

Java Programming

Course Overview/Objective

- Use Java technology data types and expressions, flow control constructors, arrays and other data collections
- Create, compile and execute Java technology applications that leverage the object-oriented features of the Java language.
- Implement error-handling techniques using exception handling
- Implement input/output (I/O) functionality to read from and write to data and text files, Create multithreaded programs
- Create a simple Transmission Control Protocol/Internet Protocol (TCP/IP) networked client that communicates with a server through sockets, Create JDBC programs.
- After Completing this course, Participants can works on J2EE and Mobile Application development

Requirements

Science Graduate

Course Project

No

Used Tools

Netbean's IDE, JDK, eclipse etc

Course Outline

Object-oriented Programming

- Define modeling concepts: abstraction, encapsulation, and packages
- Discuss Java technology application code reuse
- Define class, member, attribute, method, constructor, and package
- Use the access modifiers private and public as appropriate for the guidelines of encapsulation
- Invoke a method on a particular object
- Use the Java technology API online documentation

Identifiers, Keywords, and Types

- Use comments in a source program
- Distinguish between valid and invalid identifiers
- Use the eight primitive types
- Define literal values for numeric and textual types
- Define the terms primitive variable and reference variable
- Declare variables of class type
- Construct an object using new and describe default initialization
- Describe the significance of a reference variable
- flow control structures in a program

Arrays

- Declare and create arrays of primitive, class, or array types
- Explain why elements of an array are initialized
- Explain how to initialize the elements of an array
- Determine the number of elements in an array
- Create a multidimensional array
- Write code to copy array values from one array to another

Class Design

- Define inheritance, polymorphism, overloading, overriding, and virtual method invocation
- Use the access modifiers protected and the default (package?friendly)
- Describe the concepts of constructor and method overloading
- Describe the complete object construction and initialization operation

Advanced Class Features

- Create static variables, methods, and initializers
- Create final classes, methods, and variables
- Create and use enumerated types
- Use the static import statement
- Create abstract classes and methods
- Create and use an interface

Exceptions and Assertions

- Define exceptions
- Use try, catch, and finally statements
- Describe exception categories
- Identify common exceptions
- Develop programs to handle your own exceptions
- Use assertions
- Distinguish appropriate and inappropriate uses of assertions
- Enable assertions at runtime

Collections and Generics Framework

- Describe the general purpose implementations of the core interfaces in the Collections framework
- Examine the Map interface and
- Examine the legacy collection classes
- Create natural and custom ordering by implementing the Comparable and Comparator interfaces
- Use generic collections and type parameters in generic classes
- Refactor existing non-generic code
- Write a program to iterate over a collection
- Examine the enhanced for loop

I/O Fundamentals

- Write a program that uses command-line arguments and system properties
- Examine the Properties class
- Construct node and processing streams, and use them appropriately

Design Patterns

- Serialize and de-serialize objects
- Distinguish readers and writers from streams, and select appropriately between them

Console I/O and File I/O

- Read data from the console
- Write data to the console
- Describe files and file I/O

Building Java GUIs Using the Swing API

- Describe the JFC Swing technology
- Identify the Swing packages
- Describe the GUI building blocks: containers, components, and layout managers
- Examine top-level, general-purpose and special-purpose properties of container
- Examine components
- Examine layout managers
- Describe the Swing single-threaded model
- Build a GUI using Swing components

Handling GUI Generated Events

- Define events and event handling
- Examine the Java SE event model
- Describe GUI behavior
- Determine the user action that originated an event
- Develop event listeners
- Describe concurrency in Swing-based GUIs and describe the features of the Swing Worker class

GUI Based Applications

- Describe how to construct a menu bar, menu, and menu items in Java GUI

COURSE SUMMERY

Course Type :

Short Course

Course Duration :

03 weeks

Course Hour(s) :

99

Classes :

33

Tuition Fee :

5000.00

Batch:

01

Reg Deadline:

13 Jun 2019

Class Shift:

Afternoon

Class Start:

13 Jun 2019

[APPLY ONLINE](#)

CLASS SCHEDULE

Saturday [2:00 PM-5:00 PM]

Monday [2:00 PM-5:00 PM]

Wednesday [2:00 PM-5:00 PM]

COURSE CORDINATOR

Debasis Paul

Cordinator

Contact Info

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