



VIDYA JYOTHI INSTITUTE OF TECHNOLOGY

(Autonomous)

Department of Artificial Intelligence

(Approved By A.I.C.T.E., New Delhi, Permanently Affiliated to JNTU, Hyderabad)
(Aziz Nagar, C.B. Post, Hyderabad -500075)

III YEAR B.Tech. AI – I Sem

L T P C

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Java Programming

Course Outcomes:

- Understand the Object Oriented Programming concepts.
- Apply the concepts of package and interfaces.
- Apply the concepts of Exceptions and multithreading.
- Analyze GUI applications and AWT using Frames.
- Design the programs using Applet and JDBC Concepts

UNIT - I:

Java Basics History of Java, Java buzzwords, data types, variables, scope and life time of variables, arrays, operators, expressions, control statements, type conversion and casting, simple java program

Fundamentals of Object Oriented Programming: Object-Oriented Paradigm, Basic Concepts of Object Oriented Programming, Applications of OOP. Concepts of classes, objects, constructors, methods, access control, this keyword, garbage collection, overloading methods and constructors, parameter passing, recursion, static keyword, nested and inner classes, Strings, Object class.

UNIT - II:

Inheritance & Polymorphism: Introduction, Forms of Inheritance - specialization, specification, construction, extension, limitation, combination, Member access rules, super keyword, polymorphism- method overriding, abstract classes, final keyword.

Interfaces and Packages: Introduction to Interfaces, differences between abstract classes and interfaces, multiple inheritance through interfaces, Creating and accessing a package, Understanding CLASSPATH, importing packages.

Exception handling - Concepts of exception handling, exception hierarchy, built in exceptions, usage of try, catch, finally, throw, and throws, creating own exception sub classes.

UNIT - III:

Files: Introduction to I/O Streams: Byte Streams, Character Streams. File I/O.

Multi-threading: Differences between multi-threading and multitasking, thread life cycle, creating threads, thread priorities, synchronizing threads, inter thread communication.



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Java Programming

Java.util package- Collection Interfaces: List, Map, Set. The Collection classes: LinkedList, HashMap, TreeSet, StringTokenizer, Date, Random, Scanner.

UNIT - IV:

AWT: Class hierarchy, Component, Container, Panel, Window, Frame, Graphics.

AWT controls: Labels, Button, Scrollbar, Text Components, Checkbox, CheckboxGroup, Choice, List, Panes – ScrollPane, Dialog and MenuBar.

Event Handling: Events, Event sources, Event classes, Event Listeners, Delegation event model, handling mouse and keyboard events, Adapter classes.

UNIT - V:

Layout Manager – Border, Grid, Flow, Card and Gridbag.

Applets – Concepts of Applets, differences between applets and applications, life cycle of an apple, create applets, passing parameters to applets.

JDBC Connectivity: JDBC Type 1 to 4 Drivers, connection establishment, Query Execution.

TEXT BOOKS:

1. Java- the complete reference, Seventh edition, Herbert Schildt, Tata McGraw Hill.
2. Database Programming with JDBC & JAVA, Second Edition, George Reese, O'Reilly Media.

REFERENCE BOOKS:

1. Thinking in Java Fourth Edition, Bruce Eckel
2. Introduction to Java programming, Y. Daniel Liang, Pearson Education.
3. Understanding OOP with Java, updated edition, T. Budd, Pearson Education.
4. Programming in JAVA, Second Edition, OXFORD Higher Education.

BOS Members' Signatures :-

1. DR. SIDDHARTHA GHOSH Chairman , BOS for AI&DS, VJIT	2. DR. OBV RAMANAIAH JNTUH Nominee	3. DR. MV KRISHNAMURTHY MD, UOSD Pvt. Ltd.	4. MR. PRASAD YERRAMSETTI Lead Program Manager in Data Science, Microsoft
5. MR. GOPALKRISHNA MADDIPATLA Director of Intelligence Automation (ML) Practice, EPAM Solutions, Hyderabad	6. DR. PADMAJA SAVARAM , HOD, CSE, Keshav Memorial Institute of Technology, Hyderabad	7. DR. V. VIJAYA KUMAR DEAN CSE & IT, Anurag Group of Institutes	8. DR. B. VIJAYA KUMAR HOD, CSE, VJIT
			DATE OF BOS MEETING
9. DR. K. VASANTH HOD, ECE, VJIT	10. DR. D ARUNA KUMARI Professor in CSE, VJIT	11. PROF. B. SRINIVASULU HOD, IT, VJIT	23- 06 – 2020