

VERSION



SR. CODE

EAPL/CRASH/CRTC02

COURSE CODE

EACCJ

SUB CATEGORY

SOFTWARE DEVELOPMENT







PANFEDTQ &

ELYSIUM ELASIUM

ACADEMY

CORE JAVA & CONCEPTS

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CORE JAVA & CONCEPTS

ELYSIUM ACADEMY CORE JAVA 8 CONCEPTS

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COURSE DESCRIPTION



Java is essential to have a solid grasp of Core Java. Core Java, as its name indicates, focuses on the essentials of the Java language and leaves away the numerous libraries that are part of the established Java ecosystem.

COURSE GOALS



This can be accessed by anyone with an internet connection from any corner of the world. This includes creating simple to complex applications. It enables the use of computer language by web developers to provide dynamic, changeable content and services.

FUTURE SCOPE



For all game development, smart device development, online development, big data processing, Internet of Things apps, cloud-based applications, and other uses, Java is the way to go. When you learn how to create websites, applications, and visual designs, you can accomplish so much more with Java. Never before has JAVA's future in web development been more certain. Java has a stronghold on the market, and many IT companies support it. The future of web development is Java.





BASICS OF JAVA

01. Basics: Internal path setting

02. Environment Setup:

a. Download Links

b·Method and Installation of Java on Windows



CHAPTER

DECLARATION OF JAVA

01. Data Types



- a. Variable declaration
- b-Initialization of Variable
- c. Naming convention
- d-Types of variables
- e-Memory allocation of variables

03. Operators



CONTROL STATEMENTS

01. Decision-Making Statements

a. IF-ELSE

b. Switch







02. Looping Statements

- a. For loop
- b. While loop
- c. Do-while loop

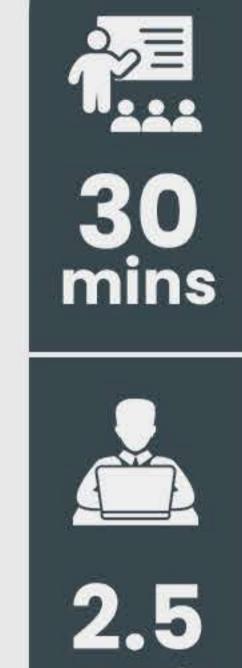
03. Jumping Statements

- a. Break
- b. Continue

CHAPTER

METHODS

- 01. Methods in Java
- 02. Use of method
- 03. Method declaration
- 04 Method signature
- 05. Types of methods
- 06. Calling of method
- 07. Java main method
- 08 · Return type



OOPS & CONCEPTS

- O1. Class
- O2. Objects
- 03. Constructor
 - a. Types of Constructor







- b-Constructor Overloading
- c. Copy Constructor

04. Encapsulation

- a. Definition
- b.Data Hiding
- c. Getter and setter method
- d·The Naming convention for the Getter and Setter methods

05. Inheritance

- a. Definition
- b·ls-A-Relationship
- c. Types of Inheritance
- d-Aggregation and Composition

06. Polymorphism

- a. Definition
- b.Types of polymorphism
- c·Method Overloading
- d·Method overriding

07. Super and this Keyword

- a. Definition
- b·Super class Methods and Constructor

08. Abstraction

- a. Abstract class
- **b**·Abstract method

09. Interface

a. Nested interface, rules, and example programs





KEYWORDS

01. Keywords & Modifiers

- a·Access modifier ad a non-access modifier
- b.Types of access modifiers
- c. Types of non-access modifiers

02. Static Keyword

- a. ·Static variable
- b.Static methods
- c. The distinctions between a static variable and an instance variable

03. Final Keyword

- a Final variable
- b. Final methods
- c. Final class

04. Inner Class

- a · Definition
- b. Types
- 05. This Keyword

CHAPTER

EXCEPTION HANDLING

- 01. Explanation
- 02. Try, Catch, Finally
- O3. Throw, Throws in Exception Handling
- 04. Throw vs. Throws
- 05. Final vs. Finally vs. Finalize





02





INPUT-OUTPUT STREAM

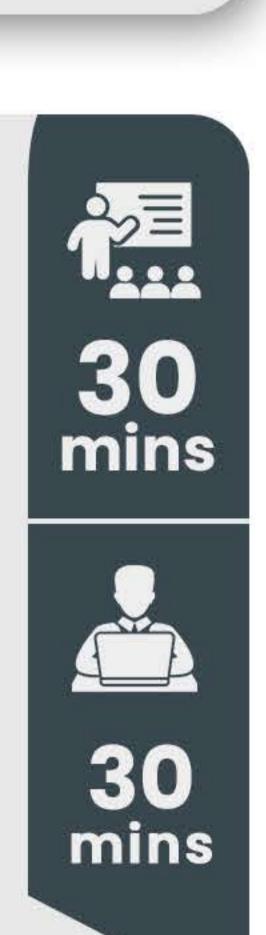
01. I/O Stream

a. Character Stream

b. Byte Stream

02. File Class

03. Serialization



CHAPTER

ARRAY AND STRINGS

01. Array

- a. Definition
 - b. Types of Array
 - c. Array Programs

O2. String, String Buffer, String Builder

- a. Definition
- b. Immutable String
- c. String Comparison
- d. String Concentration
- e. Substring
- f. String Buffer Class
- g. Strig Builder Class
- h. to String() method









COLLECTIONS FRAMEWORK

- 01. Definition
- O2. Collections
- 03. List types, set types.
- O4. Comparable an Comparator Interface
- 05. Generic
- 06. Lambda Expressions
 - a.Introduction to Lambda Expression
 - b. Parameters in Lambda Expression
- 07. Date and Time API
 - a. Java time Classes
 - b. Data Formatter
 - c. Calendar and Time Zone

CHAPTER

THREAD

- 01. Multithreading
- 02 Multithreading life cycle
- 03. Thread scheduler
- 04 · Calling method
- 05. Joining a thread
- 06 Naming a thread
- 07. Thread priority
- 08 Daemon thread
- 09. Thread pool











- 10. Thread Group
- 11. Shutdown hook
- 12. Java Synchronization
- 13. Deadlock
- 14. Inter-thread Communication
- 15 Interrupting Thread

THE CHAPTER

CHAPTER 12

O1. Java Networking
a.Socket Programs



GHAPTER

JDBC

- 01. JDBC Drivers
- 02 · Connecting steps to Database
- 03. Oracle Connectivity
- 04 · Connectivity with MySQL
- O5-Connectivity with Access without DSN
- 06 Driver Manager
- 07. Types of JDBC statements
- O8·Database Metadata, Resultset Metadata
- 09 ResultSet, types of ResultSet









- 10. Storing images, Retrieving image
- 11. Storing files, Retrieving files, Stored procedures, and functions
- 12. Transaction Management
- 13. Batch Processing

THE CHAPTER

SQL

01. Data Query Language

- a. What is DQL?
- b. Purpose of DQL
- c. Select

02 Data Manipulation Language

- a. What is DML?
- b. Purpose of DML
- c. Insert data
- d. Update data
- e. Delete Data
- f. Lock data

03. Data Control Language

- a. What is DCL?
- b. Purpose of DCL
- c. Grant data
- d. Revoke data

04. Transaction Control Language

- a. What is TCL?
- b. Purpose of TCL
- c. COMMIT
- d. ROLLBACK
- e. SAVEPOINT

05. Inserting data

a. Hands on INSERT data









- b. SELECT
- c. Hands on SELECT query
- d.Multi inserts
- e. Hands on Multi inserts
- f. NOT NULL
- g. Hands on NOT NULL
- h. DEFAULT Values
- i.Hands on DEFAULT Values
- j.AUTO INCREAMENT
- k. Hands on AUTO INCREAMENT

06. Basic Operators

- a. ORDER BY
- b. ALIASES
- c. UNIONS
- d.CONSTRAINTS
- e. VIEWS

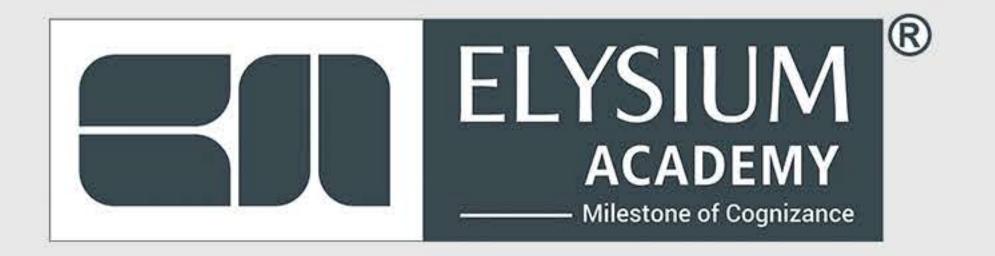
07. Primary Key

- a. What is primary key?
- b. Creating a primary key
- c. Dropping a primary key

08 · Foreign key

- a. What is foreign key?
- b. Creating a foreign key
- c. Dropping a foreign key









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