
- ❖ LIST IMPLEMENTATION CLASSES
- ❖ THE MAP INTERFACE
- ❖ MAP IMPLEMENTATION CLASSES

