17CS2102 - JAVA PROGRAMMING

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| **Course Category:** |  Core | **Credits:** | 3 |
| **Course Type:** | Theory | **Lecture – Tutorial – Practical:** | 2-2-0 |
| **Prerequisite:** | Basic knowledge of programming. | **Sessional Evaluation:****Univ.Exam Evaluation:****Total Marks:** | 4060100 |
| **Objectives** | * Acquire knowledge on preliminaries of Java.
* Understanding the knowledge of exception handling and Event handling.
* To obtain knowledge of advanced java concepts.
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| **Course Outcomes** | Upon successful completion of the course, the students will be able to: |
| CO1 | Understand the basic concepts of Java Building Blocks. |
| CO2 | Acquire the knowledge of Arrays and Strings. |
| CO3 | Conceptualize the techniques of inheritance and polymorphism to develop packages and interfaces. |
| CO4 | Understand exception handling and usage of multi-threading in java |
| CO5 | Create applets and learn the procedure to handle events. |
| CO6 | Understandthe concept of database connectivity and advanced topics. |
| **Course Content** | UNIT - I**Introduction to Programming**: Overview of Programming, programmingparadigms, Basics of OOP. **Basics of JAVA**: History, Java Buzz words, Data types, Variables, Scope and Life time of variables, Operators, Expressions, Control statements, Type conversion and casting.UNIT – II**Arrays**: Declaration, Initialization and accessing values, Multidimensional arrays. **Strings**: String, StringBuffer and StringTokenizer classes. UNIT – III**Inheritance**: Types of inheritance, Benefits, Member access rules, Constructor and calling sequence. **Polymorphism**: Method overriding and Method overloading. **Packages:** Defining Package, Creating and accessing a package.UNIT – IV**Interfaces**: Defining an interface, Implementing interface, Extending interfaces.**Exception Handling**: Concepts, Benefits, Exception handling mechanism, Built-in Exceptions. **Multi-Threading**: Processes and threads, Life cycle of a thread, Thread methods UNIT – V**Multi-Threading**: Creating and naming a thread, Priority threads, Daemon threads, Thread groups.**Applets**: Concepts, Life cycle,Creating an applet, Passing parameters to applets.UNIT – VI**Event Handling**: Events, Event classes, Event Listeners, Delegation Event Model, Handling mouse Events, Adapter classes, Inner classes.**Talking to Databases:** JDBC Concepts and Terminology, Introducing SQL, JDBC Package, JDBC Basics, Driver Manager. |
| **Text Books and References:** | **Text Books:**1. Java: The Complete Reference, 7th Edition, Herbert Schildt TMH.
2. Beginning Java 2, JDK 5 Edition, Ivor Horton,Wileydreamtech.

**Reference Books:**1. An introduction to java programming and object oriented application development, RAJohson-Thomson.
2. Introduction to java programming 6th Edition, Y Daniel liang, Pearson Education.
3. Java programming: A practical approach, C.Xavier, TMH, First edition,2011.
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| **E-Resources** | 1. [**https://nptel.ac.in/courses**](https://nptel.ac.in/courses)
2. [**https://freevideolectures.com/university/iitm**](https://freevideolectures.com/university/iitm)
3. [**www.javatpoint.com**](http://www.javatpoint.com)
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