Navodaya Computer Saksharta Mission®

A National Literacy Programme of Information Technology & Skill Development

Digital India
Power To Empower

Member of
Quality Council of India
Computer Society of India

AN ISO 9001 : 2008 CERTIFIED ORGANIZATION

An Autonomous Institution Registered Under Planning Commission-Trust & Societies Act. NCT New Delhi
RJ 2013/00056856, Section 60 (B) 4 VOL 2901/1878 Act,1882 & ROS/North/091/2010 Act,1860
Ministry of HRD (Department of Higher Education) Courses Registered Under CR Act

Government of India

Appreciatated by
President | Prime Minister | Vice-President
FMO | MHA | MHRD | MCIT | MSME | MSJE | MCA | MMA | CM | Governer

CC-J

Certificate Course in Java

COURSE CODE : CC-08

COURSE CONTENT & SYLLABUS

H.O. : 3-KHA-4, Sector 3, Vigyan Nagar, Kota-324005, (Rajasthan) India
Tel.: 0744-2412009 Fax: 0744-2411150 Mob. +91 94629 67201
visit us : www.navodayaindia.in | www.ncsm.in | E-mail : contact@ncsm.in, info@ncsm.in

© All rights reserved. All copyright of this competency based curriculum is solely and exclusively owned by Navodaya-CSM (Rajasthan), INDIA.

Certificate Course in Java

COURSE CONTENTS

Course code – CC-08 **Eligibility : 12TH Class & Above**

Duration : 3 Month

MODULE – 1 **MODULE SUBJECT**

JAVA **SUBJECT CODE – NJL**

FUNDAMENTAL OF OBJECT ORIENTED PROGRAMMING **JAVA**

JAVA EVOLUTION

OVERVIEW OF JAVA LANGUAGE

CONSTANTS, VARIABLE AND DATA TYPES

OPERATORS & EXPRESSION

DECISION MAKING N LOOPING

CLASSES, OBJECT & METHODS

ARRAYS, STRINGS & VECTORS

INTERFACES MULTIPLE INHERITANCE

PACKAGES

MANAGING ERRORS & EXCEPTION

BASIC I/O AND SERIALIZATION

APPLETS

CC-J Certificate Course in Java

© All rights reserved. All copyright of this competency based curriculum is solely and exclusively owned by Navodaya-CSM (Rajasthan), INDIA.

CC-J

Certificate Course in Java

COURSE SYLLABUS

JAVA

A. FUNDAMENTAL OF OBJECT ORIENTED PROGRAMMING

- A-1 INTRODUCTION OF OOP'S & ITS PARADIGM
- A-2 INTRODUCTION OF BASIC CONCEPT OF OBJECTS & CLASSES, DATA ABSTRACTION & ENCAPSULATION ,INHERITANCE & POLYMORPHISM
- A-3 INTRODUCTION OF COMPILE N RUNTIME MECHANISMS
- A-4 INTRODUCTION OF MESSAGE COMMUNICATION
- A-5 BENEFITS OF OOP'S
- A-6 APPLICATION OF OOP'S

B. JAVA EVOLUTION

- B-1 JAVA HISTORY
- B-2 FEATURES OF JAVA
- B-3 DIFFERENCE BETWEEN C & C++ N JAVA & C
- B-4 INTRODUCTION OF JAVA, INTERNET, WWW
- B-5 INTRODUCTION OF WEB BROWSER, HOTJAVA, NETSCAPE NAVIGATOR
- B-6 INTRODUCTION OF JAVA ENVIRONMENT, JDK
- B-7 INTRODUCTION OF APPLICATION PROGRAMMING INTERFACE

C. OVERVIEW OF JAVA LANGUAGE

- C-1 INTRODUCTION OF JAVA LANGUAGE
- C-2 INTRODUCTION OF SIMPLE JAVA PROGRAM
- C-3 INTRODUCTION OF JAVA STRUCTURE
- C-4 DEFINING OF JAVA PROGRAM STRUCTURE
- C-5 INTRODUCTION & DEFINING OF JAVA TOKENS
- C-6 IMPLEMENTING A JAVA PROGRAM
- C-7 CREATING THE PROGRAM
- C-8 COMPILING & RUNNING THE PROGRAM
- C-9 INTRODUCTION OF MACHINE NEUTRAL
- C-10 INTRODUCTION OF JAVA VIRTUAL MACHINE (JVM)

D. CONSTANTS, VARIABLE AND DATA TYPES

- D-1 INTRODUCTION OF CONSTANTS
- D-2 TYPES OF CONSTANT
- D-3 INTRODUCTION OF VARIABLES
- D-4 INTRODUCTION OF DATA TYPES

Certificate Course in Java

© All rights reserved. All copyright of this competency based curriculum is solely and exclusively owned by Navodaya-CSM (Rajasthan), INDIA.

D-5 DECLARATION OF VARIABLES
D-6 INTRODUCTION OF ASSIGNMENT & READ STATEMENT
D-7 INTRODUCTION OF TYPE CASTING N AUTOMATIC CONVERSION
D-8 INTRODUCTION OF GETTING VALUES OF VARIABLES

E. OPERATORS & EXPRESSION

E-1 INTRODUCTION OF OPERATORS
E-2 TYPES OF OPERATORS
E-3 EXAMPLES OF OPERATORS
E-4 INTRODUCTION OF FIELDS DECLARATION & METHOD DECLARATION
E-5 INTRODUCTION OF DECISION MAKING WITH IF STATEMENTS
E-6 TYPES OF IF STATEMENT & ITS PROGRAM
E-7 INTRODUCTION OF SWITCH STATEMENT
E-8 PROGRAM RELATED TO SWITCH STATEMENT

F. DECISION MAKING N LOOPING

F-1 INTRODUCTION OF LOOPING
F-2 TYPES OF LOOPING
F-3 PROGRAM RELATED TO LOOP STATEMENT

G. CLASSES, OBJECT & METHODS

G-1 INTRODUCTION OF CLASSES
G-2 DEFINING A CLASSES
G-3 FIELDS & METHOD DECLARATION
G-4 CREATING OBJECTS
G-5 ACCESSING CLASS MEMBERS
G-6 PROGRAM RELATED CLASSES & OBJECTS
G-7 INTRODUCTION OF CONSTRUCTORS AND ITS PROGRAM
G-8 INTRODUCTION OF METHODS OVERLOADING
G-9 INTRODUCTION OF STATIC MEMBERS
G-10 INTRODUCTION OF NESTING METHODS
G-11 INTRODUCTION OF INHERITANCE:- EXTENDING A CLASS
G-12 INTRODUCTION OF DEFINING A SUB CLASS, CONSTRUCTOR
G-13 INTRODUCTION OF MULTILEVEL INHERITANCE, HIERARCHICAL
G-14 INTRODUCTION OF OVERRIDING METHODS & PROGRAMS
G-15 INTRODUCTION OF FINAL VARIABLE, METHODS & CLASSES
G-16 INTRODUCTION OF VISIBILITY CONTROL

H. ARRAYS, STRINGS & VECTORS

H-1 INTRODUCTION OF ARRAY
H-2 TYPES OF ARRAY
H-3 CREATION N INITIALIZATION OF ARRAYS
H-4 INTRODUCTION OF 2-D ARRAY
H-5 INTRODUCTION OF STRINGS, STRING ARRAY & METHODS
H-6 INTRODUCTION OF VECTORS
H-7 INTRODUCTION OF ENUMERATED TYPES

I. INTERFACES MULTIPLE INHERITANCE

I-1 INTRODUCTION OF INTERFACES

Certificate Course in Java

© All rights reserved. All copyright of this competency based curriculum is solely and exclusively owned by Navodaya-CSM (Rajasthan), INDIA.

I-2 DEFINING OF INTERFACES
I-3 EXTENDING INTERFACES
I-4 IMPLEMENTING INTERFACES
I-5 ACCESSING INTERFACE VARIABLES
I-6 PROGRAM RELATED TO INTERFACES

J. PACKAGES

J-1 INTRODUCTION OF PACKAGES
J-2 INTRODUCTION OF JAVA API PACKAGES
J-3 INTRODUCTION OF NAMING CONVENTIONS
J-4 CREATING PACKAGES
J-5 ACCESSING A PACKAGES
J-6 USING A PACKAGE
J-7 ADDING A CLASS TO A PACKAGE
J-8 PROGRAM RELATED TO PACKAGE

K. MANAGING ERRORS & EXCEPTION

K-1 INTRODUCTION OF ERRORS
K-2 TYPES OF ERROR
K-3 COMPILE TIME ERROR
K-4 RUN TIME ERROR
K-5 EXCEPTIONS
K-6 PROGRAM RELATED EXCEPTIONS
K-7 MULTIPLE CATCH STATEMENTS
K-8 THROWING OUR OWN EXCEPTIONS
K-9 USING FINALLY STATEMENT
K-10 USING EXCEPTIONS FOR DEBUGGING

L. BASIC I/O AND SERIALIZATION

L-1 INTRODUCTION OF I/O STREAMS
L-2 INTRODUCTION OF BYTE STREAMS
L-3 INTRODUCTION & USING OF CHARACTER STREAMS
L-4 INTRODUCTION OF LINE ORIENTED I/O
L-5 INTRODUCTION OF BUFFERED STREAMS
L-6 INTRODUCTION OF FLUSHING BUFFERED STREAMS
L-7 INTRODUCTION OF STANDARD STREAMS
L-8 INTRODUCTION OF DATA STREAMS
L-9 INTRODUCTION OF OBJECT STREAMS
L-10 INTRODUCTION OF FILE I/O, FILE OBJECT, MANIPULATING FILES
L-11WORKING WITH DIRECTORIES
L-12 INTRODUCTION OF STATIC METHODS, RANDOM ACCESS FILES

M. APPLETS

M-1 INTRODUCTION OF APPLETS
M-2 LIFECYCLE OF APPLETS
M-3 LOADING APPLETS IN A WEB PAGE
M-4 GETTING STARTED APPLETS
M-5 APPLICATION AND APPLETS
M-6 IMPORTING CLASS AND PACKAGES FOR APPLETS
M-7 RELOADING THE APPLETS

Certificate Course in Java

© All rights reserved. All copyright of this competency based curriculum is solely and exclusively owned by Navodaya-CSM (Rajasthan), INDIA.

M-8 INTRODUCTION OF INT, START, STOP, DESTROY METHOD
M-9 USING THE PAINT METHOD
M-10 WORKING WITH GRAPHICS
M-11 WORKING WITH DRAWING LINES
M-12 WORKING WITH DRAWING RECTANGLES
M-13 WORKING WITH CIRCLES AND ELLIPSES
M-14 WORKING WITH DRAWING ARTS
M-15 WORKING WITH POLYGONS
M-16 WORKING WITH COLOURS
M-17 WORKING WITH STATUS WINDOW
M-18 WORKING WITH AUDIO CLIP INTERFACE

C C - J
Certificate Course in Java

© All rights reserved. All copyright of this competency based curriculum is solely and exclusively owned by Navodaya-CSM (Rajasthan), INDIA.