

# DEPARTMENT OF IT

# LESSON PLAN

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| Academic Year: | 2021-22 |  |  |
| Subject: | Object Oriented Java Programming | Faculty Name: | N.Sreevidya |
| Year & Semester: | II Year – I Semester | Branch: | IT |

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| **S.No.** | **Unit No. and Topic** | **No. of**  **Periods** | **References** | **Delivery method** |
|  | **UNIT-I** |  |  |  |
| 1. | History of JAVA | 1 | 1 | PPT |
| 2. | Java buzzwords | 1 | 1 | PPT |
| 3. | Data Types, Variables | 1 | 1 | PPT |
| 4. | Creating a simple java program, compiling and running, Scope and lifetime of variables | 1 | 1,2 | Demonstration |
| 5. | Operators, expressions, Control Statements | 1 | 1 | PPT |
| 6. | Type conversion and casting | 1 | 1 | PPT |
| 7. | Arrays, classes and objects, Concepts of classes, constructors and methods | 3 | 1,2 | PPT |
| 8. | Access control, this keyword, garbage collection | 1 | 1 | Demonstration |
| 9. | Overloading methods and constructors | 1 | 1 | Demonstration |
| 10. | Recursion, String handling, String Tokenizer. | 2 | 2 | PPT |
|  | **UNIT – II** |  |  |  |
| 1. | Inheritance definition, single inheritance, benefits of inheritance | 2 | 1 | PPT |
| 2. | Member access rules | 1 | 1 | PPT |
| 3. | Super classes | 1 | 1 | Demonstration |
| 4. | Polymorphism, method overriding, Dynamic method dispatch, | 2 | 2 | Demonstration |
| 5. | Using final with inheritance, abstract classes | 2 | 1,2 | PPT |
| 6. | Base class object | 1 | 1 | PPT |
| 7. | Defining an interface, implementing interface, Differences between classes and interfaces | 2 | 1,3 | PPT |
| 8. | Implements and extends keywords, An application using an interfaces and uses of interfaces | 1 | 1,2 | Demonstration |
|  | **UNIT – III** |  |  |  |
| 1. | Defining, Creating and Accessing a Package, Types of packages | 1 | 1 | PPT |
| 2. | Understanding CLASSPATH, importing packages | 1 | 1 | PPT |
| 3. | Introduction to i/o programming: DataInputStream, DataOutputStream | 2 | 1,3 | PPT |
| 4. | FileInputStream, FileOutputStream, BufferedReader. | 1 | 1 | PPT |
| 5. | Collections: Interfaces, Implementation classes, and Algorithms(Such as sorting and searching) | 2 | 1 | Demonstration |
|  | **UNIT IV** |  |  |  |
| 1. | Concepts of Exception handling, Exception hierarchy, benefits of exception handling, | 1 | 1 | PPT |
| 2. | Types of exceptions, usage of try, catch, throw, throws, finally keywords | 2 | 1 | PPT |
| 3. | Built in Exceptions, Creating own Exception sub classes | 1 | 1 | PPT |
| 4. | Concepts of multi threading, types of multi tasking, uses of multitasking | 1 | 1,2 | PPT |
| 5. | Thread life cycle, creating multiple threads by using Thread class | 1 | 1 | PPT |
| 6. | Creating multiple threads by using Runnable interface | 1 | 1 | Demonstration |
| 7. | Synchronization, thread life cycle, daemon thread. | 2 | 1 | Demonstration |
|  | **UNIT – V** |  |  |  |
| 1. | Advantages of GUI over CUI, The AWT class hierarchy | 1 | 1,3 | PPT |
| 2. | Introduction to Swings, Swing Elements: JComponent, | 1 | 1,4 | PPT |
| 3. | JFrame,User interface components, | 1 | 1 | Demonstration |
| 4. | JLabel, JButton, JScrollbars,text components,check box, check box groups, | 2 | 1 | Demonstration |
| 5. | choices, lists panels- scrollpane, menubar, | 1 | 1 | PPT |
| 6. | Layout manager board, grid, flow, card, grid bag. | 1 | 1 | PPT |
| 7. | Event handling: Delegation Event model | 1 | 1 | Demonstration |
| 8. | Closing a frame, mouse and keyboard events | 1 | 1,2 | Demonstration |
| 9. | Adapter classes. | 3 | 1 | PPT |
|  | **UNIT – VI** |  |  |  |
| 1. | Concepts of Applets, differences between applets and, Applications | 1 | 1 | PPT |
| 2. | Life cycle of an applet | 1 | 1 | PPT |
| 3. | Types of applets, creating applets, passing parameters to applets | 1 | 1 | PPT |
| 4. | Basics of Networking, TCP/IP Sockets, Datagram’s | 2 | 1,4 | PPT |
| 5. | Simple client server program | 1 | 1 | Demonstration |
| 6. | Multiple clients. | 1 | 1 | Demonstration |
| 7. | sending file from server to client. | 1 | 1 | Demonstration |
|  | **TOTAL** | 60 |  |  |

**References:**

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|  | Java – the complete reference – 6th edition – Herbert schildt, TMH |
|  | Introduction to java programming – 6th edition – y. daniel liang, pearson education |
|  | Core java2, vol 1, fundamentals, cay.s. Horstmann and Gary cornell, seventh edition pearson education |
|  | Core java2 vol 2 – advanced features – cay.s. Horstmanan and Gary cornell, seventh edition, pearson education. |

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| **Faculty** | **Head of Department** | **Principal** |